Experimental Evaluation of a Branch and Bound Algorithm for computing Pathwidth

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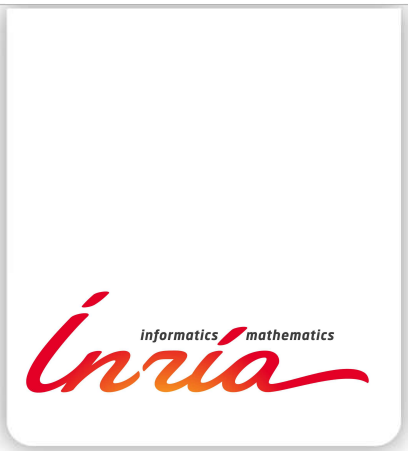

Experimental Evaluation of a Branch and Bound Algorithm for computing Pathwidth*

David Coudert[†‡], Dorian Mazauric[§], Nicolas Nisse[‡†]

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Abstract: It is well known that many NP-hard problems are tractable in the class of bounded *pathwidth* graphs. In particular, *path-decompositions* of graphs are an important ingredient of dynamic programming algorithms for solving such problems. Therefore, computing the pathwidth and associated path-decomposition of graphs has both a theoretical and practical interest. In this paper, we design a Branch and Bound algorithm that computes the exact pathwidth of graphs and a corresponding path-decomposition. Our main contribution consists of several non-trivial techniques to reduce the size of the input graph (pre-processing) and to cut the exploration space during the search phase of the algorithm.
We evaluate experimentally our algorithm by comparing it to existing algorithms of the literature. It appears from the simulations that our algorithm offers a significative gain with respect to previous work. In particular, it is able to compute the exact pathwidth of any graph with less than 60 nodes in a reasonable running-time ($\leq$ 10 min.). Moreover, our algorithm also achieves good performance when used as a heuristic (i.e., when returning best result found within bounded time-limit).
Our algorithm is not restricted to undirected graphs since it actually computes the *vertex-separation* of digraphs (which coincides with the pathwidth in case of undirected graphs).

Key-words: Pathwidth, Branch and Bound, *Sage*

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Etude d'un algorithme de Branch and Bound pour le calcul de la Pathwidth

Résumé : Les décompositions en chemin de graphes sont très importants pour la conception d'algorithmes de programmation dynamique pour résoudre de nombreux problèmes NP-difficiles. Calculer la pathwidth et la décomposition en chemin correspondante sont donc d'un grand intérêt tant d'un point de vue théorique que pratique. Dans ce papier, nous proposons un algorithme de Branch and Bound qui calcule la pathwidth et une décomposition. Notre contribution principale réside dans les techniques que nous prouvons pour réduire la taille du graphe donné en entrée (prétraitement) et réduire la taille de l'espace d'exploration de la phase de recherche de l'algorithme.

Nous évaluons expérimentalement notre algorithme en le comparant aux algorithmes proposés dans la littérature. Les simulations montrent que notre algorithme apporte un gain significatif par rapport aux algorithmes existants. Il est capable de calculer la valeur exacte de la pathwidth de tout graphe composé d'au plus 60 sommets en un temps raisonnable (moins de 10 minutes). De plus, notre algorithme montre de bonnes performances lorsqu'il est utilisé en heuristique (c'est-à-dire lorsqu'il retourne le meilleur résultat trouvé en un temps donné).

Notre algorithme n'est pas spécifique au graphes non orientés car il permet de calculer la vertex-separation des digraphes (qui coïncide avec la pathwidth dans le cas des graphes non orientés).

Mots-clés : Pathwidth, Branch and Bound, *Sage*

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1 Introduction

Because of their well known algorithmic interest [15], a lot of work has been devoted to the computation of *treewidth* and *tree-decompositions* of graphs [3,33]. On the theoretical side, exact exponential algorithms [6, 20], Fixed Parameter Tractable (FPT) algorithms [8] and Approximation algorithms [5, 19, 31, 36] have been designed. Unfortunately, most of these algorithms can hardly be used in practice. For instance, the algorithm in [6] is both exponential in time and space and therefore cannot be used for graphs with more than 32 nodes. Another example is the FPT algorithms whose time-complexity is at least exponential in the treewidth: there exists no efficient implementation of the Bodlaender and Kloks algorithm [8] even for graphs with treewidth at most 4. On the positive side, efficient algorithms exist for computing the treewidth of particular graph classes, e.g., graphs with treewidth at most 4 [22]. Many heuristics for computing lower or upper bounds on the treewidth have also been designed [1, 9–11].

Surprisingly, much less work has been devoted to the computation of *pathwidth* and *path-decompositions* of graphs [3, 32]. Indeed, the pathwidth of any n-node graph is at most $O(\log n)$ times its treewidth [3]. Hence, providing an efficient algorithm to compute pathwidth immediately leads to an efficient approximation algorithm for computing the treewidth.

In this paper, we design an algorithm that computes the pathwidth and a corresponding path-decomposition of graphs. We then provide an experimental analysis of our algorithm that presents a significative improvement with respect to existing algorithms.

1.1 Practical computation of pathwidth

Any *path-decomposition* of a n-node graph $G = (V, E)$ corresponds to a *layout* (i.e., an ordering) $(v_1, \cdots, v_n)$ of its vertices. The *width* of a path-decomposition is the maximum size of the *border*[1] of the subgraphs induced by $\{v_1, \cdots, v_i\}$, $i \leq n$. The *pathwidth* of a graph is equal to the minimum width of its path-decompositions. A motivation for computing path-decompositions comes from algorithmic applications. Indeed, given a path-decomposition of a graph, dynamic programming algorithms (whose time-complexity depends on the width of the path-decomposition) can be designed for many combinatorial optimization problems [15]. Other motivations arise from the close relationship between pathwidth and other graph invariants (related to node layouts), e.g., the node search number [12,16,30], the process number [14] and the edge search number [25].

Computing the pathwidth of graphs is NP-hard [24] in general and in planar cubic graphs [28] and chordal graphs [21]. An FPT algorithm has been proposed in [8] and some kernelization reduction rules are provided in [7]. However, no polynomial-size kernel is expected [4]. On the practical side, to the best of our knowledge, very few implementations of algorithms for computing the pathwidth (exact or bounds) have been proposed.

Exact algorithms. Solano and Pioro proposed in [37] an exact branch and bound algorithm to compute the pathwidth of graphs, that checks all possible layout of the nodes and keep the best one. A mixed integer linear programming formulation (MILP) has been proposed in [2,37] and a dynamic programming algorithm (exponential both in time and space) is described in [6]. None of these methods handle graphs with more than 30 nodes. As far as we know, the best practical exact algorithm for computing the pathwidth of graphs with more than 30 nodes is based on a SAT formulation of the problem that is solved using Constraint Programming solver [2].

Heuristics. A polynomial-time heuristic for vertex-separation is proposed in [13]. It aims at computing a layout of the nodes in a greedy way . At each step, the next node of the layout is chosen using a *flow circulation* method. A heuristic based on a branch and bound algorithm has been designed in [37]. Recently, a heuristic has been proposed that is based on the combination

[1] For any graph $G = (V, E)$ and $X \subseteq V$, the border of X is the set of nodes in X that have a neighbor in $V \setminus X$.

of a `Shake` function and `Local_Search` [17]: it consists in sequentially improving a layout by switching the nodes until a local optimum is achieved.

1.2 Contributions and organization of the paper

We design a Branch and Bound algorithm that computes the exact pathwidth of graphs and a corresponding path-decomposition. Basically, our algorithm explores the set of all possible layouts of the vertex-set, returning a layout with smallest width. Our main contribution consists of several non-trivial techniques to reduce the size of the input graph (pre-processing) and to cut the exploration space during the search phase of the algorithm. Note that, our algorithm is not restricted to undirected graphs since it actually computes the *vertex-separation* of digraphs (which coincides with the pathwidth in case of undirected graphs). In Section 2, we prove several technical lemmas that allow us to prove the correctness of the pre-processing phase (Section 2.2) and of the cut procedures (Section 2.3). Section 3 is then devoted to the presentation and the proof of our algorithm. Finally, in Section 4, we evaluate experimentally our algorithm by comparing it to existing algorithms of the literature. It appears from the simulations that our algorithm offers a significative gain with respect to previous work. In particular, it is able to compute the exact pathwidth of any graph with less than 60 nodes in a reasonable running-time ($\leq$ 10 min.). Moreover, our algorithm also achieves good performance when used as a heuristic (i.e., when returning best result found within bounded time-limit).

2 Preliminaries

In this section, we formally define the notions of pathwidth and vertex-separation. Then, we give some technical lemmas which will be used to prove the correctness of our algorithm in next section.

2.1 Definitions and Notations

All graphs and digraphs considered in this paper are connected and loopless. Let $G = (V, E)$ be a graph. For any set $S \subseteq V$, let $N_G(S)$ be the set of nodes in $V \setminus S$ that have a neighbor in S. Similarly, for any digraph $D = (V, A)$ and any subset $S \subseteq V$, let $N^+_D(S)$ (resp., $N^-_D(S)$) be the set of nodes in $V \setminus S$ that have an in-neighbor (resp., an out-neighbor) in S. We omit the subscript when there is no ambiguity. In the following, we abuse the notations by writing $N^+(u_1, \ldots, u_n)$ (resp., $N^-(u_1, \ldots, u_n)$) instead of $N^+(\{u_1, \ldots, u_n\})$ (resp., $N^-(\{u_1, \ldots, u_n\})$).

For any digraph $D = (V, A)$ and $a = uv \in A$, let D/a be the graph obtained from D by contracting a. That is, D/a is obtained from D by removing u and v, and adding a new node x_{uv} with $N^+_{D/a}(x_{uv}) = N^+_D(u) \cup N^+_D(v) \setminus \{u, v\}$ and $N^-_{D/a}(x_{uv}) = N^-_D(u) \cup N^-_D(v) \setminus \{u, v\}$. Let $D \setminus u$ be the graph obtained from D by removing u and its incident arcs.

Pathwidth. A *path-decomposition* of a connected graph $G = (V, E)$ is any sequence $\mathcal{X} = (X_1, \cdots, X_\ell)$ of subsets of V such that (1) for any edge $\{u, v\} \in E$, there exists $i \leq \ell$ such that $u, v \in X_i$, and (2) $X_i \cap X_j \subseteq X_k$ for any $1 \leq i \leq k \leq j \leq \ell$. The *width* of $\mathcal{X}$ is equal to $\max_{i \leq \ell} |X_i| - 1$ and the *pathwidth* of G, $pw(G)$, is the minimum width of the path-decompositions of G.

Layouts and vertex-separation. Given a set S, a *layout* of S is any ordering of the elements of S. Let $\mathcal{L}(S)$ denote the set of all layouts of S. Let $S' \subseteq S$ and P and Q be two layouts of S' and $S \setminus S'$ respectively. Let $P \odot Q$ denote the layout of S obtained by concatenating P and Q.

Moreover, let $\mathcal{L}_P(S) = \{L \in \mathcal{L}(S) \mid L = P \odot Q, Q \in \mathcal{L}(S \setminus S')\}$, that is, $\mathcal{L}_P(S)$ is the set of all layouts of S with prefix P.

Let $D = (V, A)$ be a digraph and let $L = (v_1, \cdots, v_{|S|}) \in \mathcal{L}(S)$ be a layout of $S \subseteq V$. For any $1 \leq i \leq |S|$, let $\nu(L, i) = |N_D^+(\{v_1, \cdots, v_i\})|$ and $\nu(L) = \max_{i \leq |S|} \nu(L, i)$. The *vertex-separation* of D, denoted by $vs(D)$, is equal to the minimum $\nu(L)$ among all layouts L of V, i.e., $vs(D) = \min_{L \in \mathcal{L}(V)} \nu(L)$.

A digraph $D = (V, A)$ is *symmetric* if for each arc $uv \in A$, there is $vu \in A$. For any undirected graph G, let $vs(G)$ denote the vertex-separation of the corresponding symmetric digraph obtained from G by replacing each edge $\{u, v\}$ by two arcs uv and vu. The following result is well known

Theorem 1 *[23] For any graph G, $pw(G) = vs(G)$.*

Therefore, from now on, we will only deal with vertex-separation of digraphs.

2.2 Technical lemmas for preprocessing

In this section, we prove few technical lemmas that will be useful to prove the correctness of the preprocessing part of our algorithm. The following lemmas are known as folklore or have already been proved for undirected graph (i.e., for symmetric digraphs). Due to lack of space, the proofs are omitted and can be found in the Appendix.

Next lemma shows that we can restrict our study to strongly connected digraphs.

Lemma 1 *[Folklore] Let D be any connected digraph and let $SCC(D)$ be the set of strongly connected components of D. Then, $vs(D) = \max_{D' \in SCC(D)} vs(D')$.*

In what follows, we show that we can contract some well chosen arcs of a digraph without modifying its vertex-separation. It is well known that, in undirected graphs, edge-contraction cannot increase the pathwidth. However, this is not true anymore in digraphs as shown in the following example. Let $D = (\{a, b, c, d\}, \{ab, cb, cd, da\})$. D is acyclic and therefore, $vs(D) = 0$. On the other hand, D/cb is a directed cycle with 3 nodes and $vs(D/cb) = 1$.

Lemmas 2 and 3 explicit conditions under which arc-contractions can be done without increasing the vertex-separation.

Lemma 2 *Let $D = (V, A)$ be a n-node digraph and $uv \in A$ such that either $vu \in A$ or $N^-(v) = \{u\}$. Then, $vs(D) \geq vs(D/uv)$.*

Lemma 3 *Let $D = (V, A)$ be a n-node digraph and $u \in V$ such that $N^+(u) = \{v\}$. Then, $vs(D) \geq vs(D/uv)$.*

Next lemma show that under some conditions, the vertex-separation does not decrease after arc-contraction.

Lemma 4 *Let $D = (V, A)$ be a n-node digraph and $uv \in A$ such that,*

- *$vu \notin A$* *(no loops are created during the contraction)*
- *and*
  - *either $N^-(v) = \{u\}$ and $N^+(u) \cap N^+(v) = \emptyset$, ($v$ has in-degree 1 and no parallel arcs out-going from x_{uv} are created during the contraction)*
  - *or $N^+(u) = \{v\}$ and $N^-(u) \cap N^-(v) = \emptyset$ (u has out-degree 1 and no parallel arcs in-going to x_{uv} are created during the contraction).*

Then, $vs(D) \leq vs(D/uv)$.

From previous lemmas, we get:

Corollary 1 *Let* $D = (V, A)$ *be a* n*-node digraph and* $uv \in A$ *such that,* $vu \notin A$*, and either* $(N^-(v) = \{u\}$ *and* $N^+(u) \cap N^+(v) = \emptyset)$ *or* $(N^+(u) = \{v\}$ *and* $N^-(u) \cap N^-(v) = \emptyset)$*. Then,* $vs(D) = vs(D/uv)$*. Moreover, an optimal layout for* D *can be obtained in linear time from an optimal layout of* D/uv.

The next lemma is well known in the case of undirected graphs. We extend it to general digraphs.

Lemma 5 *Let* $D = (V, A)$ *be a* n*-node digraph and let* $a, b, c \in V$ *be three nodes with* $N^+_D(b) = N^-_D(b) = \{a, c\}$*,* $N^+_D(a) = N^-_D(a) = \{b, x\}$*,* $N^+_D(c) = N^-_D(c) = \{b, y\}$*, and* $x \neq c$*. Then,* $vs(D) = vs(D/bc)$.

2.3 Technical lemmas for the *Cut* part

In this section, we prove few technical lemmas that will be useful to prove the correctness of the *Cut* part of our *Branch & Bound* algorithm.

When looking for a good layout of the nodes of a digraph, our algorithm will, at some step, consider a layout P of some subset $S \subset V$ and look for the best layout L of V starting with P. Next lemma gives some conditions on a node $v \in V \setminus S$ to ensure that the best solution starting with $P \odot v$ is as good as L.

Lemma 6 *Let* $D = (V, A)$ *be a* n*-node digraph,* $S \subset V$*, and* $P \in \mathcal{L}(S)$*. If there exists* $v \in V \setminus S$ *such that either* $N^+(v) \subseteq (S \cup N^+(S))$*, or* $v \in N^+(S)$ *and* $N^+(v) \setminus (S \cup N^+(S)) = \{w\}$*. Then,* $\min_{L \in \mathcal{L}_P(V)} \nu(L) = \min_{L \in \mathcal{L}_{P \odot \{v\}}(V)} \nu(L)$.

Assume we know the best layout L of V having a prefix P. The next lemma expresses some conditions under which no layout of V starting with a permutation of P is better than L.

Lemma 7 *Let* $D = (V, A)$ *be a* n*-node digraph,* $S \subset V$ *and let* $P, P' \in \mathcal{L}(S)$ *be two layouts of* S*. If* $\nu(P) < \min_{L \in \mathcal{L}_P(V)} \nu(L)$ *or* $\nu(P) \leq \nu(P')$*, then* $\min_{L \in \mathcal{L}_P(V)} \nu(L) \leq \min_{L \in \mathcal{L}_{P'}(V)} \nu(L)$.

3 The algorithm

In this section, we present our exact exponential-time algorithm for computing $vs(D)$ for any n-node digraph $D = (V, A)$. To ease the presentation, we assume that D is strongly connected. If it is not the case, we apply all the steps of our algorithm to each of its strongly connected components, and then use the construction presented in the proof of Lemma 1 to deduce in linear time the layout L of D such that $\nu(L) = vs(D)$.

Our algorithm is based on a *Branch & Bound* procedure that considers all possible layouts of V and keeps a layout L minimizing $\nu(L)$. Since the worst case time-complexity of such an algorithm is $O(n!)$, we first do a pre-processing to reduce the size of the input.

Algorithm 1 *Greedy*(D, P).

Require: A digraph $D = (V, A)$, a layout P of $S \subseteq V$
1: $S := V(P)$ and $P' := P$
2: **while** $\exists v \in V \setminus S$ s.t. $N^+(v) \subseteq S \cup N^+(S)$ or $\exists v \in N^+(S)$ s.t. $|N^+(v) \setminus (S \cup N^+(S))| = 1$ **do**
3: $\quad P' := P \odot v$ and $S := S \cup \{v\}$
4: **return** P'

Algorithm 2 Update-prefix-table$(D, \mathcal{P}, P, Current, vs^*)$.

1: **if** $vs^* < Current$ and $\nu(P) = vs^*$ **then** $b := 0$ **else** $b := 1$
2: **if** $(V(P), \nu(P), 0) \in \mathcal{P}$ **then**
3: $\quad$ Replace $(V(P), \nu(P), 0)$ with $(V(P), \nu(P), b)$ in $\mathcal{P}$
4: **else**
5: $\quad$ Add $(V(P), \nu(P), b)$ in $\mathcal{P}$

3.1 Pre-processing phase

The following reduction rules are applied while it is possible. The rules that have been proposed for undirected graphs can be used only when D is a symmetric digraph. Note that, the digraph D^* obtained after applying once one of these rules is strongly connected, and that given the layout L^* such that $\nu(L^*) = vs(D^*)$, one can deduce in linear time a layout L for D such that $\nu(L) = vs(D)$.

Rule A: If there is $uv \in A$ such that, $vu \notin A$, and either $(N^-(v) = \{u\}$ and $N^+(u) \cap N^+(v) = \emptyset)$, or $(N^+(u) = \{v\}$ and $N^-(u) \cap N^-(v) = \emptyset)$, then let $D^* = D/uv$ (By Corollary 1, $vs(D^*) = vs(D)$).

Rule B: If there are three nodes $a, b, c \in V$ with $N_D^+(b) = N_D^-(b) = \{a, c\}$, $N_D^+(a) = N_D^-(a) = \{b, x\}$, $N_D^+(c) = N_D^-(c) = \{b, y\}$, and $x \neq c$, then let $D^* = D/bc$ (By Lemma 5, $vs(D^*) = vs(D)$).

Rule C: If D is symmetric, let G be the underlying undirected graph. It is shown in [7] that $vs(D^*) = vs(D)$ when D^* is obtained as follows.

- **C.1:** If (in G) two degree-one vertices u and v share their neighbor, then $D^* = D \setminus u$.
- **C.2:** If (in G) v, w are two vertices of degree two, and suppose x and y are the common neighbors of v and w, then $D^* = D/vx$.

Note that, each time that one of the above rules is applied, the number of nodes decreases by one and therefore, the worst case time-complexity is divided by n.

When no reduction rules can be applied anymore, the algorithm $B\&B$ is applied as explained below.

3.2 Branch & Bound phase

We now describe our *Branch & Bound*, that we call $B\&B$. The main contribution of our work consists of the way we cut the exploration of all layouts of V. Intuitively, let $S \subset V$ and P be a layout of S that Procedure $B\&B$ is testing, i.e., let us consider a step when $B\&B$ is considering all layouts of V with prefix P. Moreover, let L_{UB} be the best layout of D obtained so far by $B\&B$. We use the two following cutting rules:

Algorithm 3 $B\&B(D, P, vs^*, L^*, \mathcal{P})$.

```
1: if ν(P) < vs* and (V(P), ν(P), 1) ∉ P then
2:   P' := Greedy(D, P)
3:   if V(P') = V and ν(P') < vs* then
4:     return (ν(P'), P')
5:   else
6:     Current := vs*
7:     for all v ∈ V \ P', by increasing values of ν(P' ⊙ v) do
8:       if ν(P' ⊙ v) < vs* then
9:         (vs'', L'') := B&B(D, P' ⊙ v, vs*, L*, P)
10:        if vs'' < vs* then
11:          (vs*, L*) := (vs'', L'')
12:    Update-prefix-table(D, P, P, Current, vs*)
13: return (vs*, L*)
```

1. Decide, based on Lemma 7, if it is useful to explore layouts with prefix P. For this purpose, we maintain a table $\mathcal{P}$ that contains, among other, some subsets of V. If there is an entry in $\mathcal{P}$ for $S \subset V$ and satisfying some properties, we can decide that the best layout starting with the nodes in S cannot be better than L_{UB} and therefore, we do not test further layouts with prefix P.

2. Greedily extend the current prefix P with a vertex $v \in V \setminus S$, with $S = V(P)$, if v satisfies the conditions of Lemma 6. This allows us to restrict the exploration of all the layouts with prefix P to the layouts with prefix $P \odot v$.

As shown in the next section, these two cutting rules allow our algorithm to achieve better performances than existing algorithms for computing the vertex-separation of digraphs.

Let us now describe the Procedure $B\&B$ (Algorithm 3) more formally and prove its correctness. This recursive procedure takes as inputs:

- $D = (V, A)$, the considered digraph.
- L_{UB} and UB such that L_{UB} is the best layout of V obtained so far and $UB = \nu(L_{UB})$. Note that UB is an upper bound for $(vs(D)$.
- P, a layout of a subset $S \subseteq V$. Intuitively, P is the prefix of the layouts that will be tested by this execution of $B\&B$. That is, either Procedure $B\&B$ will find a layout $L = P \odot Q$ of V such that $\nu(L) < \nu(L_{UB})$ or it decides that $\nu(L) \geq \nu(L_{UB})$ for any $L \in \mathcal{L}_P(V)$.
- $\mathcal{P}$ is a set of triples $(S_i, \nu_i, b_i)_{i \leq \rho}$, where $S_i \subset V$, ν_i is an integer, and b_i is a boolean for any $i \leq \rho$. Intuitively, $(S_i, \nu_i, b_i) \in \mathcal{P}$ means that a layout P_i of S_i has already been checked, and, if $b_i = 1$, then it is useless to test any other layout of V starting with the nodes in S_i.

  Moreover, $\nu_i = \nu(P_i)$ and $b_i = 0$ if $\nu_i = \min_{L \in \mathcal{L}_{P_i}(V)} \nu(L)$.

The initial values for the inputs of $B\&B$ are: $P = \emptyset$, L_{UB} is any layout L of V and $UB = \nu(L) < |V|$, and $\mathcal{P} = \emptyset$.

Let $\mathcal{P} = (S_i, \nu_i, b_i)_{i \leq \rho}$ and (L_{UB}, UB) be the current values of the global variables at some step of the execution of the algorithm. Then, executing $B\&B(D, P, UB, L_{UB}, \mathcal{P})$, with $P = (v_1, \cdots, v_k)$ being a layout of $S = \{v_1, \cdots, v_k\}$, proceeds as follows.

- if $\nu(P) \geq UB$, then $B\&B(D, P, UB, L_{UB}, \mathcal{P})$ does nothing, i.e., the exploration of the layouts starting by P stops. Indeed, by definition, $\min_{L \in \mathcal{L}_P(V)} \nu(L) \geq \nu(P)$. Therefore, $\min_{L \in \mathcal{L}_P(V)} \nu(L) \geq UB$ and no layout of V starting with P can be better than L_{UB}.
- else, if (S, x, b) belongs to $\mathcal{P}$ then this means that a layout P' of S has been already tested, $x = \nu(P')$ and $UB \leq \min_{L \in \mathcal{L}_{P'}(V)} \nu(L)$. If $b = 1$ or $\nu(P) \geq \nu(P')$, then $B\&B(D, P, UB, L_{UB}, \mathcal{P})$ does nothing, i.e., the exploration of the layouts starting by P stops. Indeed, either $x < \min_{L \in \mathcal{L}_{P'}(V)} \nu(L)$ (if $b = 1$) or $\nu(P) \geq \nu(P')$. By Lemma 7, it implies that $\min_{L \in \mathcal{L}_{P'}(V)} \nu(L) \leq \min_{L \in \mathcal{L}_P(V)} \nu(L)$. Again, no layout of V starting with P can be better than L_{UB}.
- otherwise, $B\&B(D, P, UB, L_{UB}, \mathcal{P})$ applies the sub-procedure $Greedy(D, P)$ (Algorithm 1) that returns a prefix P' extending P (i.e., P is a prefix of P') and $\min_{L \in \mathcal{L}_P(V)} \nu(L) = \min_{L \in \mathcal{L}_{P'}(V)} \nu(L)$. Then, it calls $B\&B(D, P' \odot v, UB, L_{UB}, \mathcal{P})$ for all $v \in V \setminus V(P')$ such that $\nu(P' \odot v) < UB$, starting from the most promising vertices (i.e., by increasing value of $\nu(P' \odot v)$).

  At the end of the exploration of the layouts with prefix P, we update the table $\mathcal{P}$ (Algorithm 2). That is,

  - if there was no triple $(S, *, *)$ in $\mathcal{P}$, then, $(S, \nu(P), b)$ is added to $\mathcal{P}$ with $b = 0$ if and only if $\nu(P) = \nu(L^*)$.
  - else, i.e., if there is $(S, x, 0) \in \mathcal{P}$ with $\nu(P) < x$ and $\nu(P) < UB$, then, $(S, \nu(P), b)$ replaces $(S, x, 0)$ in $\mathcal{P}$ with $b = 0$ if and only if $\nu(P) = \nu(L^*)$.

4 Simulations and interpretation of results

In this section, we evaluate the performance of our algorithm. In particular, we compare it to other exact algorithms and heuristics from the literature. We also analyze the impact of the three optimization phases of our algorithm : pre-processing, greedy steps, and cuts using prefixes. It appears that our algorithm is able to compute the vertex-separation of all graphs with at most 60 nodes but also for some graphs up to 250 nodes. Not only our algorithm outperforms the performance of existing exact algorithms but it can also be used as a good heuristic to obtain upper bounds on the vertex-separation.

4.1 Implementation

We have implemented several variants of our Branch and Bound algorithm in order to analyze the impact of each of our optimization sub-procedures. Our algorithms are implemented in Cython using the *Sage* open-source mathematical software [38]. All computations have been performed on a computer equipped with a Intel Xeon CPU operating at 3.20GHz and 64GB of RAM. Note that, all the algorithms take a digraph as an input. If the input is a non-directed graph, we consider it as a symmetric directed graph. We now present our variants of the Branch and Bound algorithm (Tab. 1).

BAB. This is the basic version of the branch and bound algorithm (as already implemented in [37]). It takes digraph as an input D and is applied sequentially on each of the strongly connected components of D. For each strongly connected component C of D, **BAB** considers all possible layouts of $V(C)$ and keeps a layout L minimizing $\nu(L)$.

Method	Greedy-steps	Pre-processing	Prefix	Ref.
BAB				[37]
BAB-G	✓			**[this paper]**
BAB-GP	✓	✓		**[this paper]**
BAB-GPP	✓	✓	✓	**[this paper]**

Table 1: Versions of the B&B algorithms.

BAB-G. In this variant, we add the greedy-step process (Algorithm 1) to the basic variant **BAB**.

BAB-GP. In this variant, we add the pre-processing phase to the variant **BAB-G**. That is, if some arc-contractions or node-deletions can be performed on the input digraph, we execute them.

BAB-GPP. This last variant is our main algorithm which is obtained from **BAB-GP** by adding a cut-process by storing some subsets of nodes a layout of which has already been tested as prefix (Algorithm 2).

For the different variants, it is critical to have a fast access to the data structure representing the digraph. To speed-up critical operations on neighborhoods (union, intersection, size, etc.), we store out-neighborhoods using bitsets (in particular, a single integer when $n \leq 64$). This enables us to use bitwise operations (OR for union, AND for intersection, etc.).

For **BAB-GPP**, the prefixes are stored in a tree structure which allows us a fast access to already tested prefixes. We parameterized the maximum length of a prefix (which corresponds to the tree depth) and set it by default to $\min\{n/3,\ 50\}$. The total number of stored prefixes is also parameterized to limit memory usage. By default we store at most 10^6 prefixes.

Finally, we used a timer to limit computation time per (di)graph. When the time is up, we return the best solution found so far and record it as an upper-bound on the vertex-separation of the input digraph. Following [2], we set this limit to 10 min.

Previous exact algorithms. The pathwidth problem is known to be Fixed Parameter Tractable, that is, $vs(G) \leq k$ can be decided in time $f(k)|V(G)|$ [8]. However, the function f is of order $O(2^{k^c})$ for some $c \geq 2$. Moreover, there is few hope to obtain a better function since pathwidth is unlikely to have a polynomial kernel [4]. Therefore, such algorithms have not been implemented and people have focused on exact exponential-time algorithms.

In addition to the basic Branch and Bound **BAB** of Solano [37], we are aware of the following implementations of algorithms to compute vertex-separation of graphs.

MILP. Some mixed integer linear programming formulations for the vertex-separation (MILP) have been proposed in [2, 37]. A similar formulation has been implemented in *Sage*[2]. We use this function for purpose of comparison.

DYNPROG. In [6], a dynamic programming algorithm, called DYNPROG, is designed to compute the vertex-separation of a digraph D. Roughly, this algorithm aims at deciding whether $vs(D) \leq k$ for all $k = 1, \cdots, |V(D)|$. For a given $k \leq |V(D)|$, DYNPROG stores the subsets of $V(D)$ with border at most k and uses dynamic programming to limit the number of stored subsets. An implementation of DYNPROG is also available in *Sage*[2].

[2]Module `sage.graphs.graph_decompositions.vertex_separation`.

Since the worst case time and space complexities of DynProg is $O(2^n)$, it can be used only for graphs with strictly less than 32 nodes.

SAT. In [2], an algorithm to compute the pathwidth of graphs is designed by formulating the PATHWIDTH problem as a Boolean satisfiability testing (SAT) instance and solving this SAT instance using the *MiniSat* solver [26]. No implementations are provided but the algorithm has been tested on the *Rome graphs* dataset [34]. The SAT algorithm have been able to compute the pathwidth of 17% of the instances in the *Rome graphs* dataset.

4.2 Comparison of our algorithms with BAB, MILP, and DYNPROG in random digraphs

In this section, we use the available implementations of MILP and DYNPROG in *Sage* to compare their performance with our algorithms in random directed graphs. Random directed graphs with N nodes are generated using the `graphs.RandomDirectedGNM(N,M)` method of *Sage* to generate them, where $M = \text{density} * N(N-1)$ is the number of arcs. For several network sizes ($N \in \{20, 25, 30, 40, 50\}$), we execute the algorithms for various densities ($0 < \textit{density} < 1$). For each size N and each density, we run the algorithms on 1 000 instances. The same instances are used for all algorithms. The average running times are depicted on Fig. 1.

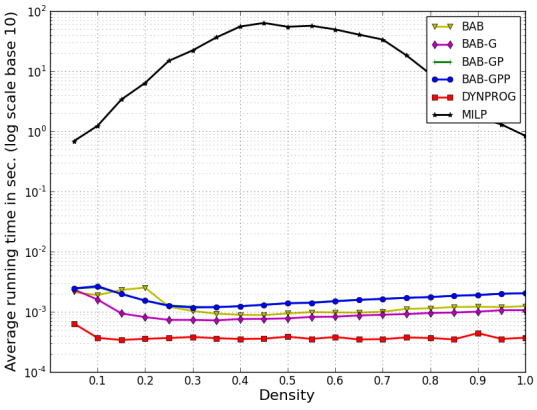
Small graphs ($N = 20$). Fig. 1(a) shows that the MILP Algorithm is out-performed by all other algorithms even for $N = 20$. In particular, two weeks of computations have been required to generate Fig. 1(a) because of MILP. Fig. 1(a) also shows that, for $N = 20$, Algorithm DYNPROG is slightly faster than all variants of **BAB**. In particular, the running time of **BAB-GPP** is a bit larger than for other variants. This is probably due to the fact that the cuts on the exploration space done by the optimization procedures executed by **BAB-GPP** are negligible compared with the time needed to apply the optimization procedures.

Graphs with $N \in \{25, 30\}$. Figs. 1(b) and 1(c) show that, for graphs with at least 25 nodes, our algorithms become competitive with respect to DYNPROG. In particular, for graphs with 30 nodes, our algorithms are significantly faster (Recall that DYNPROG can only used for graphs with at most 31 nodes).

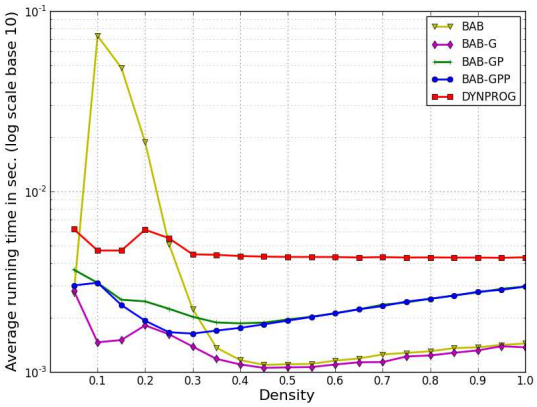
Impact of optimization Phases. In Figs. 1(b) to 1(e), we observe that for densities ≥ 0.4, all variants of the branch and bound algorithm are very fast with negligeable differences (≤ 0.01 sec.). However, we observe large variations for smaller densities. More precisely, we observe in Fig. 1(b) the significant speed-up offered by the Greedy steps w.r.t. the basic branch and bound proposed in [37]. The benefits of the pre-processing phases are however difficult to observe on such small random digraphs since the conditions required to contract arcs rarely occur, and so we observe an improvement in Fig. 1(d) only when the density is 0.05. However, Fig. 1(d) reports large speed-up when using prefixes to cut the search space. In Fig. 1(e), we point out that the running time of **BAB-GPP** varies a lot depending on the graphs (especially for graphs with small density). We report on the variations in running time when $N = 50$ and using the best settings of our algorithm. For densities below 0.4 the running time varies by up to two orders of magnitude, while for larger densities, the range of variations is very small. Last, we have reported in Fig. 1(f) the evolution of the running time of **BAB-GPP** for different densities. This confirms that the higher the density, the larger the size of the graphs we are able to solve. Note that we have observed the same behaviors for all algorithms with symetric digraphs (and so undirected graphs).

4.3 Comparison of BAB-GPP with SAT on the *Rome graphs* dataset

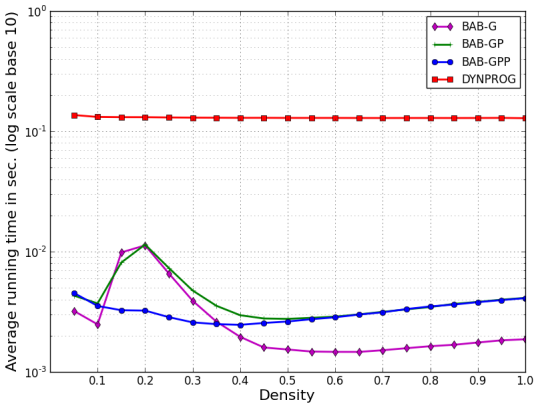
The *Rome graphs* dataset [34] consists of 11 529 undirected n-node graphs with $10 \leq n \leq 100$.



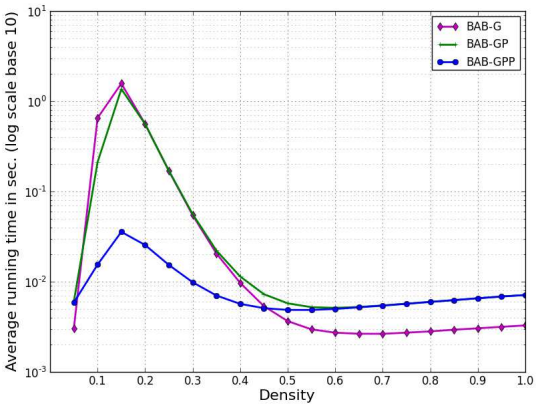
(a) $N = 20$



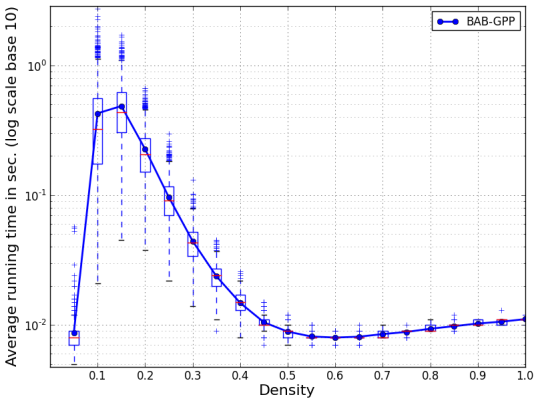
(b) $N = 25$



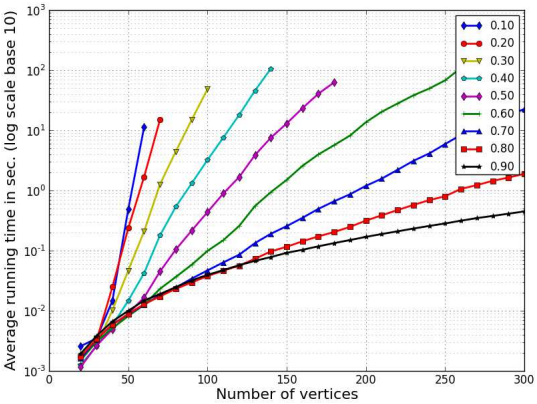
(c) $N = 30$



(d) $N = 40$



(e) $N = 50$, variations

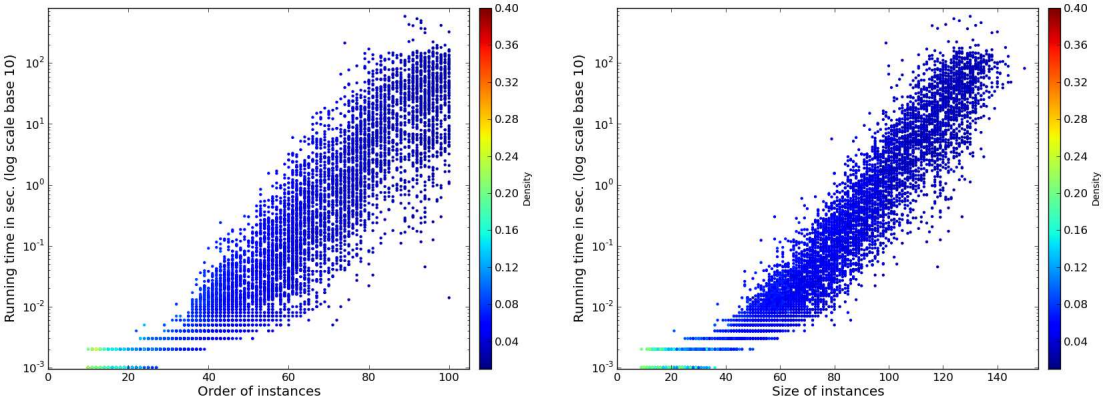


(f) Evolution of the computation time for different densities. Average values over 100 digraphs.

Figure 1: Average running time of the algorithms on random digraphs.

N	≤ 82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	**Total**
Nb graphs	9586	86	78	73	70	68	69	63	59	116	119	134	154	139	148	139	143	144	141	11 529
Solved	9586	85	77	68	65	62	65	59	50	96	91	104	113	91	110	80	77	70	78	11 027
Unsolved	0	1	1	5	5	6	4	4	9	20	28	30	41	48	38	59	66	74	63	502

Table 2: Repartition of (un)solved instances for the Rome graph Instance.



(a) Increasing number of nodes

(b) Increasing number of edges

Figure 2: Computation time for Rome graphs. One dot per instance. The color indicates the density of the instance.

In [2], the performance of the SAT algorithm has been evaluated using this benchmark. With 10 min. time limit per graph, the algorithm of [2] has been able to compute the pathwidth for 17.0% of the Rome graphs. In particular, it is stated that "We note that almost all small graphs ($n+m < 45$) could be solved within the given timeout, however, for larger graphs, the percentage of solved instances rapidly drops [...] Almost no graphs with $n+m > 70$ were solved." [2] (where m is the number of edges of the considered graphs).

In contrast, our algorithm has computed the pathwidth of 95.6% of the graphs in the *Rome dataset*, with same time limit of 10 min. Note that, in particular, we solved all instances with at most 82 vertices. We report in Tab. 2 the repartition of (un)solved instances and in Fig. 2 the computation time per solved graphs.

4.4 Impact of prefix length

Our main algorithm **BAB-GPP** is parameterized by the maximum length of the prefixes that we store and that allow us to cut the search space during the branch and bound process. We have evaluated the impact of this parameter when our algorithm is executed on some specific graphs. In particular, the *Mycielski graph* is considered as a hard instance for integer programming formulations for pathwidth [27]. The Mycielski graph M_k is a triangle-free graph with chromatic number k having the smallest possible number of vertices. See [29] for a formal definition of M_k. Note that, $|V(M_2)| = 2$ and $|V(M_k)| = 2|V(M_{k-1})| + 1$ for any $k > 2$. We ran our algorithm on the Mycielski graph M_k for $k \leq 8$. The results we obtained are depicted in Tab. 3 (for $k \in \{7, 8\}$ we only got upper bounds).

Tab. 4 presents the running time of **BAB-GPP** for the Mycielski graph M_6 and different bounds on the size of the stored prefixes. In Tab. 4, the column *Visited nodes* refers to the

k	1	2	3	4	5	6	7	8
$\|V(M_k)\|$	1	2	5	11	23	47	95	191
$pw(M_k)$	0	1	2	5	10	20	≤ 38	≤ 72

Table 3: Pathwidth of some Mycielski graphs.

Max. prefix length	**Time (in sec.)**	**Visited nodes**	**Stored prefix**
1	2226.45	1 256 780 074	44
5	144.93	82 417 700	16 386
8	5.81	3 319 482	47 756
10	1.07	664 677	61 466
15	0.77	496 482	65 252
20	0.78	496 482	65 253

Table 4: Running time of **BAB-GPP** for the Mycielski graph M_6.

number of nodes of the branch and bound exploration space that are actually considered.

Tab. 4 shows that storing larger prefixes allows for an impressive reduction of the computation time. However, we have no improvement here when allowing length of 20 instead of 15, and larger values behave similarly. This is probably due to the fact that in this experiment, because of the greedy steps, the algorithm stores only one prefix of length ≥ 15.

This suggests that the combination of the greedy steps and of the storage of the prefixes allows good performances even when the length of the prefixes is bounded. Therefore, memory-space seems not to be an issue for graphs of reasonable size (while the algorithm might potentially store an exponential number of prefixes).

4.5 Using BAB-GPP as an heuristic

Since computing the optimal vertex-separation of a graph is NP-hard, some research has been devoted to design heuristic algorithms for this problem. In [17], an local-search based heuristic is designed: starting from some layout of the nodes of D, the solution is improved by locally switching consecutive nodes in the layout until no further improvement can be obtained. The VSPLIB [40] has been designed for benchmarking this heuristic [17]. VSPLIB [40] contains 173 instances: 50 $n \times n$ grids with $5 \leq n \leq 54$; 50 trees with respectively 22, 67, and 202 nodes and pathwidth 3, 4, and 5; a set of 73 graphs, called HB, with $n \leq 10 \leq 960$ (see [17] for more details). In particular, the pathwidth of $n \times n$ grids equals n and the pathwidth of trees can be computed in linear time [18, 35]. Therefore, this benchmark allows to evaluate the performance of heuristic.

We used Algorithm **BAB-GPP** as an heuristic: if the time is up before the end of its execution, the algorithm returns the value computed so far (i.e., an upper bound on the vertex-separation of the graph).

We were able to compute the exact pathwidth for the grids with side $n \leq 13$, the trees with $n \leq 67$, and 26 of the HB graphs including one with 957 nodes. More interestingly, for all grids and trees of the VSPLIB, the final value returned by **BAB-GPP** equals the exact pathwidth. That is, our algorithm always finds quickly an optimal layout and most of the execution time is devoted to prove its optimality.

In particular for a $n \times n$ grid, the first solution found is always the pathwidth. This is due to the order in which we add the vertices in the layouts: starting from a node with smallest degree and always adding a node that minimizes the increase of the size of the border. Proceeding that

way will always give an optimal layout in square grids.

For trees, the first layout tested by **BAB-GPP** is not always the optimal one, but an optimal one is found very quickly. It would be interesting to understand why our branch and bound algorithm performs well in trees.

5 Conclusion

In this paper, we have presented a new branch and bound algorithm for computing the pathwidth of graphs and the vertex-separation of digraphs. This algorithms combines new pre-processing rules for reducing the size of the input digraph and new cutting rules allowing for significantly reducing the search space. Experimental validation of our algorithm on benchmark instances suggest that our approach is more promizing than previous proposals, based on ILP or SAT, for solving large instances. Indeed, the drawbacks of ILP and SAT formulations for layout problems are both in the large number of symmetries of the problems, and in the time needed to fill the optimality gap (i.e., distance between the lower bound based on the fractional relaxation of the formulation and the best integral solution).

Our next steps are on one hand to propose our code for inclusion into future releases of *Sage*. On the other hand, we will search for new cutting rules to further reduce computation time. In particular, looking for good lower bounds for pathwidth of graphs is a theoretical issue that received few attention. It would moreover speed up our algorithm since the main computation time seems dedicated to prove the optimality of the best value computed.

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A Proofs

A.1 Proofs of technical lemmas for pre-processing

Lemma 1 (Folklore) *Let D be any connected digraph and let $SCC(D)$ be the set of strongly connected components of D. Then, $vs(D) = \max_{D' \in SCC(D)} vs(D')$.*

Proof. Let L be any layout of D and let $D' \in SCC(D)$. Let L' be the corresponding layout of D' (that is, for any $u, v \in V(D')$, u appears before v in L' if and only if u appears before v in L). Then, $\nu(L') \leq \nu(L)$.

Conversely, for any $D' \in SCC(D)$, let $L_{D'}$ be an optimal layout of D'. For any $D', D'' \in SCC(D)$, we set $D' \prec D''$ if there is a path from D'' to D'. Note that, in this case, there is no path from D' to D'', and therefore $\prec$ is a partial order. Let L be the layout of D obtained by concatenating the layouts in $(L_{D'})_{D' \in SCC(D)}$ in such a way that $L_{D''}$ is after $L_{D'}$ if $D' \prec D''$ for all $D', D'' \in SCC(D)$ (this is possible since $\prec$ is a partial order). Then $\nu(L) \leq \max_{D' \in SCC(D)} \nu(L_{D'})$. ■ ■

Lemma 2 *Let $D = (V, A)$ be a n-node digraph and $uv \in A$ such that either $vu \in A$ or $N^-(v) = \{u\}$. Then, $vs(D) \geq vs(D/uv)$.*

Proof. Let $L = (v_1, \cdots, v_n)$ be a layout of V with $\{u, v\} = \{v_i, v_j\}$ and $i < j$.

Let us consider the layout $L' = (v'_1, \cdots, v'_{n-1}) = (v_1, \cdots, v_{i-1}, v_{i+1}, \cdots, v_{j-1}, x_{uv}, v_{j+1}, \cdots, v_n)$ of $V(D/uv)$[3]. Let $1 \leq k < n-1$, $w \in N^+_{D/uv}(v'_1, \cdots, v'_k)$ and let $x \in \{v'_1, \cdots, v'_k\}$ such that $xw \in A(D/uv)$.

Let $N^k = N^+_D(v_1, \cdots, v_k)$ if $k < i$, and $N^k = N^+_D(v_1, \cdots, v_{k+1})$ if $i \leq k < j-1$, and $N^k = N^+_D(v_1, \cdots, v_{k+2})$ if $k \geq j-1$.

- If $w \neq x_{uv}$, then
  - either $x \neq x_{uv}$ and $xw \in A(D)$ and $w \in N^k$.
  - or $x = x_{uv}$, then $k \geq j-1$, $w \notin \{u, v\}$ and either $uw \in A(D)$ or $vw \in A(D)$. Therefore, $w \in N^k$.
- If $w = x_{uv}$ then $k < j-1$ and either $xu \in A(D)$ or $xv \in A(D)$.
  - if $k < i$, then either u or v belong to N^k since $xu \in A(D)$ or $xv \in A(D)$.
  - otherwise, $i \leq k < j-1$ and, by hypothesis on u and v:
    - either $v_i v_j \in A$, in which case $v_j \in N^k$,
    - or $v_i = v$, $v_j = u$ and we have that $xu \in A(D)$, since $N^-(v) = \{u\}$ and $x \neq u$ (i.e., $xv \notin A(D)$). Therefore, $xu \in A(D)$ and $u \in N^k$.

In all cases, we get that $|N^+_{D/uv}(v'_1, \cdots, v'_k)| \leq |N^k|$ and therefore, for all layouts L of D there is a layout L' of D/uv such that $\nu(L') \leq \nu(L)$. Hence, $vs(D/uv) \leq vs(D)$. ■ ■

[3]Here, to simplify the presentation, we slightly abuse the notations by identifying the nodes of $D \setminus \{u, v\}$ and the nodes of $(D/uv) \setminus \{x_{uv}\}$.

Lemma 3 *Let $D = (V, A)$ be a n-node digraph and $u \in V$ such that $N^+(u) = \{v\}$. Then, $vs(D) \geq vs(D/uv)$.*

Proof. Let $L = (v_1, \cdots, v_n)$ be a layout of V with $\{u, v\} = \{v_i, v_j\}$ and $i < j$. The case $v_i v_j \in A$ is similar to the one of previous lemma. Therefore, let us assume that $v_i = v$ and $vu \notin A$. Let us consider the layout $L' = (v'_1, \cdots, v'_{n-1}) = (v_1, \cdots, v_{i-1}, x_{uv}, v_{i+1}, \cdots, v_{j-1}, v_{j+1}, \cdots, v_n)$ of $V(D/uv)$. Let $1 \leq k < n-1$, $w \in N^+_{D/uv}(v'_1, \cdots, v'_k)$ and let $x \in \{v'_1, \cdots, v'_k\}$ such that $xw \in A(D/uv)$.

Let $N^k = N^+_D(v_1, \cdots, v_k)$ if $k < i$, $N^k = N^+_D(v_1, \cdots, v_{i-1}, v = v_i, \cdots, v_k)$ if $i \leq k < j$, and $N^k = N^+_D(v_1, \cdots, v_{i-1}, v, v_{i+1}, \cdots, v_{j-1}, u, v_{j+1}, \cdots, v_{k+1})$ if $k \geq j$.

- If $w, x \neq x_{uv}$, then $xw \in A(D)$ and $w \in N^k$.
- If $w = x_{uv}$ then $k < i$, $x \notin \{u, v\}$, and either $xu \in A(D)$ or $xv \in A(D)$. Hence, u or v belongs to N^k.
- If $x = x_{uv}$ then $k \geq i$, $w \notin \{u, v\}$, either $uw \in A(D)$ or $vw \in A(D)$. But v being the single out-neighbor of u and $v \neq w$, we get that $vw \in A(D)$, and therefore, $w \in N^k$.

In all cases, we get that $|N^+_{D/uv}(v'_1, \cdots, v'_k)| \leq |N^k|$ and therefore, for all layouts L of D there is a layout L' of D/uv such that $\nu(L') \leq \nu(L)$. Hence, $vs(D/uv) \leq vs(D)$. ■ ■

Lemma 4 *Let $D = (V, A)$ be a n-node digraph and $uv \in A$ such that,*

- *$vu \notin A$* *(no loops are created during the contraction)*
- *and*
  - *either $N^-(v) = \{u\}$ and $N^+(u) \cap N^+(v) = \emptyset$, (v has in-degree 1 and no parallel arcs out-going from x_{uv} are created during the contraction)*
  - *or $N^+(u) = \{v\}$ and $N^-(u) \cap N^-(v) = \emptyset$ (u has out-degree 1 and no parallel arcs in-going to x_{uv} are created during the contraction).*

Then, $vs(D) \leq vs(D/uv)$.

Proof. Let $L' = (v_1, \cdots, v_{i-1}, x_{uv}, v_{i+1}, \cdots, v_{n-1})$ be any optimal layout of D/uv.

Case: $v_k v \notin A$ for any $k < i$, i.e., $v \notin N^+_D(v_1, \cdots, v_j)$. Note that, in particular, it is the case when $N^-(v) = \{u\}$.

Let $L_1 = (v_1, \cdots, v_{i-1}, v, u, v_{i+1}, \cdots, v_{n-1})$ and $L_2 = (v_1, \cdots, v_{i-1}, v, u, v_{i+1}, \cdots, v_{n-1})$.

We show that $\nu(L_1) \leq \nu(L')$ or $\nu(L_2) \leq \nu(L')$.

1. Let $j < i$ and $w \in N^+_D(v_1, \cdots, v_j)$. Since $v \notin N^+_D(v_1, \cdots, v_j)$, $w \neq v$.
   - If $w \neq u$, then $w \in N^+_{D/uv}(v_1, \cdots, v_j)$.
   - Otherwise, there is v_h, $h \leq j$ such that $v_h u \in A(D)$ and so $v_h x_{uv} \in A(D/uv)$ and, thus, $x_{uv} \in N^+_{D/uv}(v_1, \cdots, v_j)$.

   Hence, in both cases, $|N^+_D(v_1, \cdots, v_j)| \leq |N^+_{D/uv}(v_1, \cdots, v_j)|$.
2. Let $j > i$ and $w \in N^+_D(v_1, \cdots, v_j)$. Since $w \notin \{u, v\}$, then $w \in N^+_{D/uv}(v_1, \cdots, v_{i-1}, x_{uv}, v_{i+1}, \cdots, v_j)$ and, again, $|N^+_D(v_1, \cdots, v_j)| \leq |N^+_{D/uv}(v_1, \cdots, v_j)|$.

3. By definition of x_{uv}, $|N_D^+(v_1,\cdots,v_{i-1},u,v)| = |N_D^+(v_1,\cdots,v_{i-1},v,u)| = |N_{D/uv}^+(v_1,\cdots,v_{i-1},x_{uv})|$.
4. It remains to show that $|N_D^+(v_1,\cdots,v_{i-1},v)| \leq \nu(L')$ or $|N_D^+(v_1,\cdots,v_{i-1},u)| \leq \nu(L')$
   First, note that $N_D^+(v_1,\cdots,v_{i-1},v) = (N_D^+(v_1,\cdots,v_{i-1})\backslash\{v\})\cup(N_D^+(v)\cap\{u,v_{i+1},\cdots,v_{n-1}\})$.
   Moreover, since $v \notin N_D^+(v_1,\cdots,v_{i-1})$ and $vu \notin A$, this implies that

$$N_D^+(v_1,\cdots,v_{i-1},v) = N_D^+(v_1,\cdots,v_{i-1}) \cup (N_D^+(v)\cap\{v_{i+1},\cdots,v_{n-1}\}). \quad (1)$$

   On the other hand, by definition, we have that

$$N_D^+(v_1,\cdots,v_{i-1},v,u) = (N_D^+(v_1,\cdots,v_{i-1})\backslash\{u\})\bigcup((N_D^+(v)\cup N_D^+(u))\cap\{v_{i+1},\cdots,v_{n-1}\}). \quad (2)$$

   - If $N_D^+(v)\cap\{v_{i+1},\cdots,v_{n-1}\} \subseteq N_D^+(v_1,\cdots,v_{i-1})$, then $N_D^+(v_1,\cdots,v_{i-1},v) = N_D^+(v_1,\cdots,v_{i-1})$ (by equation (1)). Hence, by item (1), we get that $|N_D^+(v_1,\cdots,v_{i-1},v)| = |N_D^+(v_1,\cdots,v_{i-1})| \leq |N_{D/uv}^+(v_1,\cdots,v_{i-1})|$.
   - Else, let us assume that $(N_D^+(v)\cap\{v_{i+1},\cdots,v_{n-1}\})\setminus N_D^+(v_1,\cdots,v_{i-1}) \neq \emptyset$.
     - If, either $(N_D^+(u)\backslash N_D^+(v_1,\cdots,v_{i-1},v))\cap\{v_{i+1},\cdots,v_{n-1}\}) \neq \emptyset$ or $u \notin N_D^+(v_1,\cdots,v_{i-1})$, then, by Equations (1) and (2), we get $|N_D^+(v_1,\cdots,v_{i-1},v)| \leq |N_D^+(v_1,\cdots,v_{i-1},v,u)| \leq |N_{D/uv}^+(v_1,\cdots,x_{uv})|$ (where the last inequality comes by item 3)
     - Otherwise, since either $N^+(u)\cap N^+(v) = \emptyset$ or $N^+(u) = \{v\}$, we get that $N^+(u)\cap\{v,v_{i+1},\cdots,v_{n-1}\} \subseteq N_D^+(v_1,\cdots,v_{i-1})\cup\{v\}$.
       Moreover, $u \in N_D^+(v_1,\cdots,v_{i-1})$. Hence, $N_D^+(v_1,\cdots,v_{i-1},u) = N_D^+(v_1,\cdots,v_{i-1})\cup\{v\}\setminus\{u\}$ and $|N_D^+(v_1,\cdots,v_{i-1},u)| = |N_D^+(v_1,\cdots,v_{i-1})|$. By item (1), we get that $|N_D^+(v_1,\cdots,v_{i-1},u)| \leq |N_{D/uv}^+(v_1,\cdots,v_{i-1})|$.

Hence, $vs(D) \leq \min\{\nu(L_1),\nu(L_2)\} \leq \nu(L') = vs(D/uv)$.

Case: there is $k<i$ such that $v_kv \in A$. In that case, we have $N^+(u) = \{v\}$ and $N^-(u)\cap N^-(v) = \emptyset$. Let k be the smallest integer such that $v_kv \in A$.

Note that, since $N^-(v) = \{u\}$ or $N^-(u)\cap N^-(v) = \emptyset$, we have that $v_ku \notin A$.

If there is $\ell < k$ such that $v_\ell u \in A$, let $L = (v_1,\cdots,v_{k-1},u,v_k,v_{k+1},\cdots,v_{i-1},v,v_{i+1},\cdots,v_{n-1})$.
Otherwise, Let $L = (v_1,\cdots,v_k,u,v_{k+1},\cdots,v_{i-1},v,v_{i+1},\cdots,v_{n-1})$.

We show that $\nu(L) \leq \nu(L')$.

1. Let $j<k$ and $w \in N_D^+(v_1,\cdots,v_j)$. Since $v \notin N_D^+(v_1,\cdots,v_j)$, $w \neq v$.
   - If $w \neq u$, then $w \in N_{D/uv}^+(v_1,\cdots,v_j)$.
   - Else, there is v_h, $h \leq j$ such that $v_hu \in A(D)$ and so $v_hx_{uv} \in A(D/uv)$ and, thus, $x_{uv} \in N_{D/uv}^+(v_1,\cdots,v_j)$.

   Hence, in both cases, $|N_D^+(v_1,\cdots,v_j)| \leq |N_{D/uv}^+(v_1,\cdots,v_j)|$.
2. Let $j>i$ and $w \in N_D^+(v_1,\cdots,v_{k-1},u,v_k,\cdots,v_{i-1},v,v_{i+1},\cdots,v_j) = P$ (resp., $w \in N_D^+(v_1,\cdots,v_k,u,v_{k+1},\cdots,v_{i-1},v,v_{i+1},\cdots,v_j) = Q$) , then $w \in N_{D/uv}^+(v_1,\cdots,v_{i-1},x_{uv},v_{i+1},\cdots,v_j)$ and, again, $|Q|,|P| \leq |N_{D/uv}^+(v_1,\cdots,v_j)|$.
3. Let $k \leq j < i$. Note that, $v \in N_D^+(v_1,\cdots,v_{k-1},u,v_k,\cdots,v_j) = P$ (resp., $v \in N_D^+(v_1,\cdots,v_k,u,\cdots,v_j) = Q$) and $x_{uv} \in N_{D/uv}^+(v_1,\cdots,v_j)$.
   Moreover, for any $w \in P\backslash\{v\}$ (resp., for any $w \in Q\backslash\{v\}$), we have $w \in N_{D/uv}^+(v_1,\cdots,v_j)$ because $N^+(u) = \{v\}$. Hence, $|Q|,|P| \leq |N_{D/uv}^+(v_1,\cdots,v_j)|$.

4. Moreover, by definition of x_{uv}, $|N_D^+(v_1,\cdots,v_k,u,v_{k+1},\cdots,v_{i-1},v)| = |N_{D/uv}^+(v_1,\cdots,x_{uv})|$ and, similarly, $|N_D^+(v_1,\cdots,v_{k-1},u,v_k,\cdots,v_{i-1},v)| = |N_{D/uv}^+(v_1,\cdots,x_{uv})|$.
5. Finally,
   - If there is $\ell < k$ such that $v_\ell u \in A$, then $N_D^+(v_1,\cdots,v_{k-1},u) = N_D^+(v_1,\cdots,v_{k-1}) \cup \{v\} \backslash \{u\}$. Hence $|N_D^+(v_1,\cdots,v_{k-1},u)| \leq |N_D^+(v_1,\cdots,v_{k-1})| \leq |N_{D/uv}^+(v_1,\cdots,v_{k-1})|$ (by first item).
   - Otherwise, let $N_D^+(v_1,\cdots,v_k,u) = N_D^+(v_1,\cdots,v_k)$ (because $u \notin N_D^+(v_1,\cdots,v_k)$ and $v \in N_D^+(v_1,\cdots,v_k)$). So, $|N_D^+(v_1,\cdots,v_k,u)| = |N_D^+(v_1,\cdots,v_k)| \leq |N_{D/uv}^+(v_1,\cdots,v_k)|$ (by third item).

Hence, $vs(D) \leq \nu(L) \leq \nu(L') = vs(D/uv)$. ■

■

Lemma 5 *Let $D=(V,A)$ be a n-node digraph and let $a,b,c \in V$ be three nodes with $N_D^+(b) = N_D^-(b) = \{a,c\}$, $N_D^+(a) = N_D^-(a) = \{b,x\}$, $N_D^+(c) = N_D^-(c) = \{b,y\}$, and $x \neq c$. Then, $vs(D) = vs(D/bc)$.*

Proof. Since $cb \in A$, by Lemma 2, $vs(D/bc) \leq vs(D)$.

Let $L = (v_1,\cdots,v_{n-1})$ be a layout of D/bc with $v_i = a$, $v_j = x_{bc}$. W.l.o.g., we may assume that $i < j$ (the other case is symmetric).

We will show that there is a layout L' of D such that $\nu(L') \leq \nu(L)$.

First, we show that we may assume that y appears after a in L. For purpose of contradiction, assume that $y = v_k$ with $k < i$. Then, consider the layout $L^* = (v_1,\cdots,v_{i-1},v_j = x_{bc},v_i = a,\cdots,v_{j-1},v_{j+1},\cdots,v_{n-1})$ of D/bc. We show that $\nu(L^*) \leq \nu(L)$. Indeed, $N_{D/bc}^+(v_1,\cdots,v_{i-1},x_{bc}) \subseteq N_{D/bc}^+(v_1,\cdots,v_{i-1}) \cup \{a\} \backslash \{x_{bc}\}$ and, since $x_{bc} \in N_{D/bc}^+(v_1,\cdots,v_{i-1})$, we get $|N_{D/bc}^+(v_1,\cdots,v_{i-1},x_{bc})| \leq |N_{D/bc}^+(v_1,\cdots,v_{i-1})|$. Moreover, since x_{bc} has no out-neighbor in $\{v_{i+1},\cdots,v_{n-1}\}$, we have $N_{D/bc}^+(v_1,\cdots,v_{i-1},x_{bc},v_i,\cdots,v_h) \subseteq N_{D/bc}^+(v_1,\cdots,v_h) \setminus \{x_{bc}\}$ for any $i \leq h < n$.

Hence, we may assume that y appears after a in L (otherwise, we prove than $\nu(L') \leq \nu(L^*) \leq \nu(L)$).

Let us consider the layout $L' = (v_1,\cdots,v_i = a,b,v_{i+1},\cdots,v_{j-1},c,v_{j+1},\cdots,v_{n-1})$ of V.

- For all $1 \leq k < i$, $|N_D^+(v_1,\ldots,v_k)| = |N_{D/bc}^+(v_1,\ldots,v_k)|$ since $b \notin N_D^+(v_1,\ldots,v_k)$.
- $|N_D^+(v_1,\ldots,v_i)| = |N_{D/bc}^+(v_1,\ldots,v_i)|$ since $x_{bc} \in N_{D/bc}^+(v_1,\ldots,v_i)$, $b \in N_D^+(v_1,\ldots,v_i)$ and, because $y = v_h$ with $h > i$, $c \notin N_D^+(v_1,\ldots,v_i)$.
- Similarily, $|N_D^+(v_1,\ldots,v_i,b)| = |N_{D/bc}^+(v_1,\ldots,v_i)|$.
- Finally, for any $i < k < n$, $|N_D^+(v_1,\ldots,v_k)| = |N_{D/bc}^+(v_1,\ldots,v_k)|$.

Hence, $\nu(L') \leq \nu(L)$. ■ ■

A.2 Proofs of technical lemmas for the *Cut* part

Lemma 6 *Let $D = (V, A)$ be a n-node digraph, $S \subset V$, and $P \in \mathcal{L}(S)$. If there exists $v \in V \setminus S$ such that either $N^+(v) \subseteq (S \cup N^+(S))$, or $v \in N^+(S)$ and $N^+(v) \setminus (S \cup N^+(S)) = \{w\}$. Then, $\min_{L \in \mathcal{L}_P(V)} \nu(L) = \min_{L \in \mathcal{L}_{P \odot \{v\}}(V)} \nu(L)$.*

Proof. Note that, by definition, $\min_{L \in \mathcal{L}_P(V)} \nu(L) \leq \min_{L \in \mathcal{L}_{P \odot v}(V)} \nu(L)$.

Let $P = (v_1, \cdots, v_{|S|})$ and let $Q = (v_{|S|+1}, \cdots, v_n) \in \mathcal{L}(V \setminus S)$ such that $\nu(P \odot Q) = \min_{L \in \mathcal{L}_P(V)} \nu(L)$. Finally, let $|S| < r \leq n$ such that $v = v_r$.

If $N^+(v) \subseteq S \cup N^+(S)$, then $N^+(v_1, \cdots, v_{|S|}, v) \subseteq N^+(v_1, \cdots, v_{|S|})$ and, for any $|S| < j \leq r$, $N^+(v_1, \cdots, v_{|S|}, v, v_{|S|+1}, \cdots, v_j) \subseteq N^+(v_1, \cdots, v_j)$.

If $v \in N^+(S)$ and $N^+(v) \setminus (S \cup N^+(S)) = \{w\}$, then $N^+(v_1, \cdots, v_{|S|}, v) = N^+(v_1, \cdots, v_{|S|}) \cup \{w\} \setminus \{v\}$ and, for any $|S| < j < r$, $N^+(v_1, \cdots, v_{|S|}, v, v_{|S|+1}, \cdots, v_j) \subseteq N^+(v_1, \cdots, v_j) \cup \{w\} \setminus \{v\}$.

In both cases, for any j, $r \leq j \leq n$, then $N^+(v_1, \cdots, v_{|S|}, v, v_{|S|+1}, \cdots, v_j) = N^+(v_1, \cdots, v_j)$.

Hence,

$$
\begin{aligned}
& \min_{L \in \mathcal{L}_{P \odot v}(V)} \nu(L) \leq \nu(P \odot v \odot (v_{|S|+1}, \cdots, v_{r-1}, v_{r+1}, \cdots, v_n)) \\
= \; & \max\{\nu(P); |N^+(v_1, \cdots, v_{|S|}, v)|; \max_{|S|<j<r} |N^+(v_1, \cdots, v_{|S|}, v, v_{|S|+1}, \cdots, v_j)|; \\
& \qquad \max_{r<j\leq n} |(N^+(v_1, \cdots, v_j)|\} \\
\leq \; & \max\{\nu(P); |N^+(v_1, \cdots, v_{|S|})|; \max_{|S|<j\leq r} |N^+(v_1, \cdots, v_j)|; \max_{r<j\leq n} |N^+(v_1, \cdots, v_j)|\} \\
= \; & \nu(P \odot Q) = \min_{L \in \mathcal{L}_P(V)} \nu(L)
\end{aligned}
$$

■ ■

Lemma 7 *Let $D = (V, A)$ be a n-node digraph, $S \subset V$ and let $P, P' \in \mathcal{L}(S)$ be two layouts of S. If $\nu(P) < \min_{L \in \mathcal{L}_P(V)} \nu(L)$ or $\nu(P) \leq \nu(P')$, then $\min_{L \in \mathcal{L}_P(V)} \nu(L) \leq \min_{L \in \mathcal{L}_{P'}(V)} \nu(L)$.*

Proof. For $P \in \mathcal{L}(S)$, let $V(P) = S$. Let $r = |S|$ and let $P = (v_1, \cdots, v_r), P' = (v'_1, \cdots, v'_r) \in \mathcal{L}(S)$. Note that $V(P) = V(P') = S$. Let $Q = (v_{r+1}, \cdots, v_n) \in \mathcal{L}(V \setminus S)$ such that $\nu(P' \odot Q) = \min_{L \in \mathcal{L}_{P'}(V)} \nu(L)$.

Note that, by definition, $\nu(P) \leq \min_{L \in \mathcal{L}_P(V)} \nu(L)$.

- Let us assume first that $\nu(P) < \min_{L \in \mathcal{L}_P(V)} \nu(L) \leq \nu(P \odot Q)$.

$$
\begin{aligned}
\min_{L \in \mathcal{L}_P(V)} \nu(L) \; \leq \; & \nu(P \odot Q) \\
= \; & \max_{1 \leq i \leq n} |N^+(v_1, \cdots, v_i)| \\
= \; & \max\{\max_{1 \leq i \leq r} |N^+(v_1, \cdots, v_i)|; \max_{r < i \leq n} |N^+(v_1, \cdots, v_i)|\} \\
= \; & \max\{\nu(P); \max_{r < i \leq n} |N^+(v_1, \cdots, v_r, v_{r+1}, \cdots, v_i)|\} \\
= \; & \max_{r < i \leq n} |N^+(v_1, \cdots, v_i)| \qquad (\textit{because } \nu(P) < \nu(P \odot Q)) \\
= \; & \max_{r < i \leq n} |N^+(v'_1, \cdots, v'_r, v_{r+1}, \cdots, v_i)| \qquad (\textit{because } V(P) = V(P')) \\
\leq \; & \max\{\nu(P'); \max_{r < i \leq n} |N^+(v'_1, \cdots, v'_r, v_{r+1}, \cdots, v_i)|\} \\
= \; & \nu(P' \odot Q) \qquad = \min_{L \in \mathcal{L}_{P'}(V)} \nu(L)
\end{aligned}
$$

- Otherwise, $\nu(P) = \min_{L \in \mathcal{L}_P(V)} \nu(L)$ and $\nu(P) \leq \nu(P')$.

$$\begin{array}{rcll}
\min\limits_{L \in \mathcal{L}_P(V)} \nu(L) & = & \nu(P) & \\
& \leq & \max\{\nu(P); \max\limits_{r<i\leq n} |N^+(v_1, \cdots, v_r, v_{r+1}, \cdots, v_i)|\} & \\
& = & \max\{\nu(P); \max\limits_{r<i\leq n} |N^+(v'_1, \cdots, v'_r, v_{r+1}, \cdots, v_i)|\} & (\textit{because } V(P) = V(P')) \\
& \leq & \max\{\nu(P'); \max\limits_{r<i\leq n} |N^+(v'_1, \cdots, v'_r, v_{r+1}, \cdots, v_i)|\} & (\textit{because } \nu(P) \leq \nu(P')) \\
& = & \nu(P' \odot Q) & = \min\limits_{L \in \mathcal{L}_{P'}(V)} \nu(L)
\end{array}$$

■ ■

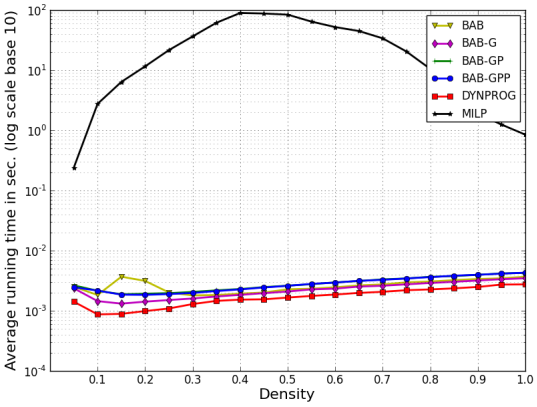
B Computational results on benchmark instances

In this section, we provide additional computational results on several benchmark instances and known families of graphs.

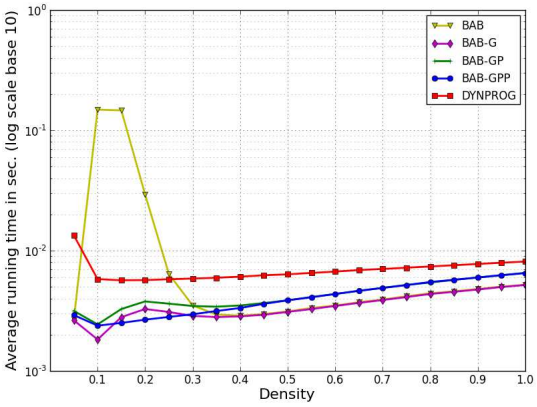
B.1 Comparison of our algorithms with BAB, MILP, and DYNPROG in random graphs

In this section, we use the available implementations of MILP and DYNPROG in *Sage* to compare their performance with our algorithms in random undirected graphs. Random graphs with N nodes are generated using the `graphs.RandomGNM(N,M)` method of *Sage* to generate them, where $M = \text{density} * N(N-1)/2$ is the number of edges. For several network sizes ($N \in \{20, 25, 30, 40, 50\}$), we execute the algorithms for various densities ($0 < density < 1$). For each size N and each density, we run the algorithms on 1 000 instances. The same instances are used for all algorithms. The average running times are depicted on Fig. 3.

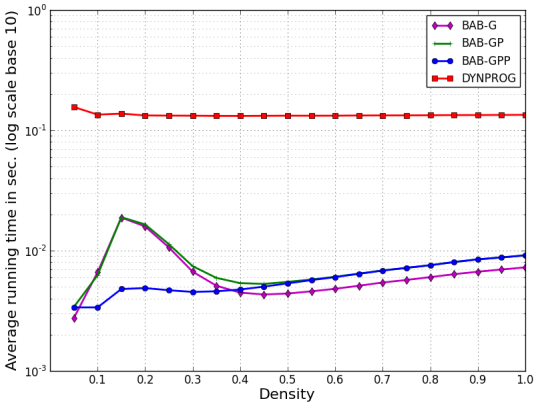
Our interpretation of the results on random undirected graphs reported in Fig. 3 is exactly the same than for random directed graphs (See Section 4.2 and Fig. 1). In short, **BAB-GPP** allows us to solve larger instances than MILP or DYNPROG, and it is faster then DYNPROG as soon as $N \geq 25$.



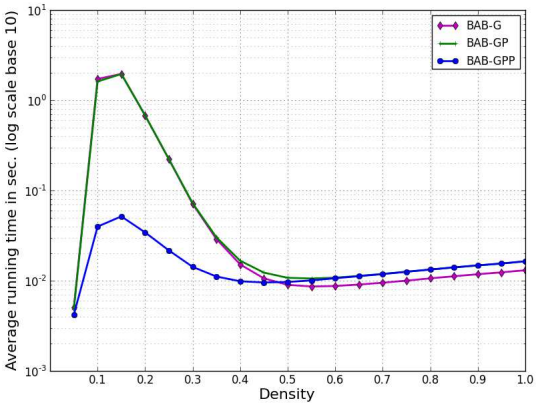
(a) $N = 20$



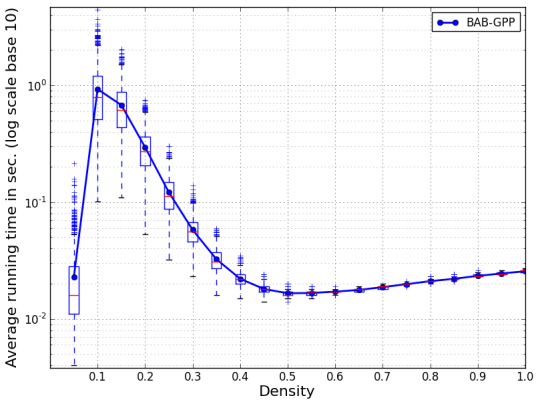
(b) $N = 25$



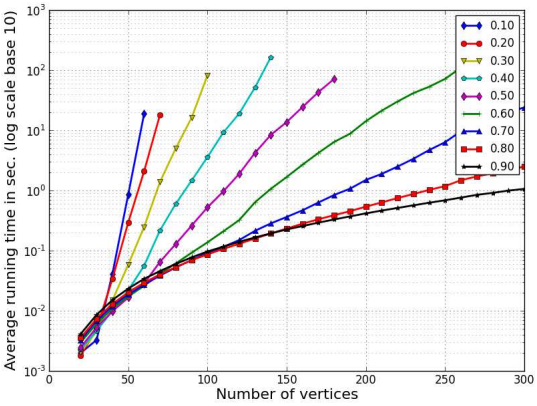
(c) $N = 30$



(d) $N = 40$



(e) $N = 50$, variations



(f) Evolution of the computation time for different densities. Average values over 100 graphs.

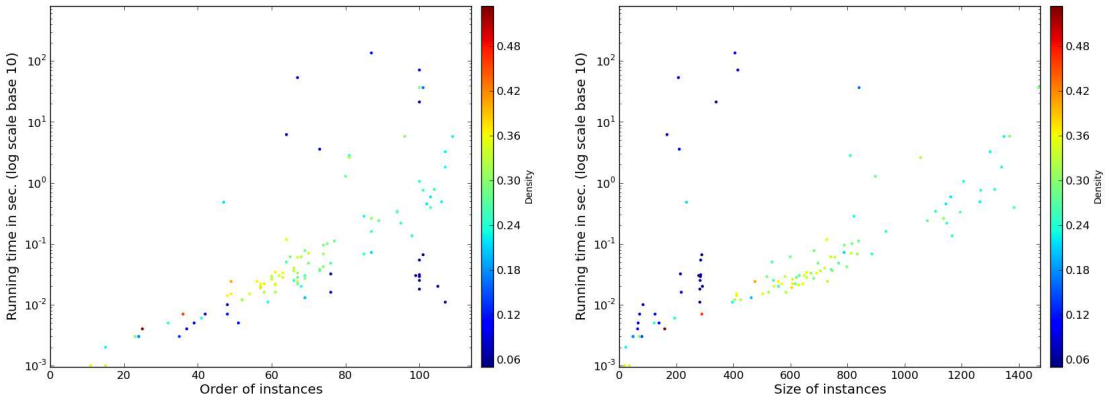
Figure 3: Average running time of various algorithms on Erdős-Rényi graphs. Average values over 1 000 graphs, except for Fig. 3(f) with average values over 100 graphs.

B.2 TreewidthLIB

The TreewidthLIB [39] contains 710 graphs among which 387 are obtained from others by pre-processing. Among the 323 non pre-processed graphs, we considered only the 131 graphs with at most 110 vertices, plus the 62 Delaunay triangulation of TSP instances. We were able to solve 111 out of 131 graphs with $n \leq 110$ (in less than a second for most of them), and 27 out of the 62 Delaunay triangulation of TSP instances.

We report:

- in Fig. 4 the distribution of the computation time per instance.
- in Table 5 the computed values and the computation time for the instances with less that 110 nodes we were able to solved.
- in Table 6 the upper bounds we have obtained for the instances with less that 110 nodes we were not able able to solved in 10min.
- in Table 7 the computed values and the computation time for the Delaunay triangulation of TSP instances we were able to solved.
- in Table 8 the upper bounds we have obtained for the Delaunay triangulation of TSP instances we were not able able to solved in 10min.



(a) Increasing number of nodes

(b) Increasing number of edges

Figure 4: Computation time for instances of the TreewidthLIB with less than 110 nodes. One dot per instance. The color indicates the density of the instance.

Table 5: Computational results for twl. instance.

Name	N	M	pw	time (in sec.)
1a8o	64	536	25	0.05
1aac	104	1316	39	0.778
1aba	85	886	28	0.068
1ail	69	631	24	0.03
1awd	89	1080	35	0.239

Continued on next page

Table 5 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
1b67	68	559	16	0.02
1bbz	57	543	25	0.02
1bf4	63	658	26	0.028
1bkf	106	1264	35	0.489
1bkr	107	1340	41	1.813
1brf	49	412	22	0.015
1bx7	41	195	11	0.006
1c4q	67	756	31	0.06
1c5e	95	1148	34	0.218
1c75	69	683	29	0.077
1c9o	66	720	28	0.04
1cc8	70	813	32	0.07
1cka	57	605	27	0.019
1ctj	87	935	32	0.159
1czp	94	1195	36	0.331
1d3b	69	682	25	0.027
1d4t	102	1145	34	0.45
1dj7	73	743	26	0.038
1dp7	76	769	27	0.048
1e0b	60	518	24	0.029
1en2	69	463	16	0.013
1erv	101	1267	38	0.754
1ezg	66	541	23	0.025
1f9m	109	1349	43	5.756
1fjl	65	600	26	0.061
1fk5	85	823	31	0.283
1fr3	67	618	21	0.022
1fse	67	730	26	0.024
1g2b	62	649	28	0.03
1g2r	94	1109	35	0.34
1g6x	52	405	19	0.012
1gcq	68	742	30	0.061
1gut	67	621	22	0.028
1hg7	66	705	28	0.036
1i07	59	397	15	0.011
1i0v	100	1207	38	1.058
1i27	73	747	26	0.036
1i2t	61	644	27	0.022
1ig5	75	816	31	0.1
1igd	61	630	25	0.021
1igq	54	503	23	0.015
1iib	103	1384	38	0.394
1iqz	77	839	31	0.111
1j75	56	558	27	0.024
1jhg	101	841	24	36.55
1jo8	58	608	27	0.022

Continued on next page

Table 5 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
1k61	60	581	26	0.029
1kq1	60	607	27	0.026
1kth	52	426	20	0.012
1ku3	61	585	22	0.016
1kw4	67	672	27	0.033
1l9l	70	697	28	0.048
1ldd	74	835	31	0.068
1ljo	74	789	30	0.095
1lkk	103	1162	34	0.588
1mgq	74	798	28	0.042
1oai	58	524	22	0.016
1plc	98	1167	33	0.135
1ptf	87	1137	37	0.261
1pwt	61	657	29	0.034
1qtn	87	788	23	0.072
1r69	63	692	29	0.033
1rb9	48	412	22	0.014
1rro	107	1300	42	3.233
1sem	57	570	26	0.022
1ubq	73	211	12	3.571
BN_28	24	49	5	0.003
BN_29	24	49	5	0.003
alarm	37	65	4	0.004
barley	48	126	7	0.007
david	87	406	13	135.7
eil101.tsp	101	290	11	0.066
eil51.tsp	51	140	8	0.005
eil76.tsp	76	215	11	0.032
fungiuk	15	36	4	0.001
graph03	100	340	21	21.27
graph05	100	416	25	71.24
knights8_8	64	168	16	6.19
kroA100.tsp	100	285	10	0.029
kroB100.tsp	100	284	10	0.025
kroC100.tsp	100	286	10	0.031
kroE100.tsp	100	283	9	0.018
lin105.tsp	105	292	9	0.02
mainuk	48	84	6	0.01
mildew	35	80	5	0.003
myciel3	11	20	5	0.001
myciel4	23	71	10	0.003
myciel5	47	236	20	0.481
oesoca	39	67	4	0.005
oesoca+	67	208	11	53.39
oesoca42	42	72	4	0.007
pr107.tsp	107	283	7	0.011

Continued on next page

Table 5 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
pr76.tsp	76	218	10	0.016
queen10_10	100	1470	72	36.67
queen5_5	25	160	18	0.004
queen6_6	36	290	25	0.007
queen7_7	49	476	35	0.024
queen8_12	96	1368	65	5.802
queen8_8	64	728	45	0.117
queen9_9	81	1056	58	2.592
rat99.tsp	99	279	10	0.03
rd100.tsp	100	286	11	0.054
sodoku	81	810	45	2.81
sodoku-elim1	80	898	45	1.283
water	32	123	10	0.005
weeduk	15	24	4	0.002

Table 6: Upper bounds for twl. instance (10 min. per graph).

Name	**N**	**M**	**Upper bound on pw**
1b0n	103	1011	32
1b0n-006	98	981	32
BN_0	100	300	23
BN_1	100	394	26
BN_10	85	304	23
BN_11	105	631	42
BN_12	90	481	30
BN_2	100	494	32
BN_3	100	451	32
BN_4	100	574	37
BN_7	95	535	35
BN_8	100	420	27
BN_9	105	382	27
celar02	100	311	10
celar06	100	350	11
graph01	100	358	23
huck	74	301	10
jean	77	254	10
myciel6	95	755	38
pathfinder	109	211	7

Table 7: Computational results for twl-tsp instance.

Name	**N**	**M**	**pw**	**time (in sec.)**
bier127.tsp	127	368	15	3.234
ch130.tsp	130	377	12	0.484

Continued on next page

Table 7 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
ch150.tsp	150	432	13	1.191
eil101.tsp	101	290	11	0.063
eil51.tsp	51	140	8	0.005
eil76.tsp	76	215	11	0.032
kroA100.tsp	100	285	10	0.028
kroA150.tsp	150	432	12	1.798
kroA200.tsp	200	586	13	1.924
kroB100.tsp	100	284	10	0.025
kroB150.tsp	150	436	12	0.559
kroB200.tsp	200	580	13	2.192
kroC100.tsp	100	286	10	0.029
kroE100.tsp	100	283	9	0.017
lin105.tsp	105	292	9	0.02
pr107.tsp	107	283	7	0.011
pr124.tsp	124	318	10	4.477
pr136.tsp	136	377	10	0.111
pr144.tsp	144	393	10	0.21
pr152.tsp	152	428	11	0.511
pr226.tsp	226	586	8	0.151
pr76.tsp	76	218	10	0.016
rat195.tsp	195	562	13	1.913
rat99.tsp	99	279	10	0.029
rd100.tsp	100	286	11	0.052
tsp225.tsp	225	622	13	217.5
u159.tsp	159	431	12	2.469

Table 8: Upper bounds for twl-tsp instance (10 min. per graph).

Name	**N**	**M**	**Upper bound on pw**
a280.tsp	280	788	14
d1291.tsp	1291	3845	43
d1655.tsp	1655	4890	40
d198.tsp	198	571	13
d2103.tsp	2103	6290	67
d493.tsp	493	1467	29
d657.tsp	657	1958	27
fl1400.tsp	1400	4138	18
fl1577.tsp	1577	4637	33
fl417.tsp	417	1179	11
gil262.tsp	262	773	19
nrw1379.tsp	1379	4115	39
p654.tsp	654	1806	13
pcb1173.tsp	1173	3501	40
pcb442.tsp	442	1286	20
pr1002.tsp	1002	2972	33

Continued on next page

Table 8 – Continued from previous page

Name	N	M	Upper bound on pw
pr2392.tsp	2392	7125	70
pr264.tsp	264	772	14
pr299.tsp	299	864	18
pr439.tsp	439	1297	27
rat575.tsp	575	1699	19
rat783.tsp	783	2322	22
rd400.tsp	400	1183	20
rl1304.tsp	1304	3879	41
rl1323.tsp	1323	3950	25
rl1889.tsp	1889	5631	35
u1060.tsp	1060	3153	52
u1432.tsp	1432	4204	46
u1817.tsp	1817	5386	65
u2152.tsp	2152	6312	62
u2319.tsp	2319	6869	66
u574.tsp	574	1708	28
u724.tsp	724	2117	20
vm1084.tsp	1084	2869	21
vml1748.tsp	1748	4784	41

B.3 VSPLIB

As explained in Section 4.5, the The VSPLIB [40] has been designed for benchmarking a local-search heuristic proposed in [17]. VSPLIB [40] contains 173 instances: 50 $n \times n$ grids with $5 \leq n \leq 54$; 50 trees with respectively 22, 67, and 202 nodes and pathwidth 3, 4, and 5; a set of 73 graphs, called HB, with $n \leq 10 \leq 960$ (see [17] for more details).

We report:

- in Fig. 5 the distribution of the computation time per instance.
- in Table 9 the pathwidth and the required computation time for the set HB of graphs we were able to solved, and in Table 10 upper bounds for instances we were not able able to solved in 10min.
- in Table 11 the pathwidth and the required computation time for the set of trees we were able to solved, and in Table 12 upper bounds for the trees we were not able able to solved in 10min.

Table 9: Computational results for vsplib_hb instance.

Name	N	M	pw	time (in sec.)
ash85.mtx.rnd	85	219	8	0.016
bcspwr01.mtx.rnd	39	46	4	0.007
bcspwr02.mtx.rnd	49	59	3	0.004
bcspwr03.mtx.rnd	118	179	6	0.717
bcsstk01.mtx.rnd	48	176	13	0.011
bcsstk02.mtx.rnd	66	2145	65	0.042

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Table 9 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
bcsstk03.mtx.rnd	112	264	3	0.014
bcsstk05.mtx.rnd	153	1135	20	38.1
can__144.mtx.rnd	144	576	8	0.019
can__161.mtx.rnd	161	608	18	4.242
can__187.mtx.rnd	187	652	12	2.102
can___24.mtx.rnd	24	68	5	0.002
can___61.mtx.rnd	61	248	8	0.016
can___62.mtx.rnd	62	78	4	0.008
can___73.mtx.rnd	73	152	10	4.629
can___96.mtx.rnd	96	336	13	0.091
dwt__198.mtx.rnd	198	597	7	0.037
dwt__234.mtx.rnd	234	300	7	15.4
dwt__361.mtx.rnd	361	1296	14	11.11
dwt___59.mtx.rnd	59	104	5	0.004
dwt___66.mtx.rnd	66	127	2	0.004
dwt___72.mtx.rnd	72	75	3	0.006
dwt___87.mtx.rnd	87	227	8	0.185
nos1.mtx.rnd	237	390	3	0.019
nos2.mtx.rnd	957	1590	3	0.13
nos4.mtx.rnd	100	247	8	0.064

Table 10: Upper bounds for vsplib_hb instance (10 min. per graph).

Name	**N**	**M**	**Upper bound on pw**
494_bus.mtx.rnd	494	586	12
662_bus.mtx.rnd	662	906	20
685_bus.mtx.rnd	685	1282	23
ash292.mtx.rnd	292	958	15
bcspwr04.mtx.rnd	274	669	16
bcspwr05.mtx.rnd	443	590	14
bcsstk04.mtx.rnd	132	1758	34
bcsstk06.mtx.rnd	420	3720	63
bcsstk07.mtx.rnd	420	3720	63
bcsstk19.mtx.rnd	817	3018	67
bcsstk20.mtx.rnd	485	1325	16
bcsstk22.mtx.rnd	138	279	8
can__229.mtx.rnd	229	774	34
can__256.mtx.rnd	256	1330	27
can__268.mtx.rnd	268	1407	23
can__292.mtx.rnd	292	1124	29
can__445.mtx.rnd	445	1682	43
can__634.mtx.rnd	634	3297	86
can__715.mtx.rnd	715	2975	46
dwt__162.mtx.rnd	162	510	10

Continued on next page

Table 10 – Continued from previous page

Name	**N**	**M**	**Upper bound on pw**
dwt__193.mtx.rnd	193	1650	29
dwt__209.mtx.rnd	209	767	18
dwt__221.mtx.rnd	221	704	11
dwt__245.mtx.rnd	245	608	13
dwt__307.mtx.rnd	307	1108	32
dwt__310.mtx.rnd	310	1069	11
dwt__346.mtx.rnd	346	1440	35
dwt__419.mtx.rnd	419	1572	27
dwt__492.mtx.rnd	492	1332	9
dwt__503.mtx.rnd	503	2762	57
dwt__512.mtx.rnd	511	1495	18
dwt__592.mtx.rnd	592	2256	36
dwt__607.mtx.rnd	607	2262	60
dwt__758.mtx.rnd	758	2618	49
dwt__869.mtx.rnd	869	3208	32
dwt__878.mtx.rnd	878	3285	38
dwt__918.mtx.rnd	918	3233	89
gr_30_30.mtx.rnd	900	3422	33
lshp_265.mtx.rnd	265	744	17
lshp_406.mtx.rnd	406	1155	21
lshp_577.mtx.rnd	577	1656	25
lshp_778.mtx.rnd	778	2247	29
nos3.mtx.rnd	960	7442	43
nos5.mtx.rnd	468	2352	56
nos6.mtx.rnd	675	1290	30
nos7.mtx.rnd	729	1944	65
plat362.mtx.rnd	362	2712	46

Table 11: Computational results for vsplib_tree instance.

Name	**N**	**M**	**pw**	**time (in sec.)**
TREE_22_3_rot1.mtx.rnd	22	21	3	0.004
TREE_22_3_rot10.mtx.rnd	22	21	3	0.004
TREE_22_3_rot11.mtx.rnd	22	21	3	0.002
TREE_22_3_rot12.mtx.rnd	22	21	3	0.002
TREE_22_3_rot13.mtx.rnd	22	21	3	0.002
TREE_22_3_rot14.mtx.rnd	22	21	3	0.002
TREE_22_3_rot15.mtx.rnd	22	21	3	0.005
TREE_22_3_rot2.mtx.rnd	22	21	3	0.004
TREE_22_3_rot3.mtx.rnd	22	21	3	0.003
TREE_22_3_rot4.mtx.rnd	22	21	3	0.003
TREE_22_3_rot5.mtx.rnd	22	21	3	0.004
TREE_22_3_rot6.mtx.rnd	22	21	3	0.004
TREE_22_3_rot7.mtx.rnd	22	21	3	0.002
TREE_22_3_rot8.mtx.rnd	22	21	3	0.002

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Table 11 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
TREE_22_3_rot9.mtx.rnd	22	21	3	0.002
TREE_67_4_rot1.mtx.rnd	67	66	4	26.79
TREE_67_4_rot10.mtx.rnd	67	66	4	39.82
TREE_67_4_rot11.mtx.rnd	67	66	4	50.23
TREE_67_4_rot12.mtx.rnd	67	66	4	51.81
TREE_67_4_rot14.mtx.rnd	67	66	4	51.39
TREE_67_4_rot15.mtx.rnd	67	66	4	53.05
TREE_67_4_rot2.mtx.rnd	67	66	4	26.85
TREE_67_4_rot3.mtx.rnd	67	66	4	26.5
TREE_67_4_rot4.mtx.rnd	67	66	4	26.9
TREE_67_4_rot5.mtx.rnd	67	66	4	26.41
TREE_67_4_rot6.mtx.rnd	67	66	4	429.1
TREE_67_4_rot7.mtx.rnd	67	66	4	38.62
TREE_67_4_rot8.mtx.rnd	67	66	4	39.65
TREE_67_4_rot9.mtx.rnd	67	66	4	38.7

Table 12: Upper bounds for vsplib_tree instance (10 min. per graph).

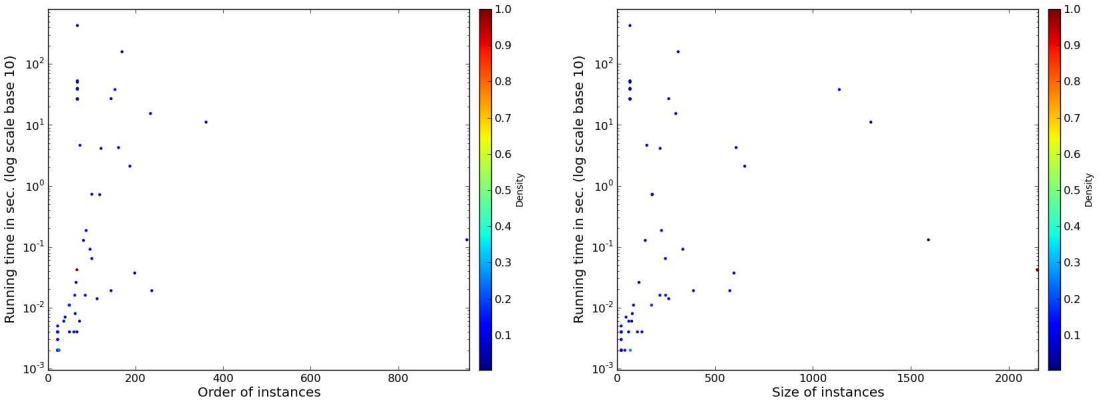
Name	**N**	**M**	**Upper bound on pw**
TREE_202_5_rot1.mtx.rnd	202	201	5
TREE_202_5_rot10.mtx.rnd	202	201	6
TREE_202_5_rot11.mtx.rnd	202	201	6
TREE_202_5_rot2.mtx.rnd	202	201	5
TREE_202_5_rot3.mtx.rnd	202	201	5
TREE_202_5_rot4.mtx.rnd	202	201	5
TREE_202_5_rot56.mtx.rnd	202	201	5
TREE_202_5_rot57.mtx.rnd	202	201	5
TREE_202_5_rot58.mtx.rnd	202	201	5
TREE_202_5_rot59.mtx.rnd	202	201	5
TREE_202_5_rot6.mtx.rnd	202	201	6
TREE_202_5_rot60.mtx.rnd	202	201	5
TREE_202_5_rot7.mtx.rnd	202	201	6
TREE_202_5_rot8.mtx.rnd	202	201	6
TREE_202_5_rot9.mtx.rnd	202	201	5
TREE_67_4_rot13.mtx.rnd	67	66	4

B.4 Sage

The graph module of the *Sage* open-source mathematical software [38] contains a large number of graph generators, families of graphs and named graphs.

We report:

- in Fig. 6 the distribution of the computation time for the named graphs for which we were able to compute the pathwidth. The corresponding values and required computation times

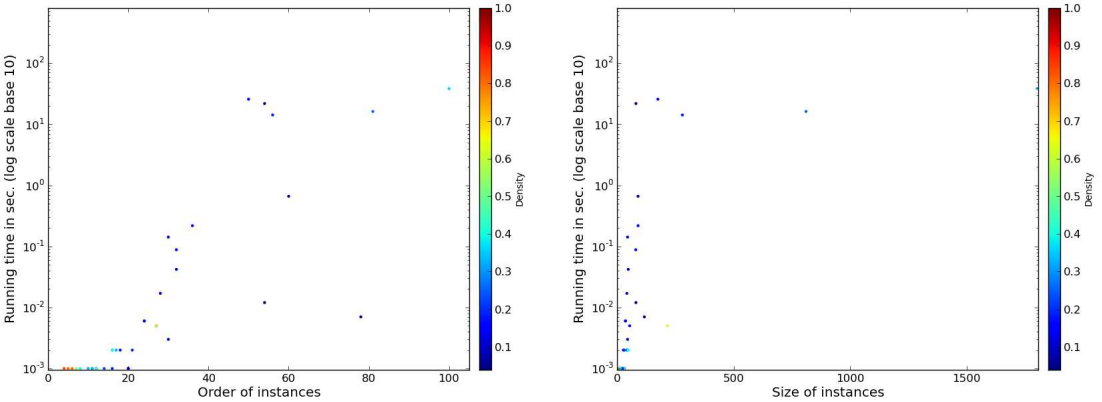


(a) Increasing number of nodes (b) Increasing number of edges

Figure 5: Computation time for instances from the VSPLIB. One dot per instance. The color indicates the density of the instance.

are reported in Table 13. In Table 14 we report some upper bounds for instances we were not able able to solved in 10min.

- in Fig. 7 the distribution of the computation time for the named graphs for which we were able to compute the pathwidth. The corresponding values and required computation times are reported in Table 15. In Table 16 we report some upper bounds for instances we were not able able to solved in 10min.



(a) Increasing number of nodes (b) Increasing number of edges

Figure 6: Computation time for named graphs in *Sage*. One dot per instance. The color indicates the density of the instance.

Table 13: Computational results for sage_named instance.

Name	**N**	**M**	**pw**	**time (in sec.)**
Bidiakis cube	12	18	4	0.001
Brinkmann graph	21	42	8	0.002
Brouwer-Haemers	81	810	56	16.17
Bucky Ball	60	90	10	0.66
Bull graph	5	5	2	0.001
Butterfly graph	5	6	2	0.001
Chvatal graph	12	24	6	0.001
Claw graph	4	3	1	0.001
Clebsch graph	16	40	9	0.001
Coxeter Graph	28	42	9	0.017
Desargues Graph	20	30	6	0.001
Diamond Graph	4	5	2	0.001
Dodecahedron	20	30	6	0.001
Double star snark	30	45	7	0.003
Durer graph	12	18	4	0.001
Dyck graph	32	48	9	0.042
Ellingham-Horton 54-graph	54	81	7	0.012
Ellingham-Horton 78-graph	78	117	6	0.007
Errera graph	17	45	6	0.002
Flower Snark	20	30	6	0.001
Franklin graph	12	18	5	0.001
Frucht graph	12	18	4	0.001
Goldner-Harary graph	11	27	4	0.001
Gray graph	54	81	13	21.83
Grotzsch graph	11	20	5	0.001
Hall-Janko graph	100	1800	82	38.32
Heawood graph	14	21	6	0.001
Herschel graph	11	18	4	0.001
Hexahedron	8	12	4	0.001
Hoffman Graph	16	32	7	0.002
Hoffman-Singleton graph	50	175	27	25.68
Holt graph	27	54	10	0.005
House Graph	5	8	2	0.001
Icosahedron	12	30	6	0.001
Krackhardt Kite Graph	10	18	4	0.001
McGee graph	24	36	8	0.006
Moebius-Kantor Graph	16	24	6	0.001
Moser spindle	7	11	3	0.001
Nauru Graph	24	36	8	0.006
Octahedron	6	12	4	0.001
Pappus Graph	18	27	7	0.002
Petersen graph	10	15	5	0.001
Schläfli graph	27	216	21	0.005
Shrikhande graph	16	48	9	0.002
Sims-Gewirtz Graph	56	280	34	14.19

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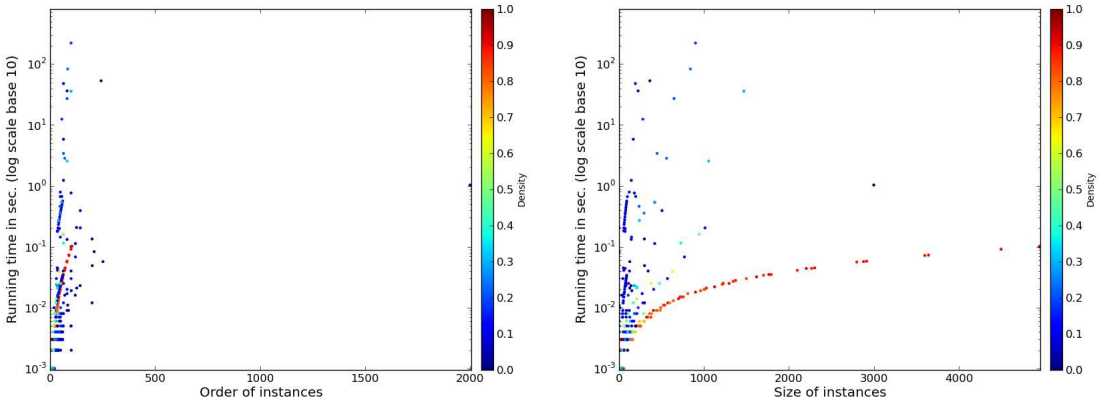
Table 13 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
Sylvester Graph	36	90	16	0.218
Tetrahedron	4	6	3	0.001
Thomsen graph	6	9	3	0.001
Tutte-Coxeter graph	30	45	9	0.142
Wagner Graph	8	12	4	0.001
Wells graph	32	80	15	0.088

Table 14: Upper bounds for sage_named instance (10 min. per graph).

Name	**N**	**M**	**Upper bound on pw**
Balaban 10-cage	70	105	15
Balaban 11-cage	112	168	24
Biggs-Smith graph	102	153	19
Cameron Graph	231	3465	161
Foster Graph	90	135	20
Harries Graph	70	105	15
Harries-Wong graph	70	105	15
Higman-Sims graph	100	1100	74
Ljubljana graph	112	168	22
M22 Graph	77	616	54
Tutte 12-Cage	126	189	26
World Map	166	323	7



(a) Increasing number of nodes

(b) Increasing number of edges

Figure 7: Computation time for families of graphs in *Sage*. One dot per instance. The color indicates the density of the instance.

Table 15: Computational results for sage_families instance.

Name	**N**	**M**	**pw**	**time (in sec.)**
(2, 2)-Balanced tree	7	6	1	0.001
(2, 3)-Balanced tree	15	14	2	0.001
(2, 4)-Balanced tree	31	30	2	0.002
(2, 5)-Balanced tree	63	62	3	0.005
(2, 6)-Balanced tree	127	126	3	0.021
(3, 2)-Balanced tree	13	12	2	0.001
(3, 3)-Balanced tree	40	39	3	0.002
(5, 5)-Barbell graph	15	26	4	0.002
(6, 5)-Barbell graph	17	36	5	0.002
(7, 5)-Barbell graph	19	48	6	0.001
(8, 5)-Barbell graph	21	62	7	0.003
(9, 5)-Barbell graph	23	78	8	0.002
(10, 5)-Barbell graph	25	96	9	0.003
(3, 3)-Bishop Graph	9	10	2	0.001
(4, 4)-Bishop Graph	16	28	3	0.002
(5, 5)-Bishop Graph	25	60	5	0.003
(6, 6)-Bishop Graph	36	110	7	0.005
(7, 7)-Bishop Graph	49	182	10	0.008
(8, 8)-Bishop Graph	64	280	13	0.012
(9, 9)-Bishop Graph	81	408	16	0.02
(10, 10)-Bishop Graph	100	570	19	0.03
(11, 11)-Bishop Graph	121	770	23	0.068
(12, 12)-Bishop Graph	144	1012	27	0.204
2-Bubble sort	2	1	1	0.001
3-Bubble sort	6	6	2	0.001
4-Bubble sort	24	36	6	0.002
3-Circular Ladder graph	6	9	3	0.001
4-Circular Ladder graph	8	12	4	0.001
5-Circular Ladder graph	10	15	4	0.001
6-Circular Ladder graph	12	18	4	0.001
10-Circular Ladder graph	20	30	4	0.001
100-Circular Ladder graph	200	300	4	0.012
1000-Circular Ladder graph	2000	3000	4	1.032
(3, 3)-Complete bipartite graph	6	9	3	0.001
(3, 4)-Complete bipartite graph	7	12	3	0.001
(3, 5)-Complete bipartite graph	8	15	3	0.001
(3, 6)-Complete bipartite graph	9	18	3	0.001
(3, 7)-Complete bipartite graph	10	21	3	0.001
(3, 8)-Complete bipartite graph	11	24	3	0.001
(3, 9)-Complete bipartite graph	12	27	3	0.001
(3, 10)-Complete bipartite graph	13	30	3	0.001
(4, 4)-Complete bipartite graph	8	16	4	0.001
(4, 5)-Complete bipartite graph	9	20	4	0.001
(4, 6)-Complete bipartite graph	10	24	4	0.001
(4, 7)-Complete bipartite graph	11	28	4	0.001

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Table 15 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
(4, 8)-Complete bipartite graph	12	32	4	0.001
(4, 9)-Complete bipartite graph	13	36	4	0.001
(4, 10)-Complete bipartite graph	14	40	4	0.001
(5, 5)-Complete bipartite graph	10	25	5	0.002
(5, 6)-Complete bipartite graph	11	30	5	0.001
(5, 7)-Complete bipartite graph	12	35	5	0.001
(5, 8)-Complete bipartite graph	13	40	5	0.001
(5, 9)-Complete bipartite graph	14	45	5	0.001
(5, 10)-Complete bipartite graph	15	50	5	0.001
(6, 6)-Complete bipartite graph	12	36	6	0.001
(6, 7)-Complete bipartite graph	13	42	6	0.001
(6, 8)-Complete bipartite graph	14	48	6	0.002
(6, 9)-Complete bipartite graph	15	54	6	0.002
(6, 10)-Complete bipartite graph	16	60	6	0.001
(7, 7)-Complete bipartite graph	14	49	7	0.002
(7, 8)-Complete bipartite graph	15	56	7	0.002
(7, 9)-Complete bipartite graph	16	63	7	0.002
(7, 10)-Complete bipartite graph	17	70	7	0.002
(8, 8)-Complete bipartite graph	16	64	8	0.001
(8, 9)-Complete bipartite graph	17	72	8	0.002
(8, 10)-Complete bipartite graph	18	80	8	0.002
(9, 9)-Complete bipartite graph	18	81	9	0.003
(9, 10)-Complete bipartite graph	19	90	9	0.002
(10, 10)-Complete bipartite graph	20	100	10	0.003
5-Complete graph	5	10	4	0.001
10-Complete graph	10	45	9	0.002
50-Complete graph	50	1225	49	0.025
100-Complete graph	100	4950	99	0.1
Multipartite Graph with set sizes [3, 3, 3]	9	27	6	0.001
Multipartite Graph with set sizes [3, 3, 3, 3]	12	54	9	0.001
Multipartite Graph with set sizes [3, 3, 3, 3, 3]	15	90	12	0.003
Multipartite Graph with set sizes [3, 3, 3, 3, 3, 3]	18	135	15	0.003
Multipartite Graph with set sizes [3, 3, 3, 3, 3, 3, 3]	21	189	18	0.005
Multipartite Graph with set sizes [3, 3, 3, 3, 3, 3, 3, 3]	24	252	21	0.005
Multipartite Graph with set sizes [3, 3, 3, 3, 3, 3, 3, 3, 3]	27	324	24	0.007
Multipartite Graph with set sizes [3, 3, 3, 3, 3, 3, 3, 3, 3, 3]	30	405	27	0.009
Multipartite Graph with set sizes [4, 4, 4]	12	48	8	0.002
Multipartite Graph with set sizes [4, 4, 4, 4]	16	96	12	0.002
Multipartite Graph with set sizes [4, 4, 4, 4, 4]	20	160	16	0.003
Multipartite Graph with set sizes [4, 4, 4, 4, 4, 4]	24	240	20	0.005
Multipartite Graph with set sizes [4, 4, 4, 4, 4, 4, 4]	28	336	24	0.007
Multipartite Graph with set sizes [4, 4, 4, 4, 4, 4, 4, 4]	32	448	28	0.009
Multipartite Graph with set sizes [4, 4, 4, 4, 4, 4, 4, 4, 4]	36	576	32	0.012
Multipartite Graph with set sizes [4, 4, 4, 4, 4, 4, 4, 4, 4, 4]	40	720	36	0.015
Multipartite Graph with set sizes [5, 5, 5]	15	75	10	0.002
Multipartite Graph with set sizes [5, 5, 5, 5]	20	150	15	0.003

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Table 15 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
Multipartite Graph with set sizes [5, 5, 5, 5, 5]	25	250	20	0.005
Multipartite Graph with set sizes [5, 5, 5, 5, 5, 5]	30	375	25	0.007
Multipartite Graph with set sizes [5, 5, 5, 5, 5, 5, 5]	35	525	30	0.011
Multipartite Graph with set sizes [5, 5, 5, 5, 5, 5, 5, 5]	40	700	35	0.014
Multipartite Graph with set sizes [5, 5, 5, 5, 5, 5, 5, 5, 5]	45	900	40	0.018
Multipartite Graph with set sizes [5, 5, 5, 5, 5, 5, 5, 5, 5, 5]	50	1125	45	0.022
Multipartite Graph with set sizes [6, 6, 6]	18	108	12	0.002
Multipartite Graph with set sizes [6, 6, 6, 6]	24	216	18	0.005
Multipartite Graph with set sizes [6, 6, 6, 6, 6]	30	360	24	0.008
Multipartite Graph with set sizes [6, 6, 6, 6, 6, 6]	36	540	30	0.011
Multipartite Graph with set sizes [6, 6, 6, 6, 6, 6, 6]	42	756	36	0.015
Multipartite Graph with set sizes [6, 6, 6, 6, 6, 6, 6, 6]	48	1008	42	0.02
Multipartite Graph with set sizes [6, 6, 6, 6, 6, 6, 6, 6, 6]	54	1296	48	0.025
Multipartite Graph with set sizes [6, 6, 6, 6, 6, 6, 6, 6, 6, 6]	60	1620	54	0.032
Multipartite Graph with set sizes [7, 7, 7]	21	147	14	0.004
Multipartite Graph with set sizes [7, 7, 7, 7]	28	294	21	0.006
Multipartite Graph with set sizes [7, 7, 7, 7, 7]	35	490	28	0.01
Multipartite Graph with set sizes [7, 7, 7, 7, 7, 7]	42	735	35	0.015
Multipartite Graph with set sizes [7, 7, 7, 7, 7, 7, 7]	49	1029	42	0.021
Multipartite Graph with set sizes [7, 7, 7, 7, 7, 7, 7, 7]	56	1372	49	0.028
Multipartite Graph with set sizes [7, 7, 7, 7, 7, 7, 7, 7, 7]	63	1764	56	0.035
Multipartite Graph with set sizes [7, 7, 7, 7, 7, 7, 7, 7, 7, 7]	70	2205	63	0.044
Multipartite Graph with set sizes [8, 8, 8]	24	192	16	0.004
Multipartite Graph with set sizes [8, 8, 8, 8]	32	384	24	0.008
Multipartite Graph with set sizes [8, 8, 8, 8, 8]	40	640	32	0.013
Multipartite Graph with set sizes [8, 8, 8, 8, 8, 8]	48	960	40	0.019
Multipartite Graph with set sizes [8, 8, 8, 8, 8, 8, 8]	56	1344	48	0.027
Multipartite Graph with set sizes [8, 8, 8, 8, 8, 8, 8, 8]	64	1792	56	0.035
Multipartite Graph with set sizes [8, 8, 8, 8, 8, 8, 8, 8, 8]	72	2304	64	0.045
Multipartite Graph with set sizes [8, 8, 8, 8, 8, 8, 8, 8, 8, 8]	80	2880	72	0.057
Multipartite Graph with set sizes [9, 9, 9]	27	243	18	0.006
Multipartite Graph with set sizes [9, 9, 9, 9]	36	486	27	0.009
Multipartite Graph with set sizes [9, 9, 9, 9, 9]	45	810	36	0.017
Multipartite Graph with set sizes [9, 9, 9, 9, 9, 9]	54	1215	45	0.024
Multipartite Graph with set sizes [9, 9, 9, 9, 9, 9, 9]	63	1701	54	0.034
Multipartite Graph with set sizes [9, 9, 9, 9, 9, 9, 9, 9]	72	2268	63	0.044
Multipartite Graph with set sizes [9, 9, 9, 9, 9, 9, 9, 9, 9]	81	2916	72	0.058
Multipartite Graph with set sizes [9, 9, 9, 9, 9, 9, 9, 9, 9, 9]	90	3645	81	0.073
Multipartite Graph with set sizes [10, 10, 10]	30	300	20	0.006
Multipartite Graph with set sizes [10, 10, 10, 10]	40	600	30	0.012
Multipartite Graph with set sizes [10, 10, 10, 10, 10]	50	1000	40	0.02
Multipartite Graph with set sizes [10, 10, 10, 10, 10, 10]	60	1500	50	0.03
Multipartite Graph with set sizes [10, 10, 10, 10, 10, 10, 10]	70	2100	60	0.041
Multipartite Graph with set sizes [10, 10, 10, 10, 10, 10, 10, 10]	80	2800	70	0.056
Multipartite Graph with set sizes [10, 10, 10, 10, 10, 10, 10, 10, 10]	90	3600	80	0.072
Multipartite Graph with set sizes [10, 10, 10, 10, 10, 10, 10, 10, 10, 10]	100	4500	90	0.091

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Table 15 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
3-Cube	8	12	4	0.001
4-Cube	16	32	7	0.001
5-Cube	32	80	13	0.024
6-Cube	64	192	23	47.76
3-Cycle graph	3	3	2	0.001
4-Cycle graph	4	4	2	0.001
5-Cycle graph	5	5	2	0.001
6-Cycle graph	6	6	2	0.001
7-Cycle graph	7	7	2	0.001
8-Cycle graph	8	8	2	0.001
9-Cycle graph	9	9	2	0.001
10-Cycle graph	10	10	2	0.001
Dorogovtsev-Goltsev-Mendes Graph, 1-th generation	3	3	2	0.001
Dorogovtsev-Goltsev-Mendes Graph, 2-th generation	6	9	3	0.001
Dorogovtsev-Goltsev-Mendes Graph, 3-th generation	15	27	4	0.002
Dorogovtsev-Goltsev-Mendes Graph, 4-th generation	42	81	5	0.023
Fibonacci-Tree-2	2	1	1	0.001
Fibonacci-Tree-3	4	3	1	0.001
Fibonacci-Tree-4	7	6	1	0.001
Fibonacci-Tree-5	12	11	2	0.001
Fibonacci-Tree-6	20	19	2	0.002
Fibonacci-Tree-7	33	32	2	0.003
Fibonacci-Tree-8	54	53	3	0.004
Fibonacci-Tree-9	88	87	3	0.009
Fibonacci-Tree-10	143	142	3	0.023
2-Folded Cube Graph	2	1	1	0.001
3-Folded Cube Graph	4	6	3	0.001
4-Folded Cube Graph	8	16	4	0.001
5-Folded Cube Graph	16	40	9	0.002
2-Friendship graph	5	6	2	0.001
3-Friendship graph	7	9	2	0.001
5-Friendship graph	11	15	2	0.001
10-Friendship graph	21	30	2	0.002
50-Friendship graph	101	150	2	0.019
100-Friendship graph	201	300	2	0.049
Generalized Petersen graph (n=10,k=1)	20	30	4	0.002
Generalized Petersen graph (n=10,k=2)	20	30	6	0.002
Generalized Petersen graph (n=10,k=3)	20	30	6	0.001
Generalized Petersen graph (n=10,k=4)	20	30	6	0.001
Generalized Petersen graph (n=11,k=1)	22	33	4	0.001
Generalized Petersen graph (n=11,k=2)	22	33	6	0.002
Generalized Petersen graph (n=11,k=3)	22	33	7	0.002
Generalized Petersen graph (n=11,k=4)	22	33	7	0.002
Generalized Petersen graph (n=12,k=1)	24	36	4	0.002
Generalized Petersen graph (n=12,k=2)	24	36	6	0.002
Generalized Petersen graph (n=12,k=3)	24	36	7	0.003

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Table 15 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
Generalized Petersen graph (n=12,k=4)	24	36	6	0.002
Generalized Petersen graph (n=13,k=1)	26	39	4	0.002
Generalized Petersen graph (n=13,k=2)	26	39	6	0.002
Generalized Petersen graph (n=13,k=3)	26	39	7	0.003
Generalized Petersen graph (n=13,k=4)	26	39	7	0.003
Generalized Petersen graph (n=14,k=1)	28	42	4	0.002
Generalized Petersen graph (n=14,k=2)	28	42	6	0.002
Generalized Petersen graph (n=14,k=3)	28	42	8	0.008
Generalized Petersen graph (n=14,k=4)	28	42	8	0.007
Generalized Petersen graph (n=15,k=1)	30	45	4	0.002
Generalized Petersen graph (n=15,k=2)	30	45	6	0.002
Generalized Petersen graph (n=15,k=3)	30	45	8	0.009
Generalized Petersen graph (n=15,k=4)	30	45	9	0.03
Generalized Petersen graph (n=16,k=1)	32	48	4	0.002
Generalized Petersen graph (n=16,k=2)	32	48	6	0.002
Generalized Petersen graph (n=16,k=3)	32	48	8	0.012
Generalized Petersen graph (n=16,k=4)	32	48	8	0.012
Generalized Petersen graph (n=17,k=1)	34	51	4	0.002
Generalized Petersen graph (n=17,k=2)	34	51	6	0.002
Generalized Petersen graph (n=17,k=3)	34	51	8	0.013
Generalized Petersen graph (n=17,k=4)	34	51	9	0.045
Generalized Petersen graph (n=18,k=1)	36	54	4	0.002
Generalized Petersen graph (n=18,k=2)	36	54	6	0.002
Generalized Petersen graph (n=18,k=3)	36	54	8	0.015
Generalized Petersen graph (n=18,k=4)	36	54	10	0.183
Generalized Petersen graph (n=19,k=1)	38	57	4	0.003
Generalized Petersen graph (n=19,k=2)	38	57	6	0.002
Generalized Petersen graph (n=19,k=3)	38	57	8	0.015
Generalized Petersen graph (n=19,k=4)	38	57	10	0.204
Generalized Petersen graph (n=20,k=1)	40	60	4	0.003
Generalized Petersen graph (n=20,k=2)	40	60	6	0.003
Generalized Petersen graph (n=20,k=3)	40	60	8	0.017
Generalized Petersen graph (n=20,k=4)	40	60	10	0.232
Generalized Petersen graph (n=21,k=1)	42	63	4	0.002
Generalized Petersen graph (n=21,k=2)	42	63	6	0.003
Generalized Petersen graph (n=21,k=3)	42	63	8	0.018
Generalized Petersen graph (n=21,k=4)	42	63	10	0.252
Generalized Petersen graph (n=22,k=1)	44	66	4	0.003
Generalized Petersen graph (n=22,k=2)	44	66	6	0.003
Generalized Petersen graph (n=22,k=3)	44	66	8	0.02
Generalized Petersen graph (n=22,k=4)	44	66	10	0.278
Generalized Petersen graph (n=23,k=1)	46	69	4	0.003
Generalized Petersen graph (n=23,k=2)	46	69	6	0.003
Generalized Petersen graph (n=23,k=3)	46	69	8	0.022
Generalized Petersen graph (n=23,k=4)	46	69	10	0.308
Generalized Petersen graph (n=24,k=1)	48	72	4	0.003

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Table 15 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
Generalized Petersen graph (n=24,k=2)	48	72	6	0.003
Generalized Petersen graph (n=24,k=3)	48	72	8	0.023
Generalized Petersen graph (n=24,k=4)	48	72	10	0.342
Generalized Petersen graph (n=25,k=1)	50	75	4	0.003
Generalized Petersen graph (n=25,k=2)	50	75	6	0.004
Generalized Petersen graph (n=25,k=3)	50	75	8	0.025
Generalized Petersen graph (n=25,k=4)	50	75	10	0.371
Generalized Petersen graph (n=26,k=1)	52	78	4	0.003
Generalized Petersen graph (n=26,k=2)	52	78	6	0.004
Generalized Petersen graph (n=26,k=3)	52	78	8	0.026
Generalized Petersen graph (n=26,k=4)	52	78	10	0.405
Generalized Petersen graph (n=27,k=1)	54	81	4	0.003
Generalized Petersen graph (n=27,k=2)	54	81	6	0.003
Generalized Petersen graph (n=27,k=3)	54	81	8	0.028
Generalized Petersen graph (n=27,k=4)	54	81	10	0.441
Generalized Petersen graph (n=28,k=1)	56	84	4	0.003
Generalized Petersen graph (n=28,k=2)	56	84	6	0.004
Generalized Petersen graph (n=28,k=3)	56	84	8	0.03
Generalized Petersen graph (n=28,k=4)	56	84	10	0.481
Generalized Petersen graph (n=29,k=1)	58	87	4	0.004
Generalized Petersen graph (n=29,k=2)	58	87	6	0.005
Generalized Petersen graph (n=29,k=3)	58	87	8	0.032
Generalized Petersen graph (n=29,k=4)	58	87	10	0.52
Generalized Petersen graph (n=30,k=1)	60	90	4	0.003
Generalized Petersen graph (n=30,k=2)	60	90	6	0.004
Generalized Petersen graph (n=30,k=3)	60	90	8	0.034
Generalized Petersen graph (n=30,k=4)	60	90	10	0.563
(2, 2)-2D Grid Graph for [2, 2]	4	4	2	0.001
(3, 3)-2D Grid Graph for [3, 3]	9	12	3	0.001
(4, 4)-2D Grid Graph for [4, 4]	16	24	4	0.001
(5, 5)-2D Grid Graph for [5, 5]	25	40	5	0.002
(6, 6)-2D Grid Graph for [6, 6]	36	60	6	0.003
(7, 7)-2D Grid Graph for [7, 7]	49	84	7	0.007
(8, 8)-2D Grid Graph for [8, 8]	64	112	8	0.025
(9, 9)-2D Grid Graph for [9, 9]	81	144	9	0.132
(10, 10)-2D Grid Graph for [10, 10]	100	180	10	0.762
(2, 2, 2)-Grid Graph for [2, 2, 2]	8	12	4	0.001
(3, 3, 3)-Grid Graph for [3, 3, 3]	27	54	8	0.003
(4, 4, 4)-Grid Graph for [4, 4, 4]	64	144	14	1.232
(3, 3)-Hanoi Tower Graph-	27	39	4	0.003
(3, 4)-Hanoi Tower Graph-	81	120	5	0.009
(3, 5)-Hanoi Tower Graph-	243	363	6	53.0
Harary graph 2, 30	30	30	2	0.002
Harary graph 2, 40	40	40	2	0.002
Harary graph 2, 50	50	50	2	0.002
Harary graph 3, 30	30	45	4	0.002

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Table 15 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
Harary graph 3, 40	40	60	4	0.002
Harary graph 3, 50	50	75	4	0.003
Harary graph 4, 30	30	60	4	0.002
Harary graph 4, 40	40	80	4	0.003
Harary graph 4, 50	50	100	4	0.003
Harary graph 5, 30	30	75	8	0.003
Harary graph 5, 40	40	100	8	0.003
Harary graph 5, 50	50	125	8	0.004
Harary graph 6, 30	30	90	6	0.003
Harary graph 6, 40	40	120	6	0.004
Harary graph 6, 50	50	150	6	0.004
Harary graph 7, 30	30	105	12	0.004
Harary graph 7, 40	40	140	12	0.004
Harary graph 7, 50	50	175	12	0.006
Harary graph 8, 30	30	120	8	0.003
Harary graph 8, 40	40	160	8	0.004
Harary graph 8, 50	50	200	8	0.005
Harary graph 9, 30	30	135	16	0.006
Harary graph 9, 40	40	180	16	0.008
Harary graph 9, 50	50	225	16	0.01
HS(3,2)	3	2	1	0.001
HS(4,2)	6	6	2	0.001
HS(5,2)	10	12	3	0.001
HS(6,2)	15	20	4	0.002
HS(7,2)	21	30	5	0.003
HS(8,2)	28	42	6	0.007
HS(9,2)	36	56	7	0.041
HS(10,2)	45	72	8	0.199
Johnson graph with parameters 3,1	3	3	2	0.001
Johnson graph with parameters 3,2	3	3	2	0.001
Johnson graph with parameters 4,1	4	6	3	0.001
Johnson graph with parameters 4,2	6	12	4	0.002
Johnson graph with parameters 4,3	4	6	3	0.001
Johnson graph with parameters 5,1	5	10	4	0.001
Johnson graph with parameters 5,2	10	30	7	0.003
Johnson graph with parameters 5,3	10	30	7	0.003
Johnson graph with parameters 5,4	5	10	4	0.001
Johnson graph with parameters 6,1	6	15	5	0.002
Johnson graph with parameters 6,2	15	60	10	0.005
Johnson graph with parameters 6,3	20	90	13	0.006
Johnson graph with parameters 6,4	15	60	10	0.005
Johnson graph with parameters 6,5	6	15	5	0.002
Johnson graph with parameters 7,1	7	21	6	0.002
Johnson graph with parameters 7,2	21	105	14	0.008
Johnson graph with parameters 7,3	35	210	22	0.021
Johnson graph with parameters 7,4	35	210	22	0.022

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Table 15 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
Johnson graph with parameters 7,5	21	105	14	0.008
Johnson graph with parameters 7,6	7	21	6	0.002
Johnson graph with parameters 8,1	8	28	7	0.002
Johnson graph with parameters 8,2	28	168	18	0.012
Johnson graph with parameters 8,3	56	420	34	0.538
Johnson graph with parameters 8,4	70	560	40	2.837
Johnson graph with parameters 8,5	56	420	34	0.536
Johnson graph with parameters 8,6	28	168	18	0.012
Johnson graph with parameters 8,7	8	28	7	0.003
(2, 2)-King Graph	4	6	3	0.001
(3, 3)-King Graph	9	20	4	0.001
(4, 4)-King Graph	16	42	5	0.002
(5, 5)-King Graph	25	72	6	0.003
(6, 6)-King Graph	36	110	7	0.004
(7, 7)-King Graph	49	156	8	0.006
(8, 8)-King Graph	64	210	9	0.008
(9, 9)-King Graph	81	272	10	0.017
(10, 10)-King Graph	100	342	11	0.04
(11, 11)-King Graph	121	420	12	0.113
(12, 12)-King Graph	144	506	13	0.392
Kneser graph with parameters 3,1	3	3	2	0.001
Kneser graph with parameters 4,1	4	6	3	0.001
Kneser graph with parameters 4,2	6	3	1	0.002
Kneser graph with parameters 5,1	5	10	4	0.001
Kneser graph with parameters 5,2	10	15	5	0.002
Kneser graph with parameters 6,1	6	15	5	0.002
Kneser graph with parameters 6,2	15	45	10	0.004
Kneser graph with parameters 6,3	20	10	1	0.01
Kneser graph with parameters 7,1	7	21	6	0.002
Kneser graph with parameters 7,2	21	105	15	0.008
Kneser graph with parameters 7,3	35	70	13	0.179
Kneser graph with parameters 8,1	8	28	7	0.002
Kneser graph with parameters 8,2	28	210	21	0.014
Kneser graph with parameters 8,3	56	280	32	12.44
Kneser graph with parameters 8,4	70	35	1	0.016
Kneser graph with parameters 9,1	9	36	8	0.003
Kneser graph with parameters 9,2	36	378	28	0.025
Kneser graph with parameters 9,3	84	840	55	82.84
Kneser graph with parameters 10,1	10	45	9	0.003
Kneser graph with parameters 10,2	45	630	36	0.039
Kneser graph with parameters 10,5	252	126	1	0.057
(3, 3)-Knight Graph	9	8	2	0.001
(4, 4)-Knight Graph	16	24	4	0.001
(5, 5)-Knight Graph	25	48	6	0.002
(6, 6)-Knight Graph	36	80	9	0.008
(7, 7)-Knight Graph	49	120	14	0.789

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Table 15 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
(8, 8)-Knight Graph	64	168	16	5.819
(9, 9)-Knight Graph	81	224	18	36.22
2-Ladder graph	4	4	2	0.001
3-Ladder graph	6	7	2	0.001
4-Ladder graph	8	10	2	0.001
10-Ladder graph	20	28	2	0.001
30-Ladder graph	60	88	2	0.003
50-Ladder graph	100	148	2	0.005
100-Ladder graph	200	298	2	0.134
(5, 4)-Lollipop Graph	9	14	4	0.001
(10, 4)-Lollipop Graph	14	49	9	0.002
(30, 4)-Lollipop Graph	34	439	29	0.009
(50, 4)-Lollipop Graph	54	1229	49	0.025
(100, 4)-Lollipop Graph	104	4954	99	0.102
Mycielski Graph 2	2	1	1	0.001
Mycielski Graph 3	5	5	2	0.001
Mycielski Graph 4	11	20	5	0.001
Mycielski Graph 5	23	71	10	0.003
Mycielski Graph 6	47	236	20	0.461
(3,2)-star	6	6	2	0.001
(4,2)-star	12	18	4	0.001
(5,2)-star	20	40	7	0.001
(6,2)-star	30	75	10	0.003
(7,2)-star	42	126	14	0.007
(8,2)-star	56	196	18	0.669
3-star	6	6	2	0.001
4-star	24	36	8	0.001
Odd Graph with parameter 2	3	3	2	0.001
Odd Graph with parameter 3	10	15	5	0.001
Odd Graph with parameter 4	35	70	13	0.18
10-Path Graph	9	8	1	0.001
(2, 2)-Queen Graph	4	6	3	0.001
(3, 3)-Queen Graph	9	28	6	0.002
(4, 4)-Queen Graph	16	76	11	0.002
(5, 5)-Queen Graph	25	160	18	0.004
(6, 6)-Queen Graph	36	290	25	0.008
(7, 7)-Queen Graph	49	476	35	0.025
(8, 8)-Queen Graph	64	728	45	0.115
(9, 9)-Queen Graph	81	1056	58	2.553
(10, 10)-Queen Graph	100	1470	72	35.67
Ringed Tree on 2 levels	3	3	2	0.001
Ringed Tree on 3 levels	7	11	3	0.001
Ringed Tree on 4 levels	15	27	5	0.001
Ringed Tree on 5 levels	31	59	7	0.004
Ringed Tree on 6 levels	63	123	9	0.04
(2, 2)-Rook Graph	4	4	2	0.001

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Table 15 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
(3, 3)-Rook Graph	9	18	5	0.001
(4, 4)-Rook Graph	16	48	9	0.002
(5, 5)-Rook Graph	25	100	14	0.004
(6, 6)-Rook Graph	36	180	20	0.023
(7, 7)-Rook Graph	49	294	27	0.356
(8, 8)-Rook Graph	64	448	35	3.407
(9, 9)-Rook Graph	81	648	44	27.15
(10, 10)-Rook Graph	100	900	54	221.1
2-Star graph	3	2	1	0.001
3-Star graph	4	3	1	0.001
5-Star graph	6	5	1	0.001
10-Star graph	11	10	1	0.001
30-Star graph	31	30	1	0.001
50-Star graph	51	50	1	0.001
100-Star graph	101	100	1	0.002
Symplectic Graph Sp(4,2)	15	45	10	0.002
Symplectic Graph Sp(6,2)	63	945	54	0.161
Symplectic Graph Sp(4,3)	40	240	29	0.27
Toroidal Hexagonal Grid graph on 4x4 elements	16	48	9	0.002
Toroidal Hexagonal Grid graph on 5x5 elements	25	75	11	0.003
Toroidal Hexagonal Grid graph on 6x6 elements	36	108	13	0.016
Toroidal Hexagonal Grid graph on 7x7 elements	49	147	15	0.144
Toroidal 2D Grid Graph with parameters 3,3	9	18	5	0.001
Toroidal 2D Grid Graph with parameters 4,4	16	32	7	0.001
Toroidal 2D Grid Graph with parameters 5,5	25	50	9	0.004
Toroidal 2D Grid Graph with parameters 6,6	36	72	11	0.044
Toroidal 2D Grid Graph with parameters 7,7	49	98	13	0.665
3-Wheel graph	3	3	2	0.001
5-Wheel graph	5	8	3	0.001
10-Wheel graph	10	18	3	0.001
30-Wheel graph	30	58	3	0.002
50-Wheel graph	50	98	3	0.003
100-Wheel graph	100	198	3	0.005

Table 16: Upper bounds for sage_families instance (10 min. per graph).

Name	**N**	**M**	**Upper bound on pw**
5-Bubble sort	120	240	23
Kneser graph with parameters 9,4	126	315	41
Kneser graph with parameters 10,3	120	2100	84
Kneser graph with parameters 10,4	210	1575	104
(10, 10)-Knight Graph	100	288	20
(11, 11)-Knight Graph	121	360	26
(12, 12)-Knight Graph	144	440	28

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Table 16 – Continued from previous page

Name	N	M	Upper bound on pw
Mycielski Graph 7	95	755	38
(11, 11)-Queen Graph	121	1980	87
(12, 12)-Queen Graph	144	2596	103

B.5 Rome graphs dataset

As said in Section 4.3, the *Rome graphs* dataset [34] consists of 11 529 undirected n-node graphs with $10 \leq n \leq 100$.

We report:

- In Table 2 page 15 the repartition of (un)solved instances and in Fig. 2 page 50 the computation time per solved graphs.
- in Table 17 the computed values and required computation time for all optimaly solved instances, and in Table 18 page 290 upper bounds for instances we were not able able to solved in 10min.

Table 17: Computational results for rome instance.

Name	N	M	pw	time (in sec.)
grafo113.28	28	31	3	0.002
grafo114.26	26	30	3	0.002
grafo115.30	30	31	3	0.003
grafo116.28	28	38	3	0.003
grafo117.20	20	21	2	0.002
grafo118.43	43	58	5	0.012
grafo119.24	24	33	3	0.002
grafo120.40	40	42	3	0.004
grafo121.20	20	25	3	0.001
grafo122.12	12	11	1	0.001
grafo123.21	21	26	3	0.002
grafo124.28	28	29	3	0.002
grafo125.32	32	37	3	0.003
grafo126.22	22	30	3	0.002
grafo127.21	21	21	2	0.001
grafo128.35	35	42	3	0.003
grafo129.48	48	58	4	0.007
grafo130.31	31	36	3	0.002
grafo131.23	23	26	2	0.003
grafo132.21	21	27	3	0.002
grafo133.16	16	17	3	0.001
grafo134.40	40	49	4	0.003
grafo135.30	30	40	4	0.003
grafo136.21	21	26	3	0.001
grafo137.21	21	36	5	0.002
grafo138.38	38	48	5	0.007

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo139.24	24	28	3	0.002
grafo140.22	22	23	2	0.002
grafo141.28	28	34	3	0.002
grafo142.33	33	37	3	0.003
grafo143.29	29	30	2	0.002
grafo144.12	12	11	2	0.001
grafo145.31	31	37	4	0.003
grafo146.22	22	31	4	0.002
grafo147.29	29	28	2	0.003
grafo148.28	28	35	4	0.002
grafo149.41	41	54	5	0.006
grafo150.31	31	34	3	0.003
grafo151.33	33	38	3	0.002
grafo152.21	21	24	3	0.002
grafo153.21	21	33	4	0.002
grafo154.33	33	34	2	0.003
grafo155.10	10	10	2	0.001
grafo156.21	21	24	3	0.002
grafo157.29	29	32	2	0.002
grafo158.21	21	24	3	0.002
grafo159.24	24	25	3	0.002
grafo160.30	30	32	2	0.002
grafo161.31	31	40	5	0.006
grafo162.24	24	32	3	0.002
grafo163.25	25	37	5	0.002
grafo164.22	22	27	3	0.002
grafo165.30	30	31	2	0.002
grafo166.10	10	10	2	0.001
grafo167.22	22	24	3	0.001
grafo168.31	31	40	3	0.002
grafo169.26	26	38	4	0.002
grafo170.49	49	62	5	0.015
grafo171.30	30	40	4	0.003
grafo172.30	30	33	3	0.002
grafo173.26	26	31	3	0.002
grafo174.27	27	28	3	0.002
grafo175.23	23	24	3	0.002
grafo176.30	30	35	3	0.002
grafo177.11	11	12	2	0.001
grafo178.33	33	42	4	0.003
grafo179.35	35	42	4	0.003
grafo180.27	27	37	4	0.002
grafo181.29	29	40	5	0.003
grafo182.23	23	25	3	0.002
grafo183.28	28	32	3	0.002
grafo184.41	41	45	3	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo185.22	22	26	3	0.002
grafo186.30	30	35	3	0.002
grafo187.15	15	18	3	0.001
grafo188.23	23	24	2	0.001
grafo189.30	30	36	3	0.003
grafo190.20	20	26	3	0.001
grafo191.21	21	24	3	0.002
grafo192.13	13	17	4	0.001
grafo193.12	12	13	2	0.001
grafo194.23	23	30	3	0.002
grafo195.15	15	24	4	0.001
grafo196.30	30	36	3	0.002
grafo197.15	15	15	2	0.001
grafo198.18	18	26	4	0.001
grafo199.13	13	19	3	0.002
grafo200.11	11	17	2	0.001
grafo201.13	13	16	3	0.001
grafo202.13	13	14	2	0.001
grafo203.13	13	14	2	0.002
grafo204.15	15	15	2	0.001
grafo205.30	30	33	3	0.002
grafo206.12	12	12	2	0.002
grafo207.12	12	13	2	0.001
grafo208.38	38	46	4	0.003
grafo209.10	10	10	2	0.001
grafo210.10	10	10	2	0.001
grafo211.14	14	15	2	0.001
grafo212.14	14	14	2	0.001
grafo213.18	18	21	3	0.002
grafo214.22	22	31	4	0.002
grafo215.20	20	22	2	0.001
grafo216.18	18	19	3	0.001
grafo217.14	14	17	3	0.001
grafo218.17	17	22	3	0.002
grafo219.11	11	13	2	0.001
grafo220.13	13	16	3	0.002
grafo221.15	15	16	2	0.001
grafo222.11	11	10	2	0.001
grafo223.12	12	11	2	0.001
grafo224.17	17	18	2	0.002
grafo225.12	12	19	3	0.001
grafo226.14	14	16	3	0.001
grafo227.39	39	47	4	0.004
grafo228.19	19	24	3	0.001
grafo229.13	13	12	2	0.001
grafo230.14	14	19	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo231.12	12	18	3	0.001
grafo232.16	16	18	3	0.001
grafo233.11	11	12	2	0.001
grafo234.12	12	15	3	0.001
grafo235.13	13	12	1	0.001
grafo236.15	15	16	2	0.001
grafo237.16	16	17	3	0.002
grafo238.10	10	11	2	0.001
grafo239.15	15	21	3	0.001
grafo240.11	11	18	3	0.001
grafo241.16	16	21	2	0.002
grafo242.14	14	16	2	0.001
grafo243.28	28	33	3	0.002
grafo244.20	20	22	3	0.001
grafo245.21	21	22	2	0.002
grafo246.11	11	10	2	0.001
grafo247.15	15	16	2	0.001
grafo248.27	27	33	3	0.002
grafo249.22	22	31	4	0.002
grafo250.13	13	19	3	0.001
grafo251.20	20	23	3	0.001
grafo252.12	12	11	2	0.001
grafo253.15	15	15	2	0.001
grafo254.10	10	11	2	0.001
grafo255.14	14	16	2	0.001
grafo256.12	12	11	2	0.001
grafo257.10	10	10	2	0.001
grafo258.13	13	14	2	0.001
grafo259.12	12	11	1	0.001
grafo260.14	14	15	2	0.001
grafo261.14	14	15	2	0.002
grafo262.11	11	12	2	0.001
grafo263.11	11	11	2	0.001
grafo264.17	17	22	3	0.001
grafo265.10	10	12	2	0.001
grafo266.13	13	14	2	0.001
grafo267.11	11	11	2	0.001
grafo268.15	15	15	2	0.001
grafo269.12	12	12	2	0.001
grafo270.20	20	30	3	0.002
grafo271.53	53	67	6	0.037
grafo272.14	14	13	2	0.002
grafo273.11	11	10	1	0.001
grafo274.17	17	17	2	0.002
grafo275.16	16	18	3	0.001
grafo276.17	17	20	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo277.13	13	15	2	0.001
grafo278.12	12	16	3	0.001
grafo279.16	16	19	3	0.001
grafo280.11	11	12	2	0.001
grafo281.14	14	13	2	0.001
grafo282.14	14	18	3	0.002
grafo283.24	24	28	3	0.002
grafo284.28	28	36	4	0.002
grafo285.14	14	19	3	0.002
grafo286.18	18	20	2	0.001
grafo287.19	19	23	3	0.001
grafo288.15	15	16	2	0.001
grafo289.40	40	50	4	0.004
grafo290.18	18	19	2	0.001
grafo291.20	20	20	2	0.002
grafo292.16	16	17	2	0.001
grafo293.17	17	20	2	0.001
grafo294.21	21	21	2	0.001
grafo295.15	15	21	4	0.002
grafo296.28	28	36	4	0.002
grafo297.15	15	19	3	0.001
grafo298.20	20	27	3	0.001
grafo299.19	19	21	3	0.001
grafo300.13	13	15	2	0.001
grafo301.17	17	22	3	0.001
grafo302.17	17	19	3	0.002
grafo303.11	11	10	2	0.001
grafo304.15	15	17	3	0.001
grafo305.16	16	19	3	0.002
grafo306.18	18	25	4	0.002
grafo307.13	13	13	2	0.001
grafo308.14	14	22	3	0.002
grafo309.26	26	36	4	0.002
grafo310.14	14	16	3	0.002
grafo311.16	16	20	3	0.001
grafo312.27	27	35	3	0.002
grafo313.11	11	10	2	0.001
grafo314.18	18	18	2	0.001
grafo315.14	14	16	2	0.001
grafo316.11	11	13	2	0.001
grafo317.13	13	21	4	0.001
grafo318.20	20	25	3	0.002
grafo319.26	26	28	2	0.002
grafo320.35	35	44	4	0.004
grafo321.15	15	15	2	0.001
grafo322.16	16	15	1	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo323.15	15	21	3	0.001
grafo324.11	11	11	2	0.001
grafo325.13	13	14	2	0.001
grafo326.14	14	19	3	0.002
grafo327.10	10	10	2	0.001
grafo328.10	10	10	2	0.001
grafo329.17	17	18	2	0.001
grafo330.15	15	16	3	0.001
grafo331.15	15	16	2	0.001
grafo332.82	82	106	7	3.232
grafo333.19	19	22	2	0.001
grafo334.12	12	13	2	0.001
grafo335.13	13	19	3	0.002
grafo336.21	21	22	2	0.001
grafo337.15	15	23	3	0.001
grafo338.15	15	16	2	0.001
grafo339.18	18	18	2	0.001
grafo340.15	15	16	2	0.001
grafo341.30	30	39	4	0.003
grafo342.16	16	20	3	0.001
grafo343.14	14	15	2	0.001
grafo344.36	36	47	5	0.006
grafo345.14	14	13	2	0.001
grafo346.19	19	22	3	0.001
grafo347.13	13	12	1	0.001
grafo348.20	20	21	2	0.001
grafo349.13	13	14	3	0.002
grafo350.21	21	26	3	0.002
grafo351.13	13	15	2	0.001
grafo352.12	12	12	2	0.002
grafo353.13	13	13	2	0.001
grafo354.12	12	12	2	0.001
grafo355.14	14	13	2	0.001
grafo356.19	19	22	3	0.002
grafo357.14	14	21	3	0.001
grafo358.30	30	39	3	0.002
grafo359.30	30	37	3	0.002
grafo360.17	17	21	4	0.002
grafo361.13	13	14	2	0.001
grafo362.19	19	18	2	0.001
grafo363.10	10	11	3	0.001
grafo364.14	14	13	2	0.001
grafo365.40	40	47	4	0.004
grafo366.16	16	16	2	0.001
grafo367.14	14	14	2	0.002
grafo368.11	11	13	3	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo369.20	20	28	3	0.002
grafo370.14	14	19	3	0.002
grafo371.14	14	13	2	0.002
grafo372.27	27	31	3	0.002
grafo373.13	13	19	3	0.001
grafo374.18	18	25	3	0.001
grafo375.17	17	19	3	0.001
grafo376.10	10	9	2	0.001
grafo377.13	13	16	2	0.001
grafo378.14	14	17	2	0.001
grafo379.15	15	17	2	0.001
grafo380.21	21	25	3	0.002
grafo381.21	21	23	3	0.001
grafo382.15	15	17	2	0.002
grafo383.12	12	14	3	0.001
grafo384.19	19	24	3	0.002
grafo385.17	17	24	4	0.001
grafo386.15	15	24	4	0.001
grafo387.13	13	15	3	0.001
grafo388.13	13	16	3	0.001
grafo389.19	19	26	3	0.002
grafo390.13	13	13	2	0.001
grafo391.15	15	20	3	0.002
grafo392.13	13	13	2	0.001
grafo393.13	13	18	3	0.001
grafo394.11	11	15	3	0.001
grafo395.35	35	46	4	0.003
grafo396.15	15	17	2	0.002
grafo397.11	11	12	2	0.001
grafo398.26	26	27	2	0.002
grafo399.15	15	16	3	0.001
grafo400.16	16	17	2	0.002
grafo401.11	11	13	3	0.001
grafo402.10	10	10	2	0.001
grafo403.14	14	15	2	0.002
grafo404.12	12	13	2	0.002
grafo405.16	16	17	3	0.001
grafo406.13	13	15	3	0.002
grafo407.10	10	9	2	0.001
grafo408.11	11	10	1	0.001
grafo409.19	19	22	3	0.002
grafo410.14	14	16	3	0.001
grafo411.16	16	23	3	0.001
grafo412.23	23	27	3	0.002
grafo413.20	20	24	3	0.002
grafo414.14	14	14	2	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo415.17	17	24	3	0.002
grafo416.18	18	18	2	0.002
grafo417.13	13	12	2	0.001
grafo418.16	16	18	3	0.001
grafo419.15	15	18	2	0.001
grafo420.17	17	25	3	0.002
grafo421.16	16	22	3	0.001
grafo422.17	17	17	2	0.002
grafo423.19	19	21	3	0.002
grafo424.18	18	22	3	0.001
grafo425.13	13	15	3	0.001
grafo426.19	19	21	2	0.001
grafo427.26	26	34	3	0.002
grafo428.19	19	22	3	0.001
grafo429.20	20	28	4	0.002
grafo430.13	13	14	2	0.001
grafo431.13	13	15	2	0.001
grafo432.19	19	20	3	0.002
grafo433.21	21	28	3	0.002
grafo434.20	20	23	3	0.001
grafo435.12	12	11	1	0.001
grafo436.12	12	13	2	0.001
grafo437.12	12	13	2	0.001
grafo438.22	22	29	3	0.002
grafo439.11	11	14	3	0.001
grafo440.13	13	14	2	0.001
grafo441.11	11	11	2	0.002
grafo442.12	12	12	2	0.001
grafo443.13	13	15	3	0.001
grafo444.16	16	15	2	0.001
grafo445.22	22	25	3	0.002
grafo446.17	17	23	3	0.001
grafo447.14	14	16	3	0.002
grafo448.11	11	11	2	0.001
grafo449.18	18	25	4	0.002
grafo450.35	35	45	4	0.003
grafo451.23	23	23	2	0.002
grafo452.14	14	13	2	0.001
grafo453.12	12	11	1	0.001
grafo454.17	17	17	2	0.002
grafo455.10	10	10	2	0.001
grafo456.29	29	36	5	0.005
grafo457.12	12	15	3	0.001
grafo458.14	14	17	3	0.001
grafo459.17	17	20	3	0.001
grafo460.10	10	9	2	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo461.10	10	10	2	0.001
grafo462.10	10	10	2	0.001
grafo463.15	15	22	4	0.001
grafo464.17	17	22	2	0.001
grafo465.10	10	10	2	0.001
grafo466.10	10	10	2	0.001
grafo467.15	15	24	3	0.002
grafo468.19	19	31	4	0.002
grafo469.18	18	21	3	0.001
grafo470.17	17	19	2	0.002
grafo471.18	18	18	2	0.002
grafo472.12	12	11	2	0.001
grafo473.10	10	10	2	0.001
grafo474.10	10	10	2	0.001
grafo475.15	15	22	3	0.002
grafo476.19	19	18	2	0.001
grafo477.13	13	13	2	0.001
grafo478.33	33	38	3	0.002
grafo479.17	17	23	3	0.002
grafo480.15	15	15	2	0.001
grafo481.80	80	108	7	2.457
grafo482.13	13	18	2	0.001
grafo483.15	15	20	3	0.002
grafo484.30	30	35	3	0.002
grafo485.16	16	20	3	0.001
grafo486.13	13	16	2	0.001
grafo487.14	14	14	2	0.001
grafo488.25	25	27	2	0.002
grafo489.14	14	15	2	0.001
grafo490.40	40	45	3	0.004
grafo491.12	12	11	1	0.001
grafo492.18	18	19	2	0.002
grafo493.12	12	12	2	0.001
grafo494.13	13	16	3	0.001
grafo495.20	20	20	2	0.002
grafo496.15	15	20	3	0.001
grafo497.15	15	17	3	0.001
grafo498.12	12	16	2	0.001
grafo499.37	37	48	5	0.009
grafo500.15	15	17	2	0.002
grafo501.13	13	12	2	0.002
grafo502.20	20	22	3	0.001
grafo503.11	11	14	2	0.001
grafo504.25	25	29	3	0.002
grafo505.13	13	12	2	0.002
grafo506.43	43	51	5	0.013

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo507.24	24	24	2	0.002
grafo508.20	20	21	2	0.002
grafo509.21	21	29	4	0.001
grafo510.13	13	16	3	0.001
grafo511.13	13	14	3	0.001
grafo512.16	16	16	2	0.001
grafo513.10	10	10	2	0.001
grafo514.13	13	12	2	0.001
grafo515.11	11	11	2	0.001
grafo516.15	15	16	2	0.001
grafo517.17	17	23	3	0.001
grafo518.15	15	17	3	0.002
grafo519.12	12	15	3	0.001
grafo520.14	14	22	3	0.001
grafo521.20	20	21	2	0.001
grafo522.24	24	30	3	0.003
grafo523.20	20	23	3	0.002
grafo524.14	14	15	2	0.001
grafo525.16	16	20	3	0.002
grafo526.12	12	15	3	0.001
grafo527.17	17	21	3	0.001
grafo528.18	18	19	2	0.002
grafo529.16	16	22	3	0.002
grafo530.13	13	13	2	0.001
grafo531.17	17	20	3	0.002
grafo532.11	11	11	2	0.001
grafo533.11	11	11	2	0.001
grafo534.15	15	14	2	0.001
grafo535.20	20	26	3	0.002
grafo536.14	14	14	2	0.001
grafo537.26	26	32	4	0.002
grafo538.18	18	19	2	0.001
grafo539.22	22	34	4	0.002
grafo540.16	16	17	2	0.002
grafo541.10	10	10	2	0.001
grafo542.12	12	14	2	0.001
grafo543.12	12	12	2	0.001
grafo544.25	25	31	3	0.002
grafo545.23	23	28	3	0.002
grafo546.12	12	11	2	0.001
grafo547.16	16	16	2	0.002
grafo548.13	13	12	2	0.001
grafo549.15	15	19	3	0.001
grafo550.15	15	19	3	0.002
grafo551.23	23	29	3	0.002
grafo552.27	27	29	2	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo553.16	16	15	2	0.001
grafo554.10	10	9	2	0.001
grafo555.12	12	13	2	0.001
grafo556.15	15	17	3	0.002
grafo557.11	11	12	2	0.001
grafo558.15	15	19	3	0.001
grafo559.13	13	15	2	0.001
grafo560.18	18	19	2	0.001
grafo561.20	20	25	3	0.002
grafo562.14	14	22	4	0.002
grafo563.19	19	29	4	0.002
grafo564.12	12	11	1	0.001
grafo565.17	17	17	2	0.001
grafo566.18	18	20	2	0.002
grafo567.14	14	18	3	0.001
grafo568.20	20	21	2	0.001
grafo569.28	28	31	2	0.002
grafo570.16	16	21	3	0.001
grafo571.12	12	11	2	0.001
grafo572.17	17	18	2	0.002
grafo573.13	13	19	3	0.001
grafo574.12	12	19	3	0.001
grafo575.25	25	29	3	0.002
grafo576.12	12	14	2	0.001
grafo577.13	13	14	2	0.002
grafo578.26	26	27	2	0.002
grafo579.35	35	37	2	0.002
grafo580.29	29	37	4	0.002
grafo581.23	23	35	4	0.002
grafo582.15	15	16	2	0.002
grafo583.15	15	19	3	0.001
grafo584.25	25	29	3	0.002
grafo585.15	15	16	2	0.001
grafo586.10	10	10	2	0.001
grafo587.10	10	10	2	0.001
grafo588.19	19	20	2	0.001
grafo589.12	12	13	2	0.002
grafo590.15	15	22	3	0.002
grafo591.25	25	26	2	0.002
grafo592.14	14	14	2	0.001
grafo593.12	12	15	2	0.001
grafo594.11	11	11	2	0.001
grafo595.13	13	15	3	0.001
grafo596.14	14	16	3	0.001
grafo597.17	17	24	3	0.001
grafo598.33	33	49	4	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo599.18	18	18	2	0.001
grafo600.19	19	21	3	0.002
grafo601.19	19	23	3	0.002
grafo602.15	15	19	3	0.001
grafo603.26	26	27	2	0.002
grafo604.12	12	11	2	0.001
grafo605.22	22	26	2	0.001
grafo606.21	21	27	3	0.001
grafo607.15	15	17	2	0.001
grafo608.13	13	12	2	0.001
grafo609.12	12	12	2	0.001
grafo610.29	29	38	4	0.003
grafo611.12	12	12	2	0.001
grafo612.11	11	11	2	0.001
grafo613.10	10	9	2	0.001
grafo614.25	25	29	3	0.002
grafo615.15	15	22	3	0.001
grafo616.19	19	28	4	0.001
grafo617.17	17	23	3	0.001
grafo618.13	13	18	3	0.001
grafo619.13	13	15	2	0.001
grafo620.27	27	27	2	0.002
grafo621.19	19	27	4	0.001
grafo622.23	23	25	3	0.002
grafo623.13	13	12	1	0.002
grafo624.17	17	18	2	0.002
grafo625.14	14	15	2	0.002
grafo626.11	11	16	2	0.001
grafo627.27	27	29	2	0.002
grafo628.14	14	17	3	0.001
grafo629.14	14	17	2	0.002
grafo630.21	21	28	3	0.002
grafo631.16	16	17	2	0.001
grafo632.13	13	16	3	0.002
grafo633.10	10	9	2	0.001
grafo634.24	24	31	3	0.002
grafo635.13	13	17	3	0.001
grafo636.29	29	30	2	0.002
grafo637.13	13	12	2	0.001
grafo638.12	12	17	3	0.001
grafo639.14	14	20	3	0.001
grafo640.16	16	16	2	0.002
grafo641.21	21	23	2	0.002
grafo642.14	14	15	2	0.001
grafo643.12	12	14	2	0.001
grafo644.14	14	17	3	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo645.17	17	19	2	0.002
grafo646.25	25	25	2	0.003
grafo647.78	78	99	6	0.619
grafo648.39	39	41	3	0.003
grafo649.14	14	25	3	0.001
grafo650.12	12	11	2	0.001
grafo651.16	16	15	2	0.001
grafo652.14	14	13	2	0.001
grafo653.12	12	12	2	0.001
grafo654.25	25	24	2	0.002
grafo655.23	23	23	2	0.002
grafo656.22	22	28	3	0.001
grafo657.15	15	22	3	0.001
grafo658.15	15	20	3	0.001
grafo659.14	14	17	2	0.001
grafo660.13	13	20	3	0.001
grafo661.16	16	17	3	0.002
grafo662.14	14	15	2	0.001
grafo663.19	19	20	3	0.001
grafo664.22	22	26	3	0.002
grafo665.13	13	13	2	0.001
grafo666.12	12	14	3	0.001
grafo667.12	12	12	2	0.001
grafo668.16	16	18	2	0.002
grafo669.12	12	12	2	0.001
grafo670.15	15	18	3	0.002
grafo671.13	13	15	2	0.001
grafo672.39	39	40	3	0.003
grafo673.18	18	22	3	0.002
grafo674.15	15	18	3	0.002
grafo675.11	11	11	2	0.001
grafo676.11	11	10	2	0.001
grafo677.17	17	21	3	0.002
grafo678.17	17	25	3	0.002
grafo679.20	20	25	3	0.001
grafo680.37	37	44	3	0.003
grafo681.35	35	48	4	0.003
grafo682.16	16	18	3	0.001
grafo683.22	22	27	3	0.002
grafo684.12	12	17	3	0.002
grafo685.11	11	11	2	0.001
grafo686.23	23	25	3	0.002
grafo687.14	14	22	3	0.002
grafo688.10	10	10	2	0.001
grafo689.10	10	10	2	0.001
grafo690.11	11	17	2	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo691.12	12	12	2	0.001
grafo692.22	22	30	3	0.002
grafo693.16	16	19	3	0.001
grafo694.22	22	23	2	0.002
grafo695.36	36	54	6	0.013
grafo696.12	12	18	3	0.002
grafo697.15	15	25	3	0.001
grafo698.20	20	27	4	0.002
grafo699.14	14	13	2	0.001
grafo700.14	14	13	2	0.001
grafo701.14	14	20	3	0.001
grafo702.12	12	14	2	0.001
grafo703.19	19	31	3	0.001
grafo704.17	17	19	3	0.002
grafo705.16	16	23	4	0.001
grafo706.18	18	25	2	0.002
grafo707.15	15	16	2	0.002
grafo708.22	22	30	3	0.002
grafo709.17	17	21	3	0.001
grafo710.15	15	21	4	0.002
grafo711.13	13	15	2	0.001
grafo712.21	21	27	3	0.002
grafo713.12	12	13	2	0.001
grafo714.13	13	15	3	0.001
grafo715.30	30	32	3	0.003
grafo716.13	13	13	2	0.001
grafo717.10	10	10	2	0.001
grafo718.10	10	10	2	0.001
grafo719.14	14	13	2	0.001
grafo720.14	14	16	3	0.001
grafo721.17	17	20	3	0.001
grafo722.15	15	17	2	0.002
grafo723.17	17	20	3	0.002
grafo724.18	18	21	3	0.001
grafo725.15	15	15	2	0.001
grafo726.14	14	15	2	0.002
grafo727.13	13	19	3	0.001
grafo728.28	28	33	3	0.003
grafo729.15	15	15	2	0.002
grafo730.12	12	13	2	0.001
grafo731.14	14	15	2	0.002
grafo732.35	35	44	4	0.004
grafo733.43	43	54	4	0.004
grafo734.14	14	18	3	0.001
grafo735.15	15	14	2	0.001
grafo736.13	13	14	2	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo737.14	14	14	2	0.001
grafo738.12	12	15	3	0.001
grafo739.15	15	18	2	0.001
grafo740.11	11	12	2	0.001
grafo741.14	14	14	2	0.001
grafo742.13	13	15	2	0.001
grafo743.32	32	37	4	0.006
grafo744.28	28	29	3	0.002
grafo745.32	32	36	3	0.003
grafo746.13	13	14	2	0.002
grafo747.12	12	13	2	0.001
grafo748.11	11	11	2	0.001
grafo749.11	11	10	1	0.001
grafo750.12	12	11	2	0.001
grafo751.11	11	12	2	0.001
grafo752.76	76	95	7	3.81
grafo753.26	26	28	3	0.002
grafo754.16	16	21	3	0.002
grafo755.20	20	21	2	0.002
grafo756.12	12	11	2	0.001
grafo757.16	16	19	2	0.001
grafo758.10	10	10	2	0.001
grafo759.11	11	12	2	0.001
grafo760.13	13	14	2	0.002
grafo761.13	13	13	2	0.001
grafo762.27	27	31	3	0.002
grafo763.18	18	23	3	0.002
grafo764.23	23	26	3	0.002
grafo765.37	37	47	3	0.003
grafo766.12	12	12	2	0.001
grafo767.22	22	22	2	0.001
grafo768.28	28	31	3	0.002
grafo769.14	14	13	2	0.002
grafo770.12	12	12	2	0.001
grafo771.19	19	18	2	0.001
grafo772.11	11	13	2	0.001
grafo773.12	12	14	3	0.002
grafo774.17	17	18	2	0.001
grafo775.17	17	23	3	0.002
grafo776.36	36	52	5	0.004
grafo777.14	14	14	2	0.001
grafo778.15	15	17	3	0.001
grafo779.13	13	15	2	0.001
grafo780.15	15	17	2	0.001
grafo781.12	12	12	2	0.001
grafo782.10	10	9	2	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo783.15	15	20	3	0.002
grafo784.18	18	23	3	0.001
grafo785.16	16	16	2	0.001
grafo786.20	20	23	3	0.002
grafo787.15	15	18	3	0.002
grafo788.16	16	25	5	0.001
grafo789.24	24	30	3	0.002
grafo790.17	17	18	3	0.001
grafo791.13	13	15	2	0.002
grafo792.13	13	14	2	0.001
grafo793.13	13	15	3	0.001
grafo794.19	19	21	3	0.002
grafo795.14	14	20	3	0.001
grafo796.14	14	19	2	0.001
grafo797.14	14	15	2	0.002
grafo798.26	26	32	4	0.003
grafo799.49	49	59	5	0.018
grafo800.12	12	11	1	0.001
grafo801.13	13	13	2	0.001
grafo802.17	17	20	2	0.001
grafo803.15	15	18	3	0.001
grafo804.21	21	22	2	0.001
grafo805.13	13	22	3	0.001
grafo806.15	15	16	3	0.001
grafo807.12	12	12	2	0.001
grafo808.12	12	11	2	0.001
grafo809.15	15	14	2	0.002
grafo810.16	16	17	3	0.001
grafo811.14	14	20	3	0.001
grafo812.14	14	17	2	0.001
grafo813.13	13	19	2	0.001
grafo814.14	14	14	2	0.001
grafo815.15	15	15	2	0.001
grafo816.17	17	18	3	0.001
grafo817.18	18	19	2	0.002
grafo818.13	13	14	2	0.001
grafo819.38	38	49	4	0.004
grafo820.18	18	21	3	0.001
grafo821.16	16	22	3	0.001
grafo822.11	11	13	2	0.001
grafo823.16	16	16	2	0.001
grafo824.12	12	12	2	0.001
grafo825.15	15	17	3	0.001
grafo826.22	22	22	2	0.002
grafo827.12	12	13	2	0.001
grafo828.22	22	24	2	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo829.17	17	21	3	0.002
grafo830.27	27	27	2	0.001
grafo831.16	16	17	2	0.001
grafo832.21	21	28	4	0.002
grafo833.13	13	17	3	0.001
grafo834.11	11	12	2	0.001
grafo835.23	23	27	3	0.002
grafo836.10	10	10	2	0.001
grafo837.10	10	10	2	0.001
grafo838.16	16	15	2	0.001
grafo839.14	14	17	2	0.001
grafo840.17	17	19	3	0.001
grafo841.14	14	13	2	0.001
grafo842.21	21	24	3	0.002
grafo843.14	14	14	2	0.002
grafo844.12	12	18	3	0.001
grafo845.16	16	17	2	0.001
grafo846.27	27	32	3	0.002
grafo847.22	22	29	3	0.001
grafo848.13	13	14	2	0.001
grafo849.11	11	11	2	0.001
grafo850.12	12	13	2	0.001
grafo851.17	17	19	3	0.002
grafo852.19	19	22	3	0.002
grafo853.16	16	16	2	0.002
grafo854.12	12	11	2	0.001
grafo855.15	15	17	3	0.001
grafo856.11	11	12	2	0.001
grafo857.11	11	11	2	0.001
grafo858.23	23	28	3	0.002
grafo859.30	30	34	3	0.002
grafo860.31	31	35	3	0.002
grafo861.12	12	12	2	0.001
grafo862.25	25	28	3	0.002
grafo863.18	18	19	3	0.002
grafo864.16	16	20	3	0.001
grafo865.28	28	35	3	0.002
grafo866.19	19	21	2	0.002
grafo867.12	12	11	2	0.002
grafo868.12	12	12	2	0.001
grafo869.10	10	10	2	0.001
grafo870.10	10	10	2	0.001
grafo871.14	14	17	3	0.001
grafo872.24	24	28	3	0.002
grafo873.20	20	25	3	0.001
grafo874.20	20	25	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo875.20	20	21	2	0.001
grafo876.38	38	45	4	0.005
grafo877.16	16	17	2	0.002
grafo878.13	13	16	2	0.001
grafo879.15	15	20	2	0.001
grafo880.17	17	16	2	0.001
grafo881.10	10	9	1	0.001
grafo882.26	26	27	2	0.001
grafo883.14	14	15	2	0.002
grafo884.17	17	23	3	0.001
grafo885.18	18	24	3	0.002
grafo886.15	15	15	2	0.002
grafo887.13	13	15	3	0.001
grafo888.12	12	13	2	0.001
grafo889.21	21	28	3	0.002
grafo890.13	13	16	3	0.001
grafo891.13	13	13	2	0.001
grafo892.23	23	25	2	0.002
grafo893.17	17	21	2	0.002
grafo894.16	16	24	3	0.001
grafo895.12	12	11	2	0.001
grafo896.16	16	24	4	0.001
grafo897.12	12	12	2	0.001
grafo898.10	10	9	2	0.001
grafo899.14	14	15	2	0.001
grafo900.11	11	13	2	0.001
grafo901.21	21	24	3	0.002
grafo902.22	22	22	2	0.002
grafo903.17	17	18	3	0.002
grafo904.20	20	22	2	0.002
grafo905.15	15	18	3	0.002
grafo906.12	12	11	2	0.001
grafo907.10	10	10	2	0.001
grafo908.12	12	14	3	0.001
grafo909.47	47	52	3	0.004
grafo910.10	10	9	2	0.002
grafo911.12	12	13	2	0.001
grafo912.14	14	13	2	0.002
grafo913.15	15	15	2	0.001
grafo914.26	26	42	6	0.002
grafo915.24	24	32	4	0.003
grafo916.83	83	110	7	2.292
grafo917.17	17	20	3	0.001
grafo918.24	24	24	2	0.002
grafo919.12	12	14	2	0.001
grafo920.24	24	25	2	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo921.16	16	18	2	0.002
grafo922.14	14	19	3	0.001
grafo923.17	17	22	3	0.002
grafo924.19	19	21	3	0.002
grafo925.21	21	31	4	0.002
grafo926.14	14	17	2	0.001
grafo927.11	11	10	1	0.001
grafo928.13	13	15	3	0.001
grafo929.16	16	21	3	0.001
grafo930.13	13	19	3	0.001
grafo931.13	13	15	3	0.001
grafo932.28	28	35	4	0.003
grafo933.12	12	11	1	0.001
grafo934.16	16	22	4	0.001
grafo935.21	21	38	4	0.002
grafo936.12	12	12	2	0.001
grafo937.11	11	10	2	0.001
grafo938.10	10	14	3	0.001
grafo939.15	15	16	2	0.001
grafo940.20	20	22	3	0.002
grafo941.29	29	35	3	0.002
grafo942.31	31	35	3	0.002
grafo943.21	21	26	4	0.002
grafo944.14	14	13	2	0.002
grafo945.17	17	22	3	0.002
grafo946.22	22	25	3	0.002
grafo947.15	15	24	4	0.002
grafo948.15	15	20	3	0.001
grafo949.10	10	10	2	0.001
grafo950.19	19	23	2	0.001
grafo951.13	13	18	2	0.001
grafo952.19	19	22	2	0.002
grafo953.18	18	18	2	0.002
grafo954.12	12	11	2	0.001
grafo955.13	13	12	2	0.001
grafo956.14	14	15	2	0.002
grafo957.12	12	11	1	0.001
grafo958.13	13	16	3	0.001
grafo959.24	24	26	3	0.002
grafo960.26	26	27	2	0.003
grafo961.10	10	10	2	0.001
grafo962.10	10	10	2	0.001
grafo963.19	19	21	3	0.002
grafo964.13	13	16	3	0.001
grafo965.15	15	15	2	0.001
grafo966.13	13	13	2	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo967.16	16	17	2	0.002
grafo968.13	13	21	3	0.001
grafo969.12	12	12	2	0.001
grafo970.12	12	16	3	0.001
grafo971.17	17	20	3	0.001
grafo972.18	18	19	2	0.001
grafo973.14	14	13	2	0.001
grafo974.14	14	13	2	0.001
grafo975.36	36	48	5	0.009
grafo976.19	19	25	3	0.001
grafo977.19	19	19	2	0.002
grafo978.10	10	10	2	0.001
grafo979.13	13	21	3	0.002
grafo980.20	20	20	2	0.001
grafo981.16	16	20	3	0.002
grafo982.15	15	16	2	0.002
grafo983.19	19	20	3	0.002
grafo984.18	18	24	3	0.002
grafo985.15	15	18	3	0.002
grafo986.12	12	11	1	0.001
grafo987.27	27	30	3	0.002
grafo988.11	11	11	2	0.001
grafo989.13	13	14	2	0.001
grafo990.13	13	13	2	0.001
grafo991.13	13	14	2	0.002
grafo992.16	16	22	3	0.001
grafo993.18	18	23	2	0.001
grafo994.13	13	16	3	0.001
grafo995.18	18	17	2	0.001
grafo996.11	11	13	3	0.001
grafo997.11	11	12	2	0.002
grafo998.16	16	15	1	0.001
grafo999.13	13	13	2	0.002
grafo1000.14	14	20	3	0.002
grafo1001.12	12	12	2	0.001
grafo1002.20	20	21	3	0.002
grafo1003.11	11	12	2	0.001
grafo1004.11	11	12	2	0.001
grafo1005.11	11	11	2	0.001
grafo1006.11	11	12	2	0.002
grafo1007.20	20	22	2	0.002
grafo1008.12	12	11	1	0.001
grafo1009.17	17	17	2	0.002
grafo1010.10	10	10	2	0.001
grafo1011.19	19	24	3	0.002
grafo1012.22	22	24	3	0.001

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Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1013.15	15	23	4	0.002
grafo1014.14	14	18	3	0.001
grafo1015.16	16	21	3	0.001
grafo1016.18	18	19	2	0.002
grafo1017.15	15	16	2	0.001
grafo1018.29	29	36	4	0.002
grafo1019.11	11	11	2	0.001
grafo1020.12	12	11	1	0.001
grafo1021.14	14	14	2	0.001
grafo1022.17	17	18	3	0.002
grafo1023.11	11	11	2	0.001
grafo1024.20	20	21	2	0.002
grafo1025.15	15	16	2	0.001
grafo1026.26	26	36	3	0.002
grafo1027.11	11	13	3	0.001
grafo1028.16	16	22	3	0.001
grafo1029.16	16	16	2	0.001
grafo1030.15	15	16	3	0.001
grafo1031.16	16	17	2	0.002
grafo1032.10	10	9	2	0.001
grafo1033.24	24	27	3	0.002
grafo1034.29	29	32	3	0.002
grafo1035.37	37	51	5	0.005
grafo1036.20	20	24	2	0.002
grafo1037.22	22	30	3	0.001
grafo1038.23	23	24	2	0.002
grafo1039.14	14	21	3	0.001
grafo1040.25	25	32	3	0.002
grafo1041.49	49	53	3	0.004
grafo1042.14	14	18	2	0.001
grafo1043.15	15	19	2	0.001
grafo1044.23	23	25	3	0.002
grafo1045.29	29	39	4	0.002
grafo1046.17	17	22	3	0.002
grafo1047.16	16	20	3	0.001
grafo1048.18	18	25	3	0.001
grafo1049.21	21	22	2	0.002
grafo1050.18	18	28	4	0.002
grafo1051.34	34	38	3	0.003
grafo1052.22	22	34	4	0.002
grafo1053.32	32	41	4	0.002
grafo1054.11	11	15	2	0.001
grafo1055.19	19	29	3	0.001
grafo1056.17	17	22	3	0.002
grafo1057.16	16	17	2	0.002
grafo1058.14	14	13	2	0.002

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Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1059.18	18	18	2	0.002
grafo1060.11	11	12	2	0.001
grafo1061.11	11	11	2	0.001
grafo1062.15	15	19	2	0.001
grafo1063.14	14	15	2	0.001
grafo1064.21	21	26	3	0.002
grafo1065.14	14	13	2	0.001
grafo1066.11	11	11	2	0.002
grafo1067.13	13	13	2	0.001
grafo1068.12	12	11	1	0.001
grafo1069.16	16	15	2	0.001
grafo1070.10	10	10	2	0.001
grafo1071.10	10	10	2	0.001
grafo1072.14	14	18	3	0.002
grafo1073.51	51	64	5	0.022
grafo1074.14	14	19	3	0.001
grafo1075.47	47	62	5	0.011
grafo1076.18	18	24	3	0.001
grafo1077.11	11	12	2	0.001
grafo1078.11	11	12	2	0.002
grafo1079.19	19	18	2	0.002
grafo1080.16	16	18	2	0.001
grafo1081.15	15	24	3	0.001
grafo1082.23	23	24	2	0.002
grafo1083.14	14	15	2	0.001
grafo1084.11	11	10	1	0.001
grafo1085.17	17	18	2	0.002
grafo1086.18	18	26	4	0.002
grafo1087.14	14	19	3	0.002
grafo1088.11	11	17	3	0.001
grafo1089.23	23	22	2	0.002
grafo1090.29	29	33	3	0.003
grafo1091.21	21	29	3	0.002
grafo1092.42	42	53	5	0.006
grafo1093.15	15	17	2	0.002
grafo1094.17	17	19	2	0.001
grafo1095.11	11	14	3	0.001
grafo1096.44	44	58	5	0.008
grafo1097.16	16	18	2	0.002
grafo1098.10	10	9	2	0.001
grafo1099.11	11	11	2	0.001
grafo1100.11	11	12	2	0.001
grafo1101.25	25	37	4	0.003
grafo1102.29	29	29	2	0.002
grafo1103.24	24	28	2	0.002
grafo1104.21	21	24	3	0.002

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Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1105.19	19	24	4	0.001
grafo1106.21	21	35	5	0.002
grafo1107.15	15	19	2	0.002
grafo1108.18	18	25	3	0.002
grafo1109.24	24	33	4	0.002
grafo1110.20	20	22	2	0.002
grafo1111.15	15	23	3	0.002
grafo1112.16	16	23	2	0.001
grafo1113.20	20	23	2	0.001
grafo1114.24	24	35	3	0.002
grafo1115.31	31	43	4	0.003
grafo1116.16	16	17	2	0.002
grafo1117.11	11	10	2	0.001
grafo1118.22	22	23	3	0.002
grafo1119.16	16	22	3	0.001
grafo1120.10	10	10	2	0.001
grafo1121.17	17	20	3	0.001
grafo1122.17	17	17	2	0.001
grafo1123.10	10	10	2	0.001
grafo1124.15	15	16	3	0.001
grafo1125.21	21	29	3	0.001
grafo1126.10	10	9	2	0.001
grafo1127.19	19	22	3	0.002
grafo1128.11	11	12	2	0.001
grafo1129.15	15	27	5	0.001
grafo1130.23	23	39	5	0.002
grafo1131.11	11	12	2	0.001
grafo1132.19	19	19	2	0.001
grafo1133.18	18	23	3	0.002
grafo1134.11	11	12	2	0.001
grafo1135.21	21	22	2	0.002
grafo1136.15	15	17	3	0.002
grafo1137.10	10	9	2	0.001
grafo1138.15	15	14	2	0.001
grafo1139.15	15	14	2	0.002
grafo1140.15	15	22	3	0.002
grafo1141.47	47	59	5	0.012
grafo1142.15	15	24	3	0.001
grafo1143.18	18	20	2	0.002
grafo1144.16	16	21	3	0.002
grafo1145.18	18	24	3	0.001
grafo1146.18	18	29	4	0.002
grafo1147.18	18	19	2	0.002
grafo1148.17	17	22	3	0.001
grafo1149.29	29	31	3	0.002
grafo1150.16	16	21	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1151.11	11	17	3	0.002
grafo1152.18	18	24	3	0.002
grafo1153.21	21	23	3	0.002
grafo1154.22	22	28	4	0.002
grafo1155.11	11	12	2	0.001
grafo1156.14	14	16	3	0.002
grafo1157.38	38	48	4	0.004
grafo1158.24	24	34	4	0.002
grafo1159.26	26	33	4	0.003
grafo1160.17	17	23	3	0.001
grafo1161.17	17	18	2	0.002
grafo1162.11	11	11	2	0.002
grafo1163.19	19	18	2	0.002
grafo1164.10	10	10	2	0.001
grafo1165.16	16	23	3	0.001
grafo1166.11	11	12	2	0.001
grafo1167.31	31	34	3	0.003
grafo1168.24	24	25	2	0.002
grafo1169.18	18	20	3	0.001
grafo1170.27	27	28	2	0.002
grafo1171.22	22	25	3	0.002
grafo1172.19	19	23	2	0.001
grafo1173.16	16	20	3	0.001
grafo1174.33	33	41	4	0.003
grafo1175.19	19	21	3	0.002
grafo1176.11	11	13	2	0.001
grafo1177.16	16	15	2	0.001
grafo1178.29	29	30	3	0.003
grafo1179.17	17	19	3	0.002
grafo1180.66	66	87	6	0.116
grafo1181.30	30	40	3	0.002
grafo1182.50	50	59	4	0.006
grafo1183.30	30	39	4	0.002
grafo1184.25	25	25	2	0.002
grafo1185.26	26	32	4	0.002
grafo1186.47	47	65	5	0.011
grafo1187.49	49	64	5	0.013
grafo1188.54	54	70	5	0.013
grafo1189.65	65	81	5	0.043
grafo1190.28	28	32	3	0.002
grafo1191.25	25	27	3	0.002
grafo1192.60	60	79	6	0.135
grafo1193.26	26	28	2	0.001
grafo1194.28	28	30	3	0.002
grafo1195.27	27	31	3	0.002
grafo1196.29	29	36	4	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1197.74	74	95	7	2.845
grafo1198.29	29	29	3	0.003
grafo1199.27	27	30	3	0.002
grafo1200.27	27	36	3	0.002
grafo1201.28	28	38	4	0.002
grafo1202.28	28	36	4	0.003
grafo1203.25	25	28	3	0.002
grafo1204.27	27	31	3	0.002
grafo1205.56	56	76	6	0.059
grafo1206.29	29	36	4	0.003
grafo1207.29	29	35	3	0.003
grafo1208.27	27	33	3	0.003
grafo1209.29	29	32	3	0.002
grafo1210.51	51	60	4	0.007
grafo1211.56	56	65	4	0.015
grafo1212.53	53	72	5	0.018
grafo1213.68	68	86	6	0.113
grafo1214.26	26	26	2	0.002
grafo1215.62	62	82	6	0.106
grafo1216.27	27	28	3	0.003
grafo1217.27	27	29	3	0.002
grafo1218.26	26	28	3	0.002
grafo1219.44	44	48	3	0.004
grafo1220.25	25	31	3	0.002
grafo1221.27	27	36	3	0.002
grafo1222.52	52	59	4	0.038
grafo1223.30	30	38	3	0.003
grafo1224.27	27	27	2	0.002
grafo1225.25	25	27	3	0.002
grafo1226.32	32	34	3	0.002
grafo1227.30	30	39	4	0.002
grafo1228.31	31	37	4	0.003
grafo1229.27	27	31	3	0.002
grafo1230.26	26	29	3	0.002
grafo1231.35	35	44	4	0.003
grafo1232.27	27	31	3	0.002
grafo1233.70	70	94	7	0.364
grafo1234.25	25	33	4	0.002
grafo1235.67	67	88	6	0.095
grafo1236.48	48	54	3	0.005
grafo1237.30	30	35	4	0.003
grafo1238.67	67	86	6	0.078
grafo1239.28	28	31	3	0.002
grafo1240.49	49	63	5	0.011
grafo1241.27	27	33	4	0.003
grafo1242.29	29	35	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1243.28	28	29	3	0.002
grafo1244.26	26	28	2	0.002
grafo1245.25	25	29	3	0.002
grafo1246.30	30	36	4	0.002
grafo1247.58	58	68	5	0.057
grafo1248.26	26	26	2	0.002
grafo1249.28	28	33	3	0.002
grafo1250.29	29	36	3	0.003
grafo1251.25	25	26	2	0.002
grafo1252.30	30	34	3	0.002
grafo1253.27	27	32	3	0.002
grafo1254.45	45	49	3	0.003
grafo1255.32	32	37	4	0.003
grafo1256.30	30	33	2	0.002
grafo1257.31	31	50	5	0.003
grafo1258.27	27	31	3	0.003
grafo1259.29	29	34	3	0.002
grafo1260.51	51	66	5	0.012
grafo1261.30	30	40	4	0.003
grafo1262.53	53	74	7	0.313
grafo1263.25	25	29	3	0.002
grafo1264.28	28	30	3	0.003
grafo1265.46	46	53	4	0.005
grafo1266.23	23	25	2	0.001
grafo1267.29	29	33	3	0.002
grafo1268.55	55	70	5	0.009
grafo1269.26	26	28	3	0.002
grafo1270.60	60	73	5	0.024
grafo1271.25	25	30	3	0.003
grafo1272.26	26	34	4	0.003
grafo1273.26	26	27	2	0.002
grafo1274.57	57	68	4	0.007
grafo1275.26	26	27	3	0.002
grafo1276.26	26	32	3	0.002
grafo1277.34	34	46	5	0.005
grafo1278.27	27	30	3	0.001
grafo1279.45	45	58	5	0.013
grafo1280.28	28	32	3	0.002
grafo1281.28	28	30	3	0.002
grafo1282.27	27	33	3	0.002
grafo1283.28	28	35	4	0.003
grafo1284.29	29	40	4	0.003
grafo1285.26	26	30	4	0.003
grafo1286.27	27	31	3	0.002
grafo1287.26	26	28	3	0.002
grafo1288.26	26	29	2	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1289.28	28	31	3	0.002
grafo1290.27	27	35	3	0.003
grafo1291.28	28	38	5	0.003
grafo1292.28	28	36	3	0.002
grafo1293.28	28	32	3	0.002
grafo1294.63	63	79	5	0.041
grafo1295.25	25	29	3	0.002
grafo1296.46	46	59	4	0.005
grafo1297.54	54	67	4	0.008
grafo1298.66	66	82	6	0.251
grafo1299.47	47	57	4	0.007
grafo1300.66	66	88	6	0.299
grafo1301.31	31	40	5	0.004
grafo1302.65	65	87	6	0.061
grafo1303.68	68	84	5	0.038
grafo1304.27	27	29	3	0.002
grafo1305.51	51	62	5	0.02
grafo1306.27	27	29	3	0.002
grafo1307.50	50	71	6	0.053
grafo1308.27	27	30	3	0.003
grafo1309.25	25	26	3	0.002
grafo1310.46	46	61	5	0.032
grafo1311.28	28	34	4	0.002
grafo1312.26	26	29	3	0.002
grafo1313.31	31	38	3	0.002
grafo1314.25	25	27	3	0.002
grafo1315.29	29	31	2	0.002
grafo1316.28	28	30	2	0.002
grafo1317.68	68	87	6	0.167
grafo1318.26	26	36	3	0.002
grafo1319.25	25	31	3	0.002
grafo1320.27	27	37	4	0.003
grafo1321.25	25	29	2	0.002
grafo1322.30	30	37	3	0.002
grafo1323.26	26	27	3	0.002
grafo1324.27	27	28	2	0.001
grafo1325.24	24	23	2	0.002
grafo1326.27	27	29	3	0.002
grafo1327.50	50	59	4	0.006
grafo1328.54	54	71	6	0.087
grafo1329.33	33	39	4	0.003
grafo1330.28	28	29	3	0.002
grafo1331.28	28	33	4	0.002
grafo1332.27	27	35	3	0.002
grafo1333.29	29	31	3	0.002
grafo1334.30	30	39	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1335.56	56	81	6	0.066
grafo1336.25	25	26	2	0.002
grafo1337.42	42	48	4	0.005
grafo1338.25	25	26	2	0.002
grafo1339.28	28	41	5	0.003
grafo1340.26	26	31	4	0.002
grafo1341.25	25	27	2	0.002
grafo1342.59	59	70	5	0.033
grafo1343.24	24	27	3	0.002
grafo1344.25	25	26	3	0.002
grafo1345.30	30	44	5	0.004
grafo1346.65	65	76	4	0.011
grafo1347.25	25	29	3	0.002
grafo1348.26	26	27	2	0.002
grafo1349.31	31	41	4	0.003
grafo1350.29	29	41	6	0.005
grafo1351.28	28	36	3	0.003
grafo1352.29	29	34	3	0.002
grafo1353.49	49	54	3	0.005
grafo1354.28	28	36	4	0.003
grafo1355.27	27	32	3	0.002
grafo1356.29	29	34	4	0.003
grafo1357.52	52	57	3	0.004
grafo1358.52	52	70	6	0.039
grafo1359.28	28	30	2	0.002
grafo1360.25	25	30	3	0.002
grafo1361.55	55	66	4	0.008
grafo1362.31	31	37	3	0.003
grafo1363.29	29	38	4	0.003
grafo1364.68	68	87	7	1.034
grafo1365.66	66	86	6	0.166
grafo1366.56	56	70	5	0.023
grafo1367.25	25	26	2	0.002
grafo1368.31	31	44	5	0.003
grafo1369.23	23	24	2	0.002
grafo1370.72	72	89	5	0.064
grafo1371.26	26	33	3	0.002
grafo1372.25	25	27	3	0.003
grafo1373.27	27	31	3	0.002
grafo1374.28	28	32	3	0.002
grafo1375.26	26	31	4	0.002
grafo1376.29	29	34	3	0.002
grafo1377.26	26	26	2	0.002
grafo1378.46	46	62	6	0.013
grafo1379.32	32	39	3	0.002
grafo1380.61	61	72	5	0.053

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1381.70	70	87	5	0.039
grafo1382.48	48	55	3	0.004
grafo1383.51	51	74	6	0.016
grafo1384.27	27	36	3	0.002
grafo1385.29	29	36	3	0.003
grafo1386.29	29	40	4	0.002
grafo1387.56	56	70	4	0.007
grafo1388.29	29	38	3	0.002
grafo1389.26	26	28	2	0.002
grafo1390.27	27	39	4	0.002
grafo1391.27	27	30	3	0.002
grafo1392.50	50	63	6	0.12
grafo1393.52	52	62	4	0.007
grafo1394.45	45	57	4	0.005
grafo1395.61	61	78	5	0.068
grafo1396.61	61	78	5	0.027
grafo1397.26	26	27	2	0.002
grafo1398.24	24	25	2	0.002
grafo1399.28	28	32	3	0.003
grafo1400.31	31	44	4	0.003
grafo1401.45	45	53	3	0.004
grafo1402.48	48	56	4	0.005
grafo1403.17	17	23	3	0.002
grafo1404.51	51	70	6	0.036
grafo1405.50	50	61	4	0.007
grafo1406.46	46	56	4	0.006
grafo1407.68	68	90	7	0.565
grafo1408.49	49	59	3	0.005
grafo1409.49	49	61	3	0.004
grafo1410.67	67	85	6	0.359
grafo1411.32	32	41	4	0.002
grafo1412.28	28	29	3	0.002
grafo1413.45	45	53	3	0.004
grafo1414.66	66	82	6	0.746
grafo1415.58	58	65	4	0.009
grafo1416.48	48	62	5	0.018
grafo1417.52	52	63	4	0.006
grafo1418.50	50	57	4	0.005
grafo1419.47	47	57	3	0.004
grafo1420.68	68	91	7	1.494
grafo1421.32	32	45	4	0.004
grafo1422.22	22	22	2	0.002
grafo1423.33	33	55	7	0.007
grafo1424.47	47	58	5	0.025
grafo1425.60	60	77	6	0.135
grafo1426.65	65	85	6	0.17

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1427.51	51	59	3	0.003
grafo1428.56	56	69	5	0.014
grafo1429.31	31	45	4	0.002
grafo1430.31	31	50	5	0.003
grafo1431.52	52	70	5	0.016
grafo1432.60	60	77	6	0.175
grafo1433.47	47	60	5	0.01
grafo1434.30	30	40	4	0.003
grafo1435.43	43	55	5	0.011
grafo1436.33	33	39	3	0.002
grafo1437.52	52	59	4	0.007
grafo1438.49	49	59	5	0.027
grafo1439.15	15	21	3	0.001
grafo1440.24	24	32	3	0.002
grafo1441.71	71	92	7	1.214
grafo1442.57	57	76	6	0.063
grafo1443.67	67	85	6	0.168
grafo1444.23	23	25	3	0.002
grafo1445.30	30	38	3	0.002
grafo1446.23	23	24	2	0.002
grafo1447.52	52	62	4	0.008
grafo1448.52	52	63	4	0.01
grafo1449.21	21	20	2	0.001
grafo1450.56	56	70	6	0.184
grafo1451.75	75	88	5	0.099
grafo1452.49	49	66	5	0.024
grafo1453.63	63	80	5	0.019
grafo1454.49	49	59	4	0.006
grafo1455.32	32	38	3	0.002
grafo1456.29	29	43	5	0.003
grafo1457.24	24	24	2	0.002
grafo1458.48	48	63	5	0.014
grafo1459.56	56	69	5	0.018
grafo1460.50	50	62	4	0.006
grafo1461.69	69	88	5	0.052
grafo1462.65	65	87	6	0.074
grafo1463.24	24	25	2	0.002
grafo1464.46	46	53	4	0.005
grafo1465.55	55	65	4	0.006
grafo1466.61	61	78	5	0.034
grafo1467.49	49	64	5	0.009
grafo1468.62	62	75	5	0.05
grafo1469.67	67	82	5	0.026
grafo1470.51	51	69	6	0.111
grafo1471.24	24	26	2	0.001
grafo1472.53	53	68	6	0.043

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1473.65	65	80	5	0.028
grafo1474.52	52	73	7	0.167
grafo1475.47	47	60	4	0.006
grafo1476.71	71	95	6	0.416
grafo1477.32	32	37	3	0.003
grafo1478.56	56	69	4	0.007
grafo1479.48	48	53	4	0.011
grafo1480.56	56	77	7	0.229
grafo1481.61	61	75	5	0.025
grafo1482.53	53	67	5	0.016
grafo1483.54	54	67	5	0.018
grafo1484.46	46	57	4	0.005
grafo1485.23	23	22	2	0.002
grafo1486.51	51	60	4	0.007
grafo1487.55	55	71	5	0.036
grafo1488.48	48	58	4	0.004
grafo1489.67	67	77	4	0.012
grafo1490.47	47	57	4	0.005
grafo1491.48	48	62	4	0.005
grafo1492.54	54	67	4	0.006
grafo1493.66	66	84	6	0.057
grafo1494.50	50	57	4	0.006
grafo1495.58	58	79	5	0.02
grafo1496.52	52	66	5	0.013
grafo1497.71	71	95	7	0.729
grafo1498.48	48	59	3	0.004
grafo1499.32	32	50	5	0.003
grafo1500.50	50	71	6	0.063
grafo1501.58	58	72	5	0.024
grafo1502.33	33	43	4	0.003
grafo1503.22	22	26	3	0.001
grafo1504.51	51	68	6	0.041
grafo1505.24	24	28	3	0.002
grafo1506.43	43	50	4	0.004
grafo1507.32	32	45	4	0.003
grafo1508.67	67	85	6	0.166
grafo1509.32	32	44	4	0.002
grafo1510.48	48	54	3	0.004
grafo1511.28	28	30	2	0.002
grafo1512.26	26	30	3	0.002
grafo1513.65	65	84	6	0.276
grafo1514.47	47	55	4	0.005
grafo1515.53	53	68	5	0.021
grafo1516.71	71	101	8	1.7
grafo1517.63	63	74	4	0.007
grafo1518.67	67	85	7	0.678

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1519.44	44	52	4	0.004
grafo1520.51	51	65	6	0.067
grafo1521.24	24	38	5	0.002
grafo1522.43	43	53	4	0.006
grafo1523.27	27	35	4	0.003
grafo1524.46	46	61	5	0.012
grafo1525.65	65	85	6	0.297
grafo1526.24	24	25	2	0.002
grafo1527.65	65	77	5	0.039
grafo1528.50	50	56	3	0.004
grafo1529.73	73	90	6	0.294
grafo1530.24	24	27	3	0.002
grafo1531.47	47	54	3	0.004
grafo1532.51	51	61	4	0.005
grafo1533.50	50	66	5	0.022
grafo1534.30	30	32	3	0.002
grafo1535.48	48	53	3	0.004
grafo1536.47	47	52	3	0.004
grafo1537.24	24	29	2	0.002
grafo1538.68	68	84	5	0.078
grafo1539.34	34	38	3	0.003
grafo1540.34	34	44	4	0.004
grafo1541.33	33	44	5	0.003
grafo1542.49	49	59	4	0.005
grafo1543.54	54	72	6	0.044
grafo1544.45	45	54	4	0.009
grafo1545.54	54	71	6	0.116
grafo1546.22	22	22	2	0.001
grafo1547.53	53	68	4	0.009
grafo1548.39	39	44	3	0.003
grafo1549.55	55	66	4	0.007
grafo1550.53	53	67	5	0.012
grafo1551.58	58	72	5	0.019
grafo1552.62	62	72	4	0.023
grafo1553.67	67	84	5	0.012
grafo1554.47	47	58	4	0.005
grafo1555.37	37	48	4	0.003
grafo1556.63	63	79	6	0.101
grafo1557.23	23	29	3	0.002
grafo1558.53	53	64	4	0.007
grafo1559.59	59	69	5	0.03
grafo1560.49	49	59	4	0.005
grafo1561.33	33	42	3	0.002
grafo1562.49	49	55	3	0.004
grafo1563.74	74	92	6	0.301
grafo1564.66	66	85	6	0.123

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1565.68	68	83	5	0.045
grafo1566.58	58	62	4	0.013
grafo1567.57	57	74	6	0.17
grafo1568.69	69	89	6	0.095
grafo1569.28	28	36	4	0.003
grafo1570.63	63	74	5	0.056
grafo1571.43	43	52	4	0.004
grafo1572.26	26	30	3	0.002
grafo1573.29	29	34	3	0.002
grafo1574.29	29	35	3	0.003
grafo1575.68	68	84	6	0.343
grafo1576.29	29	34	3	0.002
grafo1577.26	26	36	3	0.003
grafo1578.27	27	30	3	0.002
grafo1579.32	32	35	3	0.003
grafo1580.28	28	34	3	0.002
grafo1581.46	46	52	4	0.005
grafo1582.30	30	34	3	0.002
grafo1583.66	66	81	5	0.019
grafo1584.70	70	98	7	0.364
grafo1585.26	26	33	4	0.002
grafo1586.25	25	29	3	0.002
grafo1587.29	29	35	3	0.003
grafo1588.58	58	66	4	0.012
grafo1589.31	31	46	4	0.003
grafo1590.45	45	50	3	0.003
grafo1591.52	52	62	4	0.007
grafo1592.27	27	31	3	0.002
grafo1593.27	27	30	2	0.002
grafo1594.25	25	26	3	0.001
grafo1595.29	29	30	2	0.002
grafo1596.26	26	26	2	0.002
grafo1597.28	28	37	3	0.003
grafo1598.29	29	33	3	0.003
grafo1599.29	29	33	3	0.002
grafo1600.28	28	37	4	0.002
grafo1601.27	27	32	3	0.003
grafo1602.26	26	29	3	0.002
grafo1603.28	28	32	3	0.002
grafo1604.28	28	32	3	0.003
grafo1605.50	50	54	3	0.004
grafo1606.63	63	85	7	0.349
grafo1607.32	32	42	4	0.004
grafo1608.28	28	29	2	0.002
grafo1609.28	28	29	2	0.002
grafo1610.48	48	66	6	0.038

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1611.56	56	76	5	0.029
grafo1612.29	29	32	3	0.002
grafo1613.54	54	71	5	0.012
grafo1614.14	14	14	2	0.002
grafo1614.25	25	27	3	0.001
grafo1615.12	12	15	2	0.002
grafo1615.28	28	35	3	0.002
grafo1616.17	17	21	3	0.002
grafo1616.30	30	37	4	0.003
grafo1617.21	21	24	3	0.002
grafo1617.67	67	80	5	0.01
grafo1618.15	15	16	2	0.001
grafo1618.47	47	56	4	0.006
grafo1619.11	11	15	3	0.001
grafo1619.60	60	75	5	0.021
grafo1620.14	14	15	2	0.001
grafo1620.27	27	27	2	0.002
grafo1621.10	10	15	2	0.001
grafo1621.51	51	61	4	0.006
grafo1622.19	19	20	2	0.001
grafo1622.31	31	41	4	0.002
grafo1623.27	27	30	3	0.002
grafo1623.30	30	41	3	0.002
grafo1624.23	23	34	4	0.003
grafo1624.44	44	53	3	0.003
grafo1625.19	19	24	4	0.002
grafo1625.27	27	37	4	0.002
grafo1626.18	18	27	4	0.001
grafo1626.28	28	30	3	0.002
grafo1627.10	10	15	2	0.001
grafo1627.30	30	40	4	0.002
grafo1628.25	25	33	5	0.003
grafo1628.56	56	72	5	0.018
grafo1629.11	11	11	2	0.001
grafo1629.26	26	29	3	0.002
grafo1630.31	31	40	4	0.003
grafo1631.16	16	21	3	0.001
grafo1632.21	21	26	3	0.002
grafo1633.17	17	18	2	0.002
grafo1634.17	17	18	2	0.002
grafo1635.16	16	25	3	0.001
grafo1636.11	11	20	3	0.001
grafo1637.31	31	41	4	0.003
grafo1638.21	21	25	3	0.002
grafo1639.14	14	16	2	0.001
grafo1640.17	17	19	2	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1641.30	30	33	3	0.003
grafo1642.18	18	19	3	0.001
grafo1643.10	10	9	1	0.001
grafo1644.18	18	21	3	0.001
grafo1645.21	21	23	2	0.002
grafo1646.28	28	33	3	0.002
grafo1647.30	30	33	3	0.003
grafo1648.18	18	24	3	0.001
grafo1649.20	20	22	3	0.002
grafo1650.31	31	39	4	0.002
grafo1651.20	20	21	2	0.002
grafo1652.18	18	20	2	0.002
grafo1653.18	18	18	2	0.001
grafo1654.10	10	14	3	0.001
grafo1655.26	26	32	3	0.002
grafo1656.17	17	22	3	0.001
grafo1657.10	10	15	2	0.001
grafo1658.14	14	15	2	0.001
grafo1659.11	11	15	3	0.001
grafo1660.19	19	23	3	0.002
grafo1661.19	19	21	3	0.001
grafo1662.14	14	20	3	0.001
grafo1663.39	39	50	4	0.004
grafo1664.26	26	32	4	0.003
grafo1665.17	17	17	2	0.002
grafo1666.19	19	28	4	0.002
grafo1667.24	24	29	4	0.002
grafo1668.33	33	41	4	0.004
grafo1669.48	48	59	4	0.008
grafo1670.16	16	20	2	0.001
grafo1671.17	17	17	2	0.001
grafo1672.19	19	21	3	0.001
grafo1673.20	20	22	2	0.002
grafo1674.12	12	16	3	0.001
grafo1675.19	19	21	2	0.001
grafo1676.20	20	22	3	0.002
grafo1677.21	21	20	2	0.002
grafo1678.23	23	27	3	0.002
grafo1679.18	18	24	3	0.001
grafo1680.32	32	44	4	0.003
grafo1681.54	54	74	6	0.077
grafo1682.21	21	41	6	0.002
grafo1683.11	11	19	4	0.001
grafo1684.19	19	23	3	0.002
grafo1685.23	23	23	2	0.002
grafo1686.16	16	18	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1687.30	30	32	3	0.002
grafo1688.13	13	17	3	0.001
grafo1689.31	31	34	3	0.002
grafo1690.20	20	24	3	0.001
grafo1691.16	16	19	3	0.002
grafo1692.16	16	17	2	0.002
grafo1693.12	12	13	2	0.001
grafo1694.32	32	38	4	0.002
grafo1695.15	15	17	2	0.001
grafo1696.24	24	28	3	0.002
grafo1697.11	11	17	4	0.001
grafo1698.33	33	43	5	0.004
grafo1699.21	21	24	3	0.001
grafo1700.15	15	19	3	0.002
grafo1701.36	36	41	4	0.003
grafo1702.30	30	36	4	0.003
grafo1703.18	18	20	2	0.002
grafo1704.10	10	15	2	0.001
grafo1705.19	19	24	3	0.002
grafo1706.24	24	30	3	0.002
grafo1707.18	18	21	3	0.001
grafo1708.21	21	26	3	0.001
grafo1709.13	13	19	3	0.001
grafo1710.40	40	49	5	0.005
grafo1711.33	33	46	4	0.003
grafo1712.22	22	25	2	0.002
grafo1713.19	19	19	2	0.001
grafo1714.12	12	18	3	0.001
grafo1715.22	22	34	4	0.002
grafo1716.20	20	23	3	0.001
grafo1717.14	14	14	2	0.001
grafo1718.21	21	29	3	0.001
grafo1719.13	13	16	3	0.001
grafo1720.19	19	25	3	0.002
grafo1721.24	24	27	3	0.002
grafo1722.12	12	21	4	0.001
grafo1723.10	10	15	2	0.001
grafo1724.19	19	21	3	0.002
grafo1725.32	32	41	4	0.003
grafo1726.22	22	26	2	0.002
grafo1727.21	21	23	3	0.002
grafo1728.61	61	71	4	0.007
grafo1729.13	13	19	3	0.001
grafo1730.29	29	35	4	0.003
grafo1731.16	16	19	3	0.002
grafo1732.17	17	20	2	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1733.20	20	24	3	0.002
grafo1734.11	11	14	2	0.001
grafo1735.11	11	14	2	0.001
grafo1736.27	27	35	4	0.003
grafo1737.22	22	28	4	0.002
grafo1738.15	15	15	2	0.002
grafo1739.16	16	21	3	0.002
grafo1740.10	10	13	2	0.001
grafo1741.16	16	16	2	0.001
grafo1742.34	34	43	4	0.003
grafo1743.25	25	32	4	0.002
grafo1744.12	12	15	3	0.001
grafo1745.17	17	20	2	0.001
grafo1746.27	27	38	4	0.002
grafo1747.19	19	29	4	0.002
grafo1748.16	16	17	3	0.001
grafo1749.21	21	32	5	0.002
grafo1750.12	12	18	3	0.001
grafo1751.17	17	21	2	0.002
grafo1752.21	21	29	3	0.002
grafo1753.16	16	23	3	0.002
grafo1754.13	13	21	3	0.001
grafo1755.20	20	22	3	0.002
grafo1756.16	16	20	2	0.001
grafo1757.20	20	25	3	0.002
grafo1758.37	37	45	3	0.004
grafo1759.26	26	36	4	0.002
grafo1760.28	28	39	5	0.003
grafo1761.20	20	26	3	0.002
grafo1762.21	21	25	2	0.002
grafo1763.12	12	21	3	0.001
grafo1764.20	20	25	4	0.001
grafo1765.22	22	31	4	0.002
grafo1766.11	11	17	3	0.001
grafo1767.32	32	42	4	0.002
grafo1768.26	26	30	3	0.002
grafo1769.16	16	20	2	0.001
grafo1770.38	38	45	3	0.003
grafo1771.22	22	26	3	0.002
grafo1772.15	15	25	4	0.001
grafo1773.27	27	33	4	0.002
grafo1774.10	10	15	2	0.001
grafo1775.31	31	40	3	0.002
grafo1776.44	44	54	4	0.005
grafo1777.23	23	32	4	0.002
grafo1778.15	15	20	3	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1779.21	21	30	4	0.002
grafo1780.18	18	24	3	0.001
grafo1781.14	14	20	3	0.001
grafo1782.15	15	22	4	0.001
grafo1783.30	30	37	4	0.003
grafo1784.32	32	36	4	0.004
grafo1785.37	37	44	3	0.003
grafo1786.21	21	25	3	0.001
grafo1787.16	16	16	2	0.001
grafo1788.33	33	42	4	0.003
grafo1789.23	23	28	4	0.002
grafo1790.16	16	17	2	0.002
grafo1791.11	11	15	3	0.001
grafo1792.16	16	22	3	0.001
grafo1793.21	21	26	4	0.002
grafo1794.17	17	20	3	0.001
grafo1795.11	11	15	2	0.001
grafo1796.31	31	40	4	0.003
grafo1797.19	19	27	3	0.001
grafo1798.23	23	31	4	0.002
grafo1799.26	26	30	3	0.002
grafo1800.19	19	24	3	0.002
grafo1801.20	20	23	3	0.001
grafo1802.13	13	18	3	0.001
grafo1803.17	17	17	2	0.002
grafo1804.19	19	30	4	0.001
grafo1805.26	26	31	3	0.002
grafo1806.23	23	28	3	0.003
grafo1807.12	12	17	4	0.001
grafo1808.15	15	15	2	0.001
grafo1809.17	17	17	2	0.001
grafo1810.30	30	40	4	0.002
grafo1811.18	18	23	3	0.002
grafo1812.19	19	21	3	0.001
grafo1813.28	28	33	3	0.003
grafo1814.21	21	28	4	0.002
grafo1815.34	34	37	2	0.003
grafo1816.12	12	19	3	0.001
grafo1817.28	28	34	3	0.002
grafo1818.26	26	28	2	0.002
grafo1819.22	22	37	4	0.002
grafo1820.18	18	26	3	0.002
grafo1821.19	19	21	2	0.001
grafo1822.11	11	17	3	0.001
grafo1823.19	19	25	3	0.001
grafo1824.18	18	23	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1825.26	26	31	3	0.002
grafo1826.19	19	27	4	0.002
grafo1827.13	13	16	2	0.001
grafo1828.27	27	33	3	0.002
grafo1829.15	15	19	3	0.001
grafo1830.24	24	29	3	0.003
grafo1831.17	17	19	2	0.002
grafo1832.11	11	12	3	0.001
grafo1833.46	46	60	5	0.017
grafo1834.19	19	23	3	0.002
grafo1835.11	11	15	3	0.001
grafo1836.45	45	58	5	0.016
grafo1837.20	20	24	3	0.002
grafo1838.21	21	25	2	0.002
grafo1839.13	13	15	3	0.002
grafo1840.28	28	34	4	0.002
grafo1841.18	18	26	4	0.002
grafo1842.27	27	35	4	0.003
grafo1843.12	12	15	2	0.001
grafo1844.42	42	54	4	0.004
grafo1845.17	17	18	2	0.001
grafo1846.19	19	24	3	0.002
grafo1847.26	26	29	3	0.002
grafo1848.18	18	22	3	0.001
grafo1849.16	16	20	2	0.002
grafo1850.22	22	28	3	0.002
grafo1851.17	17	22	3	0.002
grafo1852.19	19	25	3	0.001
grafo1853.13	13	15	2	0.001
grafo1854.22	22	27	3	0.002
grafo1855.20	20	27	4	0.001
grafo1856.14	14	14	2	0.001
grafo1857.10	10	12	2	0.001
grafo1858.19	19	21	3	0.002
grafo1859.32	32	35	3	0.002
grafo1860.20	20	22	3	0.002
grafo1861.17	17	21	3	0.001
grafo1862.24	24	27	3	0.002
grafo1863.21	21	26	3	0.002
grafo1864.18	18	18	2	0.001
grafo1865.18	18	20	2	0.002
grafo1866.11	11	17	4	0.001
grafo1867.27	27	30	3	0.002
grafo1868.34	34	39	4	0.003
grafo1869.31	31	33	3	0.003
grafo1870.14	14	21	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1871.17	17	18	2	0.001
grafo1872.23	23	25	3	0.002
grafo1873.20	20	27	4	0.001
grafo1874.36	36	48	5	0.007
grafo1875.17	17	22	3	0.002
grafo1876.11	11	19	3	0.002
grafo1877.33	33	48	5	0.004
grafo1878.16	16	18	2	0.001
grafo1879.21	21	30	4	0.001
grafo1880.24	24	26	3	0.002
grafo1881.19	19	22	3	0.002
grafo1882.19	19	22	3	0.002
grafo1883.15	15	15	2	0.001
grafo1884.16	16	16	2	0.002
grafo1885.13	13	16	2	0.001
grafo1886.22	22	21	2	0.002
grafo1887.56	56	72	5	0.029
grafo1888.15	15	16	2	0.001
grafo1889.27	27	34	3	0.002
grafo1890.33	33	40	4	0.004
grafo1891.18	18	19	3	0.001
grafo1892.23	23	24	2	0.002
grafo1893.18	18	18	2	0.001
grafo1894.22	22	30	3	0.002
grafo1895.14	14	16	2	0.001
grafo1896.21	21	25	3	0.002
grafo1897.19	19	20	2	0.001
grafo1898.10	10	15	2	0.001
grafo1899.23	23	29	3	0.001
grafo1900.19	19	22	3	0.002
grafo1901.20	20	26	3	0.002
grafo1902.12	12	14	3	0.001
grafo1903.18	18	21	2	0.002
grafo1904.39	39	49	5	0.007
grafo1905.13	13	14	2	0.001
grafo1906.51	51	62	5	0.039
grafo1907.16	16	18	2	0.001
grafo1908.32	32	39	4	0.003
grafo1909.13	13	18	3	0.001
grafo1910.21	21	27	4	0.002
grafo1911.21	21	26	4	0.001
grafo1912.11	11	17	3	0.001
grafo1913.11	11	14	2	0.001
grafo1914.28	28	36	4	0.002
grafo1915.33	33	44	3	0.003
grafo1916.20	20	23	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1917.11	11	17	3	0.001
grafo1918.16	16	23	3	0.002
grafo1919.21	21	25	3	0.001
grafo1920.11	11	22	4	0.001
grafo1921.27	27	31	3	0.001
grafo1922.22	22	29	4	0.002
grafo1923.26	26	29	3	0.002
grafo1924.16	16	18	2	0.002
grafo1925.35	35	36	2	0.003
grafo1926.26	26	34	3	0.002
grafo1927.21	21	25	3	0.002
grafo1928.23	23	28	3	0.002
grafo1929.21	21	24	3	0.001
grafo1930.13	13	13	2	0.001
grafo1931.20	20	29	3	0.002
grafo1932.13	13	17	3	0.001
grafo1933.22	22	26	3	0.002
grafo1934.14	14	14	2	0.002
grafo1935.13	13	18	3	0.001
grafo1936.18	18	27	3	0.002
grafo1937.21	21	24	3	0.002
grafo1938.12	12	15	3	0.001
grafo1939.22	22	22	2	0.001
grafo1940.18	18	24	3	0.002
grafo1941.21	21	26	4	0.002
grafo1942.18	18	19	2	0.001
grafo1943.12	12	15	3	0.001
grafo1944.19	19	24	3	0.002
grafo1945.16	16	17	2	0.001
grafo1946.31	31	38	3	0.002
grafo1947.14	14	18	3	0.001
grafo1948.36	36	45	4	0.004
grafo1949.29	29	34	3	0.002
grafo1950.24	24	27	2	0.002
grafo1951.14	14	25	4	0.001
grafo1952.26	26	31	4	0.002
grafo1953.32	32	34	2	0.002
grafo1954.24	24	27	3	0.002
grafo1955.10	10	15	2	0.001
grafo1956.41	41	58	6	0.013
grafo1957.10	10	15	2	0.001
grafo1958.30	30	33	3	0.003
grafo1959.25	25	30	3	0.002
grafo1960.26	26	29	3	0.002
grafo1961.15	15	16	2	0.001
grafo1962.34	34	39	3	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo1963.42	42	63	6	0.02
grafo1964.36	36	51	5	0.006
grafo1965.28	28	37	4	0.002
grafo1966.24	24	34	4	0.002
grafo1967.35	35	53	5	0.004
grafo1968.25	25	32	4	0.003
grafo1969.14	14	14	2	0.001
grafo1970.15	15	17	2	0.002
grafo1971.15	15	20	3	0.001
grafo1972.10	10	15	2	0.001
grafo1973.27	27	33	3	0.002
grafo1974.23	23	27	3	0.002
grafo1975.33	33	46	5	0.003
grafo1976.32	32	43	5	0.003
grafo1977.24	24	23	2	0.001
grafo1978.37	37	47	4	0.003
grafo1979.47	47	64	5	0.013
grafo1980.28	28	35	3	0.002
grafo1981.24	24	36	5	0.005
grafo1982.15	15	17	2	0.002
grafo1983.29	29	37	4	0.003
grafo1984.34	34	43	4	0.003
grafo1985.33	33	43	4	0.002
grafo1986.27	27	34	4	0.002
grafo1987.30	30	38	4	0.002
grafo1988.25	25	26	2	0.002
grafo1989.31	31	33	2	0.002
grafo1990.34	34	38	4	0.004
grafo1991.31	31	39	5	0.004
grafo1992.32	32	36	3	0.002
grafo1993.32	32	42	4	0.003
grafo1994.14	14	19	3	0.001
grafo1995.25	25	33	3	0.002
grafo1996.26	26	32	3	0.003
grafo1997.27	27	31	3	0.002
grafo1998.31	31	36	3	0.002
grafo1999.38	38	45	3	0.003
grafo2000.24	24	27	3	0.002
grafo2001.12	12	14	3	0.001
grafo2002.62	62	77	5	0.055
grafo2003.29	29	35	3	0.002
grafo2004.35	35	40	3	0.003
grafo2005.30	30	37	4	0.003
grafo2006.25	25	36	4	0.003
grafo2007.39	39	51	5	0.005
grafo2008.33	33	42	4	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2009.23	23	30	4	0.002
grafo2010.34	34	41	4	0.003
grafo2011.39	39	49	4	0.004
grafo2012.30	30	46	4	0.003
grafo2013.30	30	38	4	0.004
grafo2014.23	23	28	3	0.001
grafo2015.35	35	48	5	0.003
grafo2016.25	25	33	4	0.001
grafo2017.24	24	28	3	0.002
grafo2018.28	28	37	4	0.002
grafo2019.41	41	47	4	0.004
grafo2020.35	35	43	3	0.003
grafo2021.27	27	31	3	0.002
grafo2022.28	28	31	3	0.002
grafo2023.16	16	20	3	0.001
grafo2024.28	28	31	3	0.002
grafo2025.30	30	42	5	0.003
grafo2026.28	28	36	4	0.002
grafo2027.35	35	46	4	0.003
grafo2028.23	23	32	4	0.002
grafo2029.31	31	40	4	0.003
grafo2030.30	30	44	5	0.003
grafo2031.34	34	42	3	0.003
grafo2032.23	23	27	3	0.002
grafo2033.30	30	37	4	0.003
grafo2034.31	31	41	4	0.003
grafo2035.30	30	45	5	0.003
grafo2036.27	27	32	3	0.003
grafo2037.27	27	31	4	0.003
grafo2038.29	29	39	4	0.002
grafo2039.39	39	45	3	0.003
grafo2040.27	27	35	4	0.003
grafo2041.28	28	39	4	0.003
grafo2042.33	33	43	4	0.003
grafo2043.35	35	45	4	0.004
grafo2044.33	33	43	4	0.002
grafo2045.28	28	49	6	0.003
grafo2046.38	38	50	4	0.003
grafo2047.32	32	34	3	0.003
grafo2048.52	52	65	4	0.005
grafo2049.33	33	38	4	0.003
grafo2050.27	27	36	3	0.002
grafo2051.25	25	26	2	0.002
grafo2052.38	38	50	5	0.005
grafo2053.31	31	37	3	0.003
grafo2054.29	29	35	3	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2055.39	39	51	5	0.008
grafo2056.20	20	22	2	0.002
grafo2057.34	34	45	4	0.003
grafo2058.28	28	29	3	0.002
grafo2059.42	42	52	4	0.004
grafo2060.25	25	26	3	0.003
grafo2061.25	25	31	3	0.002
grafo2062.42	42	51	4	0.005
grafo2063.29	29	39	4	0.002
grafo2064.33	33	42	5	0.006
grafo2065.70	70	91	7	0.487
grafo2066.33	33	39	4	0.003
grafo2067.25	25	28	3	0.002
grafo2068.12	12	16	3	0.002
grafo2069.32	32	37	3	0.003
grafo2070.37	37	49	5	0.007
grafo2071.37	37	58	6	0.005
grafo2072.29	29	43	5	0.002
grafo2073.32	32	34	3	0.003
grafo2074.34	34	34	2	0.002
grafo2075.32	32	41	4	0.003
grafo2076.29	29	35	4	0.002
grafo2077.25	25	30	3	0.002
grafo2078.29	29	37	4	0.003
grafo2079.19	19	21	2	0.002
grafo2080.25	25	32	3	0.002
grafo2081.39	39	52	5	0.005
grafo2082.34	34	38	2	0.003
grafo2083.52	52	63	4	0.007
grafo2084.25	25	35	4	0.003
grafo2085.29	29	30	2	0.002
grafo2086.39	39	55	6	0.039
grafo2087.29	29	36	4	0.003
grafo2088.38	38	54	4	0.004
grafo2089.66	66	84	6	0.306
grafo2090.17	17	18	2	0.001
grafo2091.34	34	47	4	0.003
grafo2092.29	29	36	4	0.002
grafo2093.36	36	53	5	0.005
grafo2094.34	34	39	4	0.004
grafo2095.29	29	35	4	0.002
grafo2096.43	43	58	5	0.007
grafo2097.53	53	69	6	0.105
grafo2098.35	35	42	4	0.003
grafo2099.37	37	44	3	0.003
grafo2100.29	29	38	4	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2101.17	17	17	2	0.002
grafo2102.34	34	41	4	0.003
grafo2103.66	66	76	5	0.027
grafo2104.36	36	45	4	0.004
grafo2105.10	10	12	2	0.001
grafo2106.17	17	19	2	0.001
grafo2107.31	31	35	3	0.003
grafo2108.26	26	35	4	0.002
grafo2109.11	11	18	4	0.001
grafo2110.11	11	11	2	0.001
grafo2111.10	10	16	3	0.001
grafo2112.28	28	36	4	0.002
grafo2113.19	19	25	3	0.001
grafo2114.21	21	24	3	0.001
grafo2115.12	12	15	2	0.001
grafo2116.32	32	41	4	0.003
grafo2117.18	18	20	2	0.002
grafo2118.15	15	15	2	0.001
grafo2119.21	21	27	4	0.002
grafo2120.13	13	20	4	0.001
grafo2121.13	13	25	3	0.001
grafo2122.20	20	21	3	0.001
grafo2123.26	26	28	3	0.002
grafo2124.49	49	64	5	0.013
grafo2125.16	16	18	2	0.001
grafo2126.11	11	15	3	0.002
grafo2127.18	18	23	3	0.001
grafo2128.19	19	19	2	0.001
grafo2129.11	11	17	3	0.001
grafo2130.31	31	37	2	0.003
grafo2131.19	19	25	4	0.002
grafo2132.37	37	45	4	0.004
grafo2133.22	22	24	2	0.002
grafo2134.24	24	30	4	0.002
grafo2135.19	19	23	3	0.002
grafo2136.11	11	17	3	0.001
grafo2137.22	22	21	2	0.004
grafo2138.17	17	19	2	0.001
grafo2139.11	11	16	3	0.002
grafo2140.25	25	28	2	0.002
grafo2141.55	55	76	6	0.047
grafo2142.16	16	16	2	0.002
grafo2143.19	19	27	3	0.001
grafo2144.12	12	18	3	0.001
grafo2145.29	29	34	3	0.002
grafo2146.17	17	17	2	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2147.17	17	20	3	0.002
grafo2148.39	39	45	4	0.004
grafo2149.24	24	30	4	0.002
grafo2150.16	16	19	2	0.001
grafo2151.20	20	27	3	0.002
grafo2152.21	21	22	2	0.002
grafo2153.19	19	23	3	0.002
grafo2154.14	14	16	3	0.002
grafo2155.33	33	40	4	0.003
grafo2156.33	33	41	4	0.003
grafo2157.15	15	15	2	0.001
grafo2158.14	14	18	2	0.001
grafo2159.17	17	19	2	0.002
grafo2160.15	15	19	2	0.002
grafo2161.29	29	34	3	0.002
grafo2162.21	21	26	3	0.002
grafo2163.24	24	27	3	0.002
grafo2164.16	16	18	2	0.001
grafo2165.22	22	23	2	0.001
grafo2166.20	20	28	4	0.001
grafo2167.38	38	45	4	0.005
grafo2168.16	16	18	3	0.001
grafo2169.15	15	21	4	0.001
grafo2170.13	13	18	3	0.001
grafo2171.19	19	23	3	0.002
grafo2172.31	31	32	2	0.002
grafo2173.21	21	25	3	0.002
grafo2174.17	17	18	2	0.001
grafo2175.25	25	28	3	0.002
grafo2176.21	21	26	3	0.002
grafo2177.17	17	22	3	0.001
grafo2178.22	22	25	3	0.002
grafo2179.14	14	19	3	0.001
grafo2180.27	27	28	2	0.003
grafo2181.41	41	52	4	0.004
grafo2182.38	38	52	5	0.005
grafo2183.16	16	17	2	0.001
grafo2184.18	18	21	2	0.001
grafo2185.24	24	28	3	0.002
grafo2186.18	18	23	3	0.002
grafo2187.19	19	22	3	0.002
grafo2188.28	28	40	3	0.002
grafo2189.14	14	16	2	0.001
grafo2190.36	36	42	3	0.003
grafo2191.16	16	19	2	0.001
grafo2192.16	16	18	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2193.22	22	30	3	0.002
grafo2194.48	48	57	4	0.005
grafo2195.35	35	46	5	0.004
grafo2196.16	16	17	2	0.001
grafo2197.13	13	14	2	0.001
grafo2198.16	16	20	3	0.001
grafo2199.44	44	50	4	0.005
grafo2200.23	23	29	3	0.002
grafo2201.25	25	29	3	0.002
grafo2202.20	20	25	3	0.002
grafo2203.33	33	41	4	0.003
grafo2204.13	13	13	2	0.001
grafo2205.38	38	55	6	0.011
grafo2206.19	19	23	3	0.002
grafo2207.36	36	49	5	0.006
grafo2208.21	21	24	3	0.002
grafo2209.20	20	31	4	0.002
grafo2210.28	28	32	3	0.003
grafo2211.16	16	28	4	0.001
grafo2212.36	36	41	3	0.003
grafo2213.20	20	28	3	0.002
grafo2214.19	19	21	3	0.001
grafo2215.36	36	41	4	0.004
grafo2216.15	15	20	3	0.001
grafo2217.23	23	29	3	0.001
grafo2218.13	13	13	2	0.001
grafo2219.15	15	19	3	0.001
grafo2220.17	17	25	4	0.002
grafo2221.13	13	13	2	0.001
grafo2222.17	17	17	2	0.001
grafo2223.38	38	44	4	0.004
grafo2224.37	37	45	5	0.006
grafo2225.15	15	18	3	0.001
grafo2226.39	39	63	6	0.005
grafo2227.17	17	25	3	0.001
grafo2228.14	14	14	2	0.001
grafo2229.25	25	42	6	0.002
grafo2230.39	39	54	5	0.006
grafo2231.16	16	20	3	0.002
grafo2232.15	15	16	2	0.001
grafo2233.15	15	20	2	0.002
grafo2234.14	14	19	3	0.001
grafo2235.41	41	58	6	0.013
grafo2236.16	16	20	3	0.001
grafo2237.27	27	34	3	0.002
grafo2238.33	33	39	4	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2239.17	17	27	3	0.002
grafo2240.12	12	13	2	0.002
grafo2241.16	16	20	3	0.002
grafo2242.25	25	32	3	0.002
grafo2243.46	46	61	5	0.009
grafo2244.18	18	20	2	0.002
grafo2245.17	17	19	2	0.002
grafo2246.20	20	30	4	0.002
grafo2247.18	18	25	4	0.002
grafo2248.22	22	28	4	0.002
grafo2249.40	40	49	5	0.007
grafo2250.48	48	60	3	0.004
grafo2251.48	48	60	3	0.004
grafo2252.15	15	22	3	0.001
grafo2253.18	18	25	3	0.001
grafo2254.48	48	66	6	0.032
grafo2255.39	39	45	3	0.003
grafo2256.23	23	26	3	0.002
grafo2257.14	14	16	2	0.001
grafo2258.47	47	60	4	0.004
grafo2259.14	14	14	2	0.001
grafo2260.14	14	15	2	0.002
grafo2261.12	12	14	2	0.001
grafo2262.31	31	40	3	0.003
grafo2263.22	22	24	3	0.002
grafo2264.15	15	17	2	0.001
grafo2265.12	12	15	3	0.002
grafo2266.15	15	16	2	0.001
grafo2267.36	36	52	5	0.005
grafo2268.20	20	24	3	0.002
grafo2269.23	23	27	3	0.001
grafo2270.32	32	34	2	0.003
grafo2271.71	71	89	7	0.887
grafo2272.20	20	23	3	0.001
grafo2273.40	40	60	5	0.006
grafo2274.35	35	41	3	0.003
grafo2275.27	27	32	3	0.003
grafo2276.16	16	20	3	0.001
grafo2277.18	18	21	3	0.001
grafo2278.39	39	50	4	0.004
grafo2279.16	16	18	2	0.001
grafo2280.15	15	16	2	0.001
grafo2281.16	16	21	3	0.001
grafo2282.20	20	24	3	0.002
grafo2283.13	13	18	2	0.001
grafo2284.20	20	30	4	0.001

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Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2285.38	38	52	5	0.006
grafo2286.15	15	16	3	0.002
grafo2287.13	13	13	2	0.002
grafo2288.16	16	24	4	0.001
grafo2289.18	18	20	2	0.001
grafo2290.19	19	22	3	0.001
grafo2291.14	14	14	2	0.001
grafo2292.14	14	19	3	0.002
grafo2293.13	13	13	2	0.001
grafo2294.16	16	17	2	0.001
grafo2295.22	22	27	3	0.002
grafo2296.15	15	21	3	0.001
grafo2297.17	17	20	3	0.002
grafo2298.13	13	14	2	0.001
grafo2299.35	35	40	4	0.004
grafo2300.17	17	20	2	0.001
grafo2301.25	25	37	4	0.002
grafo2302.16	16	20	4	0.001
grafo2303.13	13	19	2	0.002
grafo2304.38	38	51	5	0.006
grafo2305.21	21	24	3	0.002
grafo2306.13	13	14	2	0.002
grafo2307.18	18	23	3	0.002
grafo2308.19	19	21	3	0.002
grafo2309.34	34	51	5	0.006
grafo2310.39	39	59	6	0.014
grafo2311.15	15	15	2	0.002
grafo2312.11	11	11	2	0.001
grafo2313.13	13	14	2	0.001
grafo2314.27	27	35	3	0.002
grafo2315.23	23	26	2	0.002
grafo2316.40	40	57	6	0.014
grafo2317.20	20	22	2	0.001
grafo2318.15	15	16	2	0.002
grafo2319.14	14	16	3	0.002
grafo2320.23	23	35	3	0.002
grafo2321.38	38	58	5	0.005
grafo2322.42	42	50	4	0.004
grafo2323.25	25	30	4	0.002
grafo2324.17	17	21	3	0.001
grafo2325.13	13	13	2	0.001
grafo2326.16	16	21	3	0.002
grafo2327.15	15	19	2	0.002
grafo2328.28	28	36	4	0.002
grafo2329.21	21	24	2	0.002
grafo2330.24	24	27	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2331.15	15	17	3	0.002
grafo2332.19	19	20	2	0.002
grafo2333.13	13	15	3	0.001
grafo2334.16	16	21	3	0.001
grafo2335.12	12	14	3	0.001
grafo2336.17	17	18	2	0.002
grafo2337.27	27	37	4	0.002
grafo2338.14	14	13	1	0.001
grafo2339.14	14	15	2	0.002
grafo2340.13	13	14	2	0.001
grafo2341.24	24	29	3	0.002
grafo2342.18	18	20	2	0.001
grafo2343.12	12	12	2	0.001
grafo2344.12	12	14	2	0.001
grafo2345.17	17	20	3	0.001
grafo2346.30	30	33	3	0.003
grafo2347.20	20	22	2	0.002
grafo2348.37	37	46	5	0.006
grafo2349.16	16	18	3	0.002
grafo2350.11	11	12	2	0.002
grafo2351.20	20	26	4	0.001
grafo2352.15	15	17	2	0.001
grafo2353.28	28	32	3	0.002
grafo2354.13	13	16	3	0.001
grafo2355.16	16	17	2	0.001
grafo2356.21	21	27	3	0.002
grafo2357.23	23	22	2	0.002
grafo2358.34	34	41	4	0.003
grafo2359.12	12	17	3	0.001
grafo2360.17	17	21	3	0.002
grafo2361.21	21	28	3	0.002
grafo2362.36	36	54	6	0.007
grafo2363.34	34	39	3	0.002
grafo2364.23	23	26	3	0.002
grafo2365.30	30	34	3	0.003
grafo2366.16	16	20	2	0.001
grafo2367.12	12	15	2	0.002
grafo2368.14	14	17	3	0.001
grafo2369.43	43	53	3	0.003
grafo2370.22	22	28	3	0.002
grafo2371.19	19	24	3	0.001
grafo2372.16	16	20	3	0.001
grafo2373.16	16	18	3	0.002
grafo2374.37	37	46	3	0.003
grafo2375.19	19	35	4	0.002
grafo2376.16	16	20	3	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2377.15	15	15	2	0.001
grafo2378.21	21	25	4	0.002
grafo2379.35	35	45	4	0.003
grafo2380.12	12	12	2	0.001
grafo2381.40	40	47	3	0.003
grafo2382.20	20	26	3	0.001
grafo2383.18	18	26	4	0.001
grafo2384.11	11	12	2	0.001
grafo2385.13	13	14	2	0.002
grafo2386.28	28	28	2	0.002
grafo2387.29	29	38	3	0.002
grafo2388.28	28	33	3	0.002
grafo2389.39	39	48	4	0.005
grafo2390.19	19	23	3	0.002
grafo2391.38	38	44	3	0.003
grafo2392.14	14	14	2	0.001
grafo2393.14	14	16	2	0.001
grafo2394.31	31	36	3	0.003
grafo2395.28	28	37	5	0.003
grafo2396.20	20	24	3	0.002
grafo2397.33	33	39	4	0.003
grafo2398.37	37	47	5	0.005
grafo2399.26	26	31	3	0.002
grafo2400.26	26	38	5	0.003
grafo2401.17	17	31	4	0.001
grafo2402.36	36	38	3	0.002
grafo2403.15	15	19	2	0.001
grafo2404.23	23	28	3	0.002
grafo2405.36	36	47	5	0.005
grafo2406.23	23	26	3	0.002
grafo2407.33	33	40	3	0.003
grafo2408.18	18	25	4	0.001
grafo2409.15	15	18	3	0.002
grafo2410.22	22	24	3	0.001
grafo2411.56	56	78	7	0.433
grafo2412.50	50	61	5	0.019
grafo2413.16	16	20	3	0.001
grafo2414.15	15	22	3	0.001
grafo2415.13	13	13	2	0.002
grafo2416.21	21	24	3	0.002
grafo2417.14	14	18	3	0.001
grafo2418.17	17	20	3	0.001
grafo2419.14	14	17	3	0.001
grafo2420.16	16	18	3	0.001
grafo2421.17	17	19	3	0.002
grafo2422.20	20	27	4	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2423.21	21	26	3	0.002
grafo2424.35	35	40	3	0.003
grafo2425.19	19	23	3	0.002
grafo2426.12	12	18	3	0.001
grafo2427.19	19	24	3	0.001
grafo2428.19	19	23	3	0.002
grafo2429.27	27	37	4	0.003
grafo2430.14	14	15	3	0.001
grafo2431.86	86	105	5	0.178
grafo2432.15	15	18	3	0.001
grafo2433.11	11	11	2	0.001
grafo2434.21	21	29	4	0.002
grafo2435.18	18	26	3	0.001
grafo2436.28	28	37	4	0.002
grafo2437.25	25	30	3	0.003
grafo2438.18	18	23	3	0.001
grafo2439.12	12	12	2	0.001
grafo2440.16	16	20	3	0.001
grafo2441.16	16	20	3	0.002
grafo2442.14	14	18	2	0.001
grafo2443.22	22	31	4	0.002
grafo2444.29	29	36	3	0.002
grafo2445.26	26	31	3	0.001
grafo2446.46	46	57	5	0.018
grafo2447.39	39	61	7	0.036
grafo2448.15	15	23	3	0.001
grafo2449.19	19	24	4	0.001
grafo2450.14	14	14	2	0.002
grafo2451.17	17	20	3	0.001
grafo2452.25	25	32	4	0.002
grafo2453.22	22	29	4	0.002
grafo2454.34	34	46	4	0.004
grafo2455.40	40	58	6	0.012
grafo2456.22	22	26	3	0.002
grafo2457.37	37	48	5	0.005
grafo2458.12	12	13	2	0.001
grafo2459.15	15	19	3	0.001
grafo2460.14	14	14	2	0.001
grafo2461.18	18	24	3	0.001
grafo2462.31	31	43	4	0.003
grafo2463.32	32	40	4	0.003
grafo2464.34	34	38	4	0.003
grafo2465.36	36	44	4	0.004
grafo2466.14	14	13	2	0.001
grafo2467.16	16	19	3	0.002
grafo2468.15	15	17	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2469.23	23	38	4	0.002
grafo2470.16	16	20	3	0.001
grafo2471.14	14	16	3	0.001
grafo2472.47	47	63	6	0.05
grafo2473.22	22	25	3	0.002
grafo2474.22	22	25	3	0.002
grafo2475.34	34	47	5	0.005
grafo2476.86	86	105	6	0.53
grafo2477.47	47	62	6	0.048
grafo2478.47	47	62	6	0.047
grafo2479.34	34	41	4	0.003
grafo2480.18	18	21	3	0.001
grafo2481.15	15	17	2	0.002
grafo2482.15	15	18	2	0.001
grafo2483.25	25	36	5	0.002
grafo2484.17	17	18	3	0.002
grafo2485.13	13	17	3	0.002
grafo2486.15	15	16	2	0.001
grafo2487.15	15	17	3	0.002
grafo2488.13	13	13	2	0.001
grafo2489.19	19	26	3	0.001
grafo2490.22	22	29	4	0.002
grafo2491.18	18	18	2	0.002
grafo2492.34	34	38	3	0.002
grafo2493.16	16	19	3	0.001
grafo2494.17	17	20	3	0.001
grafo2495.16	16	23	3	0.001
grafo2496.49	49	59	4	0.006
grafo2497.49	49	59	4	0.006
grafo2498.27	27	32	3	0.002
grafo2499.23	23	26	3	0.002
grafo2500.12	12	18	3	0.001
grafo2501.19	19	25	4	0.001
grafo2502.15	15	20	3	0.001
grafo2503.40	40	58	6	0.008
grafo2504.36	36	49	5	0.004
grafo2505.13	13	13	2	0.002
grafo2506.43	43	56	5	0.011
grafo2507.17	17	26	4	0.001
grafo2508.24	24	26	3	0.002
grafo2509.37	37	46	4	0.004
grafo2510.48	48	60	5	0.013
grafo2511.10	10	10	2	0.001
grafo2512.12	12	14	2	0.001
grafo2513.24	24	28	3	0.002
grafo2514.15	15	18	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2515.12	12	14	2	0.001
grafo2516.21	21	24	3	0.002
grafo2517.24	24	28	3	0.002
grafo2518.13	13	14	2	0.002
grafo2519.37	37	40	3	0.003
grafo2520.17	17	24	4	0.001
grafo2521.37	37	39	3	0.003
grafo2522.28	28	35	3	0.003
grafo2523.40	40	51	5	0.007
grafo2524.22	22	26	3	0.001
grafo2525.16	16	19	3	0.002
grafo2526.13	13	15	2	0.001
grafo2527.14	14	15	2	0.001
grafo2528.37	37	50	4	0.004
grafo2529.40	40	48	4	0.004
grafo2530.38	38	52	5	0.007
grafo2531.41	41	56	5	0.012
grafo2532.14	14	15	2	0.001
grafo2533.18	18	19	2	0.001
grafo2534.22	22	25	3	0.002
grafo2535.48	48	59	5	0.015
grafo2536.25	25	29	3	0.002
grafo2537.16	16	19	2	0.001
grafo2538.10	10	10	2	0.001
grafo2539.32	32	39	4	0.003
grafo2540.22	22	25	3	0.001
grafo2541.14	14	21	3	0.001
grafo2542.16	16	21	3	0.001
grafo2543.38	38	42	3	0.003
grafo2544.28	28	33	3	0.002
grafo2545.20	20	25	2	0.002
grafo2546.19	19	24	3	0.002
grafo2547.17	17	18	2	0.001
grafo2548.38	38	46	4	0.003
grafo2549.16	16	20	3	0.002
grafo2550.26	26	29	3	0.002
grafo2551.23	23	31	3	0.002
grafo2552.22	22	26	3	0.002
grafo2553.18	18	19	2	0.001
grafo2554.20	20	22	3	0.002
grafo2555.14	14	18	2	0.001
grafo2556.18	18	22	2	0.002
grafo2557.37	37	40	3	0.002
grafo2558.34	34	46	5	0.004
grafo2559.13	13	15	2	0.001
grafo2560.15	15	17	2	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2561.14	14	18	3	0.001
grafo2562.19	19	28	4	0.002
grafo2563.14	14	17	3	0.001
grafo2564.20	20	22	2	0.001
grafo2565.17	17	23	3	0.001
grafo2566.40	40	53	5	0.009
grafo2567.13	13	13	2	0.001
grafo2568.15	15	16	2	0.001
grafo2569.14	14	16	3	0.002
grafo2570.15	15	22	3	0.002
grafo2571.21	21	28	3	0.002
grafo2572.28	28	34	3	0.002
grafo2573.35	35	43	4	0.004
grafo2574.15	15	18	3	0.002
grafo2575.13	13	13	2	0.001
grafo2576.18	18	25	3	0.001
grafo2577.17	17	21	3	0.002
grafo2578.34	34	36	3	0.003
grafo2579.11	11	11	2	0.001
grafo2580.15	15	15	2	0.001
grafo2581.45	45	54	4	0.004
grafo2582.27	27	27	2	0.002
grafo2583.16	16	17	2	0.001
grafo2584.16	16	22	4	0.001
grafo2585.16	16	18	2	0.001
grafo2586.15	15	17	3	0.001
grafo2587.24	24	28	3	0.002
grafo2588.24	24	28	3	0.002
grafo2589.26	26	34	5	0.002
grafo2590.14	14	14	2	0.001
grafo2591.15	15	23	3	0.001
grafo2592.12	12	16	3	0.001
grafo2593.40	40	55	5	0.004
grafo2594.17	17	21	3	0.001
grafo2595.13	13	12	1	0.001
grafo2596.25	25	29	3	0.001
grafo2597.15	15	17	2	0.001
grafo2598.21	21	28	4	0.002
grafo2599.13	13	17	3	0.001
grafo2600.38	38	46	4	0.004
grafo2601.17	17	28	4	0.002
grafo2602.38	38	48	5	0.006
grafo2603.22	22	27	3	0.002
grafo2604.18	18	22	3	0.001
grafo2605.32	32	41	4	0.003
grafo2606.26	26	32	3	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2607.12	12	15	2	0.001
grafo2608.18	18	23	3	0.001
grafo2609.15	15	19	2	0.002
grafo2610.17	17	18	3	0.001
grafo2611.20	20	19	2	0.002
grafo2612.37	37	53	5	0.004
grafo2613.15	15	17	3	0.001
grafo2614.16	16	19	2	0.001
grafo2615.17	17	18	2	0.002
grafo2616.25	25	29	3	0.002
grafo2617.46	46	55	4	0.004
grafo2618.21	21	26	3	0.001
grafo2619.15	15	18	2	0.001
grafo2620.13	13	16	3	0.002
grafo2621.14	14	17	3	0.002
grafo2622.38	38	52	5	0.006
grafo2623.41	41	53	5	0.006
grafo2624.22	22	27	3	0.002
grafo2625.14	14	15	2	0.001
grafo2626.15	15	22	3	0.002
grafo2627.40	40	49	5	0.008
grafo2628.10	10	11	2	0.001
grafo2629.30	30	37	3	0.002
grafo2630.22	22	27	3	0.002
grafo2631.34	34	42	4	0.003
grafo2632.19	19	21	3	0.002
grafo2633.17	17	24	3	0.002
grafo2634.14	14	13	2	0.001
grafo2635.44	44	51	4	0.004
grafo2636.16	16	22	3	0.001
grafo2637.21	21	24	3	0.001
grafo2638.34	34	35	3	0.002
grafo2639.29	29	43	5	0.004
grafo2640.19	19	28	4	0.001
grafo2641.17	17	23	3	0.001
grafo2642.13	13	17	3	0.001
grafo2643.19	19	22	3	0.002
grafo2644.17	17	19	2	0.002
grafo2645.13	13	18	3	0.001
grafo2646.16	16	27	3	0.001
grafo2647.17	17	19	2	0.001
grafo2648.27	27	29	3	0.002
grafo2649.22	22	28	3	0.002
grafo2650.30	30	34	3	0.003
grafo2651.12	12	13	2	0.001
grafo2652.16	16	20	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2653.14	14	18	3	0.001
grafo2654.33	33	49	5	0.004
grafo2655.18	18	26	3	0.001
grafo2656.49	49	59	5	0.014
grafo2657.49	49	59	5	0.014
grafo2658.18	18	21	3	0.001
grafo2659.13	13	16	2	0.001
grafo2660.22	22	27	3	0.002
grafo2661.22	22	30	4	0.002
grafo2662.19	19	21	2	0.002
grafo2663.12	12	13	2	0.001
grafo2664.21	21	25	3	0.002
grafo2665.12	12	12	2	0.001
grafo2666.61	61	68	5	0.029
grafo2667.22	22	22	2	0.002
grafo2668.12	12	13	2	0.001
grafo2669.13	13	17	2	0.001
grafo2670.20	20	28	4	0.001
grafo2671.24	24	25	2	0.002
grafo2672.34	34	40	4	0.003
grafo2673.11	11	11	2	0.001
grafo2674.18	18	23	4	0.002
grafo2675.12	12	14	2	0.001
grafo2676.22	22	26	3	0.002
grafo2677.21	21	27	4	0.002
grafo2678.37	37	45	4	0.003
grafo2679.17	17	19	3	0.001
grafo2680.17	17	22	2	0.002
grafo2681.15	15	23	3	0.001
grafo2682.17	17	19	3	0.002
grafo2683.13	13	15	3	0.001
grafo2684.33	33	38	3	0.003
grafo2685.44	44	52	4	0.004
grafo2686.44	44	52	4	0.004
grafo2687.33	33	46	5	0.004
grafo2688.17	17	25	3	0.002
grafo2689.21	21	28	3	0.002
grafo2690.41	41	57	5	0.004
grafo2691.23	23	31	3	0.002
grafo2692.85	85	108	6	0.395
grafo2693.13	13	13	2	0.001
grafo2694.65	65	78	5	0.078
grafo2695.43	43	52	4	0.004
grafo2696.26	26	32	3	0.002
grafo2697.16	16	20	3	0.001
grafo2698.16	16	18	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2699.30	30	38	3	0.003
grafo2700.25	25	28	3	0.001
grafo2701.20	20	26	4	0.001
grafo2702.24	24	36	4	0.002
grafo2703.36	36	43	4	0.004
grafo2704.25	25	32	3	0.002
grafo2705.15	15	16	2	0.001
grafo2706.13	13	14	2	0.001
grafo2707.12	12	14	2	0.001
grafo2708.39	39	48	4	0.003
grafo2709.15	15	17	2	0.001
grafo2710.41	41	49	4	0.005
grafo2711.68	68	82	5	0.155
grafo2712.23	23	30	3	0.001
grafo2713.37	37	48	4	0.004
grafo2714.11	11	11	2	0.001
grafo2715.18	18	21	3	0.001
grafo2716.14	14	19	3	0.001
grafo2717.17	17	18	2	0.002
grafo2718.20	20	28	4	0.002
grafo2719.21	21	26	3	0.001
grafo2720.14	14	17	2	0.001
grafo2721.27	27	27	2	0.002
grafo2722.24	24	31	3	0.002
grafo2723.18	18	28	4	0.002
grafo2724.23	23	29	4	0.002
grafo2725.38	38	47	5	0.006
grafo2726.38	38	53	5	0.006
grafo2727.33	33	40	3	0.002
grafo2728.16	16	17	3	0.002
grafo2729.40	40	46	4	0.004
grafo2730.15	15	15	2	0.001
grafo2731.18	18	23	3	0.002
grafo2732.37	37	48	5	0.006
grafo2733.14	14	16	3	0.002
grafo2734.25	25	28	3	0.002
grafo2735.36	36	45	3	0.003
grafo2736.16	16	19	3	0.001
grafo2737.41	41	54	5	0.01
grafo2738.14	14	23	3	0.001
grafo2739.23	23	28	3	0.001
grafo2740.15	15	21	3	0.001
grafo2741.29	29	40	4	0.002
grafo2742.39	39	52	5	0.007
grafo2743.39	39	52	4	0.004
grafo2744.18	18	24	3	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2745.17	17	19	3	0.002
grafo2746.38	38	44	4	0.005
grafo2747.16	16	19	2	0.002
grafo2748.22	22	29	3	0.002
grafo2749.33	33	40	4	0.003
grafo2750.17	17	17	2	0.001
grafo2751.16	16	25	4	0.001
grafo2752.15	15	24	4	0.001
grafo2753.18	18	24	3	0.001
grafo2754.16	16	24	3	0.001
grafo2755.25	25	32	3	0.002
grafo2756.21	21	26	4	0.002
grafo2757.38	38	52	5	0.005
grafo2758.17	17	20	3	0.002
grafo2759.16	16	18	2	0.001
grafo2760.32	32	38	3	0.002
grafo2761.37	37	45	3	0.003
grafo2762.76	76	98	7	2.791
grafo2763.20	20	21	2	0.001
grafo2764.16	16	25	4	0.001
grafo2765.18	18	22	2	0.001
grafo2766.26	26	32	4	0.002
grafo2767.20	20	22	2	0.002
grafo2768.18	18	23	3	0.002
grafo2769.23	23	27	3	0.002
grafo2770.24	24	29	3	0.002
grafo2771.33	33	42	3	0.003
grafo2772.14	14	14	2	0.001
grafo2773.14	14	15	3	0.001
grafo2774.26	26	26	2	0.002
grafo2775.25	25	26	3	0.002
grafo2776.20	20	24	4	0.002
grafo2777.37	37	47	4	0.004
grafo2778.80	80	101	7	1.58
grafo2779.27	27	28	2	0.002
grafo2780.17	17	23	3	0.001
grafo2781.41	41	61	6	0.011
grafo2782.17	17	19	2	0.002
grafo2783.15	15	17	3	0.002
grafo2784.16	16	20	3	0.002
grafo2785.14	14	17	2	0.002
grafo2786.37	37	53	5	0.004
grafo2787.24	24	35	5	0.002
grafo2788.49	49	57	4	0.009
grafo2789.23	23	29	3	0.001
grafo2790.16	16	18	3	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2791.15	15	15	2	0.002
grafo2792.11	11	11	2	0.001
grafo2793.21	21	20	2	0.002
grafo2794.53	53	73	7	0.263
grafo2795.25	25	31	3	0.002
grafo2796.19	19	22	3	0.002
grafo2797.15	15	17	2	0.002
grafo2798.16	16	18	2	0.001
grafo2799.16	16	22	3	0.001
grafo2800.24	24	27	3	0.002
grafo2801.22	22	24	2	0.001
grafo2802.17	17	20	2	0.001
grafo2803.14	14	15	2	0.002
grafo2804.19	19	26	4	0.002
grafo2805.18	18	25	4	0.001
grafo2806.15	15	16	2	0.002
grafo2807.22	22	27	3	0.002
grafo2808.37	37	44	4	0.003
grafo2809.11	11	11	2	0.001
grafo2810.12	12	11	1	0.001
grafo2811.29	29	40	4	0.002
grafo2812.11	11	11	2	0.001
grafo2813.25	25	29	3	0.001
grafo2814.21	21	24	3	0.001
grafo2815.35	35	43	4	0.003
grafo2816.18	18	28	3	0.002
grafo2817.15	15	16	2	0.001
grafo2818.18	18	21	3	0.002
grafo2819.22	22	25	3	0.002
grafo2820.14	14	14	2	0.001
grafo2821.22	22	30	4	0.002
grafo2822.36	36	43	4	0.004
grafo2823.17	17	21	3	0.002
grafo2824.12	12	14	2	0.001
grafo2825.18	18	19	2	0.002
grafo2826.37	37	51	5	0.005
grafo2827.37	37	48	5	0.007
grafo2828.33	33	37	4	0.004
grafo2829.17	17	20	3	0.001
grafo2830.14	14	15	2	0.001
grafo2831.21	21	33	4	0.002
grafo2832.13	13	14	2	0.001
grafo2833.21	21	24	3	0.002
grafo2834.24	24	28	3	0.002
grafo2835.17	17	20	3	0.001
grafo2836.39	39	44	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2837.25	25	27	2	0.002
grafo2838.36	36	41	3	0.003
grafo2839.37	37	47	4	0.003
grafo2840.27	27	34	4	0.003
grafo2841.17	17	21	3	0.001
grafo2842.13	13	13	2	0.001
grafo2843.43	43	51	4	0.004
grafo2844.19	19	30	4	0.002
grafo2845.14	14	16	2	0.001
grafo2846.21	21	30	4	0.002
grafo2847.18	18	20	2	0.001
grafo2848.40	40	48	5	0.012
grafo2849.17	17	19	3	0.002
grafo2850.14	14	17	3	0.001
grafo2851.40	40	52	5	0.004
grafo2852.16	16	18	2	0.002
grafo2853.23	23	34	5	0.002
grafo2854.23	23	29	3	0.002
grafo2855.12	12	17	3	0.002
grafo2856.16	16	18	3	0.001
grafo2857.27	27	31	3	0.003
grafo2858.19	19	22	3	0.001
grafo2859.37	37	41	3	0.003
grafo2860.18	18	21	3	0.002
grafo2861.16	16	15	2	0.002
grafo2862.17	17	21	3	0.002
grafo2863.40	40	50	4	0.003
grafo2864.39	39	57	6	0.01
grafo2865.36	36	45	4	0.003
grafo2866.17	17	24	3	0.002
grafo2867.12	12	16	2	0.001
grafo2868.17	17	28	4	0.001
grafo2869.37	37	41	3	0.003
grafo2870.14	14	17	3	0.001
grafo2871.17	17	16	2	0.001
grafo2872.13	13	16	3	0.001
grafo2873.21	21	25	3	0.002
grafo2874.50	50	54	3	0.004
grafo2875.22	22	27	3	0.001
grafo2876.27	27	32	3	0.002
grafo2877.36	36	53	6	0.01
grafo2878.19	19	33	5	0.001
grafo2879.27	27	31	3	0.002
grafo2880.16	16	18	2	0.002
grafo2881.65	65	76	4	0.013
grafo2882.17	17	18	2	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2883.15	15	16	2	0.002
grafo2884.18	18	25	4	0.001
grafo2885.16	16	18	2	0.002
grafo2886.21	21	22	2	0.001
grafo2887.15	15	17	2	0.001
grafo2888.27	27	34	3	0.002
grafo2889.18	18	22	3	0.002
grafo2890.12	12	14	2	0.001
grafo2891.17	17	21	3	0.002
grafo2892.41	41	47	3	0.003
grafo2893.16	16	19	3	0.001
grafo2894.13	13	16	3	0.001
grafo2895.15	15	17	2	0.001
grafo2896.10	10	10	2	0.001
grafo2897.29	29	33	3	0.002
grafo2898.14	14	18	3	0.001
grafo2899.34	34	43	4	0.003
grafo2900.14	14	14	2	0.001
grafo2901.13	13	15	2	0.001
grafo2902.17	17	26	4	0.001
grafo2903.15	15	16	2	0.001
grafo2904.37	37	54	4	0.003
grafo2905.47	47	52	3	0.004
grafo2906.21	21	24	3	0.002
grafo2907.18	18	21	3	0.002
grafo2908.13	13	12	2	0.002
grafo2909.28	28	32	3	0.003
grafo2910.14	14	16	3	0.001
grafo2911.15	15	20	3	0.001
grafo2912.21	21	24	2	0.002
grafo2913.40	40	58	6	0.014
grafo2914.63	63	80	6	0.414
grafo2915.27	27	37	5	0.003
grafo2916.16	16	25	3	0.001
grafo2917.14	14	16	2	0.001
grafo2918.16	16	22	3	0.001
grafo2919.14	14	15	2	0.002
grafo2920.22	22	36	4	0.001
grafo2921.15	15	17	3	0.002
grafo2922.20	20	24	3	0.002
grafo2923.24	24	27	3	0.002
grafo2924.17	17	22	3	0.002
grafo2925.36	36	40	3	0.003
grafo2926.14	14	14	2	0.002
grafo2927.13	13	14	2	0.001
grafo2928.15	15	17	3	0.001

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2929.23	23	31	3	0.001
grafo2930.35	35	37	3	0.003
grafo2931.11	11	13	2	0.001
grafo2932.40	40	60	6	0.005
grafo2933.16	16	18	2	0.001
grafo2934.19	19	21	2	0.001
grafo2935.11	11	11	2	0.001
grafo2936.12	12	13	2	0.001
grafo2937.25	25	28	3	0.002
grafo2938.12	12	12	2	0.001
grafo2939.19	19	28	4	0.002
grafo2940.19	19	22	3	0.002
grafo2941.38	38	54	6	0.009
grafo2942.31	31	32	2	0.002
grafo2943.21	21	25	3	0.001
grafo2944.12	12	14	2	0.001
grafo2945.24	24	28	3	0.002
grafo2946.11	11	11	2	0.001
grafo2947.37	37	45	4	0.004
grafo2948.25	25	30	3	0.003
grafo2949.12	12	11	2	0.001
grafo2950.27	27	36	4	0.003
grafo2951.19	19	24	3	0.001
grafo2952.38	38	45	4	0.005
grafo2953.11	11	11	2	0.001
grafo2954.37	37	50	5	0.005
grafo2955.38	38	49	5	0.008
grafo2956.37	37	39	3	0.002
grafo2957.37	37	52	5	0.007
grafo2958.27	27	32	3	0.003
grafo2959.38	38	48	4	0.004
grafo2960.38	38	48	4	0.004
grafo2961.26	26	31	3	0.002
grafo2962.33	33	38	3	0.002
grafo2963.40	40	49	4	0.003
grafo2964.11	11	12	2	0.001
grafo2965.22	22	25	3	0.002
grafo2966.23	23	26	3	0.002
grafo2967.47	47	58	4	0.007
grafo2968.32	32	41	4	0.003
grafo2969.39	39	57	6	0.012
grafo2970.38	38	51	4	0.004
grafo2971.11	11	11	2	0.001
grafo2972.25	25	29	3	0.003
grafo2973.37	37	45	4	0.004
grafo2974.36	36	44	4	0.004

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo2975.40	40	49	4	0.003
grafo2976.18	18	20	2	0.001
grafo2977.25	25	28	3	0.002
grafo2978.86	86	107	6	0.64
grafo2979.11	11	11	2	0.001
grafo2980.23	23	34	4	0.001
grafo2981.26	26	36	4	0.003
grafo2982.39	39	52	5	0.008
grafo2983.25	25	28	3	0.002
grafo2984.37	37	52	5	0.008
grafo2985.43	43	55	6	0.04
grafo2986.38	38	50	5	0.005
grafo2987.17	17	20	3	0.001
grafo2988.25	25	29	3	0.002
grafo2989.20	20	25	3	0.002
grafo2990.35	35	48	5	0.004
grafo2991.32	32	43	4	0.003
grafo2992.26	26	28	3	0.003
grafo2993.23	23	28	3	0.001
grafo2994.41	41	52	5	0.008
grafo2995.20	20	24	3	0.001
grafo2996.37	37	47	4	0.003
grafo2997.23	23	29	3	0.002
grafo2998.18	18	20	2	0.001
grafo2999.26	26	30	4	0.002
grafo3000.38	38	39	2	0.003
grafo3001.40	40	56	5	0.011
grafo3002.37	37	47	4	0.004
grafo3003.40	40	52	4	0.003
grafo3004.38	38	43	3	0.003
grafo3005.58	58	77	6	0.204
grafo3006.35	35	44	4	0.004
grafo3007.27	27	30	3	0.002
grafo3008.32	32	47	6	0.007
grafo3009.17	17	22	3	0.001
grafo3010.19	19	26	4	0.001
grafo3011.30	30	41	4	0.002
grafo3012.32	32	38	4	0.004
grafo3013.23	23	31	4	0.002
grafo3014.33	33	44	5	0.004
grafo3015.35	35	38	3	0.003
grafo3016.41	41	49	4	0.004
grafo3017.20	20	25	3	0.002
grafo3018.24	24	33	4	0.001
grafo3019.39	39	55	5	0.008
grafo3020.40	40	42	3	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3021.25	25	29	3	0.002
grafo3022.36	36	45	5	0.006
grafo3023.34	34	42	4	0.003
grafo3024.10	10	10	2	0.001
grafo3025.27	27	32	3	0.002
grafo3026.26	26	32	3	0.003
grafo3027.26	26	32	4	0.002
grafo3028.24	24	34	4	0.002
grafo3029.32	32	40	3	0.003
grafo3030.27	27	33	3	0.002
grafo3031.16	16	18	3	0.001
grafo3032.30	30	35	3	0.003
grafo3033.38	38	47	3	0.003
grafo3034.29	29	40	4	0.002
grafo3035.36	36	50	6	0.011
grafo3036.60	60	69	3	0.006
grafo3037.23	23	32	4	0.001
grafo3038.38	38	50	5	0.006
grafo3039.27	27	31	4	0.002
grafo3040.44	44	50	3	0.003
grafo3041.36	36	53	5	0.008
grafo3042.14	14	18	4	0.001
grafo3043.36	36	42	4	0.005
grafo3044.26	26	34	3	0.002
grafo3045.35	35	42	3	0.004
grafo3046.25	25	29	2	0.002
grafo3047.33	33	36	3	0.003
grafo3048.41	41	50	4	0.004
grafo3049.20	20	24	3	0.001
grafo3050.36	36	43	3	0.002
grafo3051.20	20	23	3	0.002
grafo3052.20	20	23	2	0.001
grafo3053.42	42	47	3	0.004
grafo3054.18	18	21	3	0.002
grafo3055.36	36	46	5	0.008
grafo3056.26	26	36	3	0.002
grafo3057.34	34	46	4	0.003
grafo3058.42	42	51	4	0.004
grafo3059.35	35	44	4	0.003
grafo3060.28	28	36	4	0.003
grafo3061.32	32	46	4	0.003
grafo3062.23	23	37	4	0.002
grafo3063.91	91	103	6	5.128
grafo3064.23	23	25	2	0.002
grafo3065.17	17	26	3	0.001
grafo3066.32	32	48	5	0.004

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3067.34	34	39	3	0.002
grafo3068.35	35	50	5	0.004
grafo3069.88	88	100	5	0.498
grafo3070.31	31	40	3	0.002
grafo3071.23	23	24	3	0.002
grafo3072.27	27	35	3	0.002
grafo3073.11	11	11	2	0.001
grafo3074.26	26	37	4	0.002
grafo3075.72	72	92	6	0.308
grafo3076.34	34	39	3	0.003
grafo3077.72	72	92	6	0.307
grafo3078.25	25	31	3	0.002
grafo3079.27	27	35	4	0.002
grafo3080.43	43	46	3	0.003
grafo3081.23	23	27	3	0.002
grafo3082.33	33	43	4	0.003
grafo3083.27	27	32	4	0.002
grafo3084.36	36	42	3	0.003
grafo3085.49	49	72	6	0.026
grafo3086.49	49	72	6	0.026
grafo3087.14	14	14	2	0.001
grafo3088.40	40	57	6	0.013
grafo3089.25	25	34	3	0.002
grafo3090.24	24	30	3	0.002
grafo3091.11	11	11	2	0.001
grafo3092.24	24	28	3	0.002
grafo3093.35	35	47	5	0.008
grafo3094.42	42	49	4	0.005
grafo3095.34	34	44	4	0.005
grafo3096.36	36	51	4	0.004
grafo3097.11	11	12	2	0.001
grafo3098.18	18	24	3	0.002
grafo3099.39	39	47	4	0.005
grafo3100.24	24	28	2	0.002
grafo3101.11	11	11	2	0.001
grafo3102.34	34	42	4	0.004
grafo3103.88	88	105	7	111.0
grafo3104.39	39	53	4	0.004
grafo3105.25	25	35	4	0.002
grafo3106.32	32	38	4	0.003
grafo3107.32	32	48	5	0.003
grafo3108.24	24	25	2	0.002
grafo3109.24	24	32	4	0.002
grafo3110.38	38	49	5	0.007
grafo3111.48	48	54	4	0.007
grafo3112.13	13	14	2	0.001

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Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3113.11	11	11	2	0.001
grafo3114.40	40	55	5	0.015
grafo3115.59	59	73	5	0.026
grafo3116.40	40	47	4	0.004
grafo3117.38	38	51	4	0.004
grafo3118.39	39	52	4	0.004
grafo3119.55	55	82	7	0.08
grafo3120.62	62	80	6	0.124
grafo3121.47	47	54	3	0.005
grafo3122.56	56	84	7	0.199
grafo3123.63	63	84	6	0.097
grafo3124.34	34	43	4	0.003
grafo3125.37	37	42	4	0.004
grafo3126.39	39	60	4	0.004
grafo3127.57	57	82	8	0.394
grafo3128.37	37	49	5	0.005
grafo3129.37	37	48	4	0.004
grafo3130.41	41	61	5	0.006
grafo3131.40	40	53	4	0.003
grafo3132.43	43	53	4	0.005
grafo3133.49	49	61	6	0.078
grafo3134.37	37	45	4	0.004
grafo3135.34	34	38	3	0.003
grafo3136.56	56	83	8	0.545
grafo3137.42	42	61	6	0.017
grafo3138.60	60	85	7	0.302
grafo3139.89	89	121	7	2.883
grafo3140.55	55	68	5	0.014
grafo3141.42	42	55	5	0.008
grafo3142.39	39	52	5	0.011
grafo3143.94	94	132	8	10.41
grafo3144.54	54	74	7	0.225
grafo3145.36	36	45	4	0.003
grafo3146.53	53	78	7	0.177
grafo3147.53	53	66	5	0.024
grafo3148.37	37	47	5	0.008
grafo3149.41	41	48	4	0.004
grafo3150.40	40	46	3	0.003
grafo3151.45	45	58	5	0.012
grafo3152.43	43	51	4	0.005
grafo3153.36	36	43	3	0.003
grafo3154.44	44	57	5	0.008
grafo3155.39	39	48	4	0.004
grafo3156.56	56	82	6	0.036
grafo3157.55	55	73	5	0.031
grafo3158.98	98	133	9	82.55

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3159.38	38	48	4	0.003
grafo3160.48	48	63	5	0.012
grafo3161.39	39	48	4	0.004
grafo3162.54	54	71	7	0.133
grafo3163.47	47	75	7	0.032
grafo3164.38	38	48	4	0.003
grafo3165.52	52	72	7	0.103
grafo3166.57	57	75	6	0.094
grafo3167.44	44	60	5	0.008
grafo3168.39	39	51	4	0.003
grafo3169.51	51	66	5	0.015
grafo3170.52	52	78	6	0.03
grafo3171.40	40	56	5	0.006
grafo3172.51	51	71	6	0.021
grafo3173.63	63	87	6	0.324
grafo3174.39	39	47	4	0.004
grafo3175.42	42	57	6	0.042
grafo3176.54	54	65	5	0.031
grafo3177.39	39	46	4	0.004
grafo3178.34	34	42	4	0.005
grafo3179.41	41	56	6	0.022
grafo3180.57	57	80	7	0.084
grafo3181.55	55	77	6	0.083
grafo3182.36	36	53	6	0.011
grafo3183.55	55	67	5	0.022
grafo3184.91	91	127	9	68.67
grafo3185.52	52	76	7	0.161
grafo3186.39	39	49	4	0.004
grafo3187.39	39	53	5	0.007
grafo3188.56	56	76	5	0.015
grafo3189.54	54	84	8	0.36
grafo3190.53	53	84	8	0.133
grafo3191.43	43	57	5	0.006
grafo3192.41	41	49	3	0.004
grafo3193.40	40	48	4	0.004
grafo3194.59	59	67	4	0.009
grafo3195.54	54	76	6	0.042
grafo3196.53	53	65	6	0.116
grafo3197.41	41	53	5	0.009
grafo3198.60	60	80	6	0.09
grafo3199.60	60	72	5	0.034
grafo3200.36	36	47	4	0.004
grafo3201.40	40	54	6	0.012
grafo3202.35	35	47	5	0.004
grafo3203.40	40	51	3	0.004
grafo3204.63	63	87	7	0.397

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3205.44	44	57	5	0.012
grafo3206.42	42	57	5	0.011
grafo3207.42	42	57	5	0.009
grafo3208.53	53	80	7	0.077
grafo3209.58	58	75	5	0.029
grafo3210.36	36	49	4	0.003
grafo3211.52	52	77	8	0.451
grafo3212.57	57	77	7	0.434
grafo3213.44	44	57	5	0.007
grafo3214.33	33	44	4	0.002
grafo3215.58	58	74	5	0.011
grafo3216.40	40	47	4	0.004
grafo3217.60	60	69	3	0.005
grafo3218.42	42	51	5	0.009
grafo3219.37	37	54	6	0.013
grafo3220.36	36	45	4	0.004
grafo3221.48	48	59	5	0.012
grafo3222.44	44	56	4	0.005
grafo3223.39	39	40	2	0.003
grafo3225.37	37	53	5	0.006
grafo3226.55	55	74	7	0.159
grafo3227.43	43	65	7	0.09
grafo3228.40	40	53	4	0.004
grafo3229.40	40	48	4	0.005
grafo3230.32	32	40	4	0.003
grafo3231.43	43	53	4	0.008
grafo3232.47	47	55	4	0.005
grafo3233.43	43	49	4	0.004
grafo3234.50	50	65	5	0.011
grafo3235.58	58	71	5	0.022
grafo3236.60	60	80	6	0.064
grafo3237.39	39	49	3	0.003
grafo3238.55	55	68	5	0.015
grafo3239.42	42	48	3	0.004
grafo3240.46	46	66	6	0.035
grafo3241.36	36	47	5	0.005
grafo3242.39	39	51	5	0.02
grafo3243.39	39	51	5	0.006
grafo3244.39	39	48	4	0.004
grafo3245.54	54	76	7	0.131
grafo3246.55	55	76	7	0.251
grafo3247.38	38	43	3	0.004
grafo3248.43	43	61	5	0.011
grafo3249.44	44	58	4	0.004
grafo3250.43	43	58	5	0.015
grafo3251.39	39	47	3	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3252.54	54	62	5	0.02
grafo3253.44	44	52	4	0.005
grafo3254.40	40	55	4	0.004
grafo3255.40	40	46	3	0.003
grafo3256.45	45	63	5	0.007
grafo3257.61	61	82	6	0.163
grafo3258.42	42	58	5	0.006
grafo3259.38	38	43	3	0.003
grafo3260.33	33	48	5	0.004
grafo3261.39	39	44	3	0.003
grafo3262.92	92	130	10	70.56
grafo3263.40	40	50	4	0.004
grafo3264.54	54	68	5	0.02
grafo3265.41	41	62	5	0.009
grafo3266.46	46	54	3	0.003
grafo3267.46	46	53	4	0.006
grafo3268.42	42	56	5	0.006
grafo3269.43	43	58	5	0.007
grafo3270.41	41	49	4	0.004
grafo3271.53	53	80	8	0.328
grafo3272.38	38	44	3	0.003
grafo3273.45	45	58	5	0.013
grafo3274.52	52	68	5	0.015
grafo3275.43	43	60	5	0.007
grafo3276.49	49	65	6	0.027
grafo3277.42	42	56	5	0.005
grafo3278.41	41	56	5	0.007
grafo3279.45	45	62	6	0.019
grafo3280.39	39	58	4	0.003
grafo3281.34	34	50	5	0.004
grafo3282.36	36	40	3	0.003
grafo3283.47	47	61	5	0.017
grafo3284.54	54	82	8	0.54
grafo3285.42	42	60	6	0.025
grafo3286.59	59	83	7	0.544
grafo3287.40	40	52	4	0.005
grafo3288.37	37	50	4	0.004
grafo3289.53	53	76	8	0.532
grafo3290.53	53	74	6	0.038
grafo3291.35	35	42	4	0.005
grafo3292.56	56	84	8	0.488
grafo3293.36	36	46	4	0.003
grafo3294.43	43	59	5	0.009
grafo3295.43	43	53	4	0.005
grafo3296.40	40	48	4	0.003
grafo3297.53	53	74	6	0.02

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3298.58	58	76	6	0.184
grafo3299.53	53	70	6	0.05
grafo3300.42	42	55	5	0.022
grafo3301.53	53	83	8	0.325
grafo3302.35	35	42	3	0.003
grafo3303.46	46	64	6	0.012
grafo3304.36	36	47	4	0.004
grafo3305.47	47	60	5	0.011
grafo3306.41	41	53	5	0.011
grafo3307.55	55	72	6	0.184
grafo3308.97	97	110	5	0.539
grafo3309.59	59	84	6	0.053
grafo3310.46	46	68	8	0.182
grafo3311.36	36	47	4	0.003
grafo3312.39	39	49	5	0.007
grafo3313.42	42	58	6	0.023
grafo3314.39	39	51	5	0.007
grafo3316.34	34	39	3	0.002
grafo3317.36	36	46	4	0.003
grafo3318.55	55	75	6	0.062
grafo3319.39	39	54	5	0.006
grafo3320.37	37	45	4	0.003
grafo3321.38	38	53	5	0.006
grafo3322.37	37	46	4	0.004
grafo3323.56	56	64	4	0.006
grafo3324.44	44	52	4	0.005
grafo3325.42	42	52	3	0.004
grafo3326.42	42	60	5	0.006
grafo3327.48	48	73	7	0.092
grafo3328.56	56	76	6	0.074
grafo3329.39	39	50	4	0.003
grafo3330.39	39	60	6	0.017
grafo3331.44	44	62	5	0.006
grafo3332.38	38	43	3	0.003
grafo3333.51	51	71	7	0.159
grafo3334.48	48	67	6	0.026
grafo3335.40	40	53	5	0.007
grafo3336.36	36	44	5	0.006
grafo3337.40	40	53	4	0.004
grafo3338.56	56	71	5	0.02
grafo3339.42	42	53	5	0.011
grafo3340.41	41	54	5	0.008
grafo3341.37	37	50	5	0.005
grafo3342.61	61	90	8	0.932
grafo3343.58	58	70	4	0.015
grafo3344.42	42	52	5	0.008

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3345.63	63	84	6	0.092
grafo3346.55	55	74	6	0.056
grafo3347.35	35	48	5	0.006
grafo3348.43	43	58	6	0.024
grafo3349.47	47	51	3	0.003
grafo3350.50	50	65	5	0.017
grafo3351.38	38	46	4	0.004
grafo3352.55	55	69	5	0.017
grafo3353.40	40	46	3	0.003
grafo3354.63	63	83	6	0.098
grafo3355.55	55	67	5	0.028
grafo3356.33	33	40	4	0.004
grafo3357.53	53	73	6	0.052
grafo3358.36	36	42	3	0.003
grafo3359.37	37	58	6	0.008
grafo3360.43	43	56	5	0.018
grafo3361.44	44	52	4	0.005
grafo3362.51	51	63	5	0.015
grafo3363.37	37	47	5	0.008
grafo3364.52	52	77	7	0.114
grafo3365.43	43	72	7	0.033
grafo3366.52	52	65	5	0.016
grafo3367.40	40	50	4	0.005
grafo3368.39	39	56	5	0.005
grafo3369.41	41	56	5	0.008
grafo3370.43	43	57	5	0.007
grafo3371.55	55	60	4	0.008
grafo3372.46	46	69	7	0.058
grafo3373.48	48	74	7	0.055
grafo3374.38	38	48	4	0.004
grafo3375.39	39	59	6	0.019
grafo3376.61	61	86	7	0.287
grafo3377.36	36	45	4	0.004
grafo3378.35	35	48	5	0.004
grafo3379.36	36	44	4	0.003
grafo3380.46	46	56	4	0.005
grafo3381.40	40	53	5	0.005
grafo3382.99	99	129	7	3.968
grafo3383.38	38	62	7	0.015
grafo3384.52	52	81	8	0.3
grafo3385.54	54	64	5	0.021
grafo3386.57	57	86	8	0.888
grafo3387.40	40	53	5	0.006
grafo3388.41	41	56	5	0.013
grafo3389.46	46	65	6	0.035
grafo3390.58	58	83	8	0.536

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3391.39	39	61	5	0.006
grafo3392.43	43	52	4	0.005
grafo3393.42	42	53	4	0.004
grafo3394.39	39	53	5	0.005
grafo3395.37	37	51	5	0.006
grafo3396.61	61	95	9	3.299
grafo3397.49	49	53	3	0.005
grafo3398.59	59	87	7	0.218
grafo3399.61	61	78	6	0.166
grafo3400.93	93	124	8	15.17
grafo3401.41	41	53	5	0.015
grafo3402.42	42	62	6	0.022
grafo3403.37	37	42	3	0.003
grafo3404.43	43	53	4	0.005
grafo3405.57	57	78	6	0.087
grafo3406.37	37	49	4	0.004
grafo3407.34	34	43	4	0.004
grafo3408.62	62	73	5	0.022
grafo3409.57	57	85	8	0.643
grafo3410.48	48	62	5	0.018
grafo3411.52	52	68	5	0.013
grafo3412.46	46	65	6	0.033
grafo3413.36	36	53	5	0.005
grafo3414.36	36	39	3	0.003
grafo3415.49	49	65	6	0.058
grafo3416.38	38	50	4	0.004
grafo3417.38	38	46	3	0.003
grafo3418.49	49	63	5	0.009
grafo3419.44	44	51	4	0.004
grafo3420.41	41	51	5	0.008
grafo3421.38	38	52	5	0.004
grafo3422.59	59	96	9	1.458
grafo3423.54	54	69	5	0.023
grafo3424.46	46	56	5	0.009
grafo3425.41	41	52	3	0.003
grafo3426.53	53	62	5	0.011
grafo3427.56	56	81	7	0.11
grafo3428.57	57	80	6	0.071
grafo3429.43	43	65	5	0.004
grafo3430.39	39	53	5	0.005
grafo3431.58	58	83	7	0.123
grafo3432.44	44	55	5	0.022
grafo3433.37	37	42	4	0.003
grafo3434.45	45	60	5	0.008
grafo3435.99	99	135	9	72.36
grafo3436.57	57	76	6	0.064

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3437.38	38	45	4	0.004
grafo3438.36	36	52	4	0.004
grafo3439.42	42	57	5	0.01
grafo3440.55	55	67	4	0.014
grafo3441.53	53	61	5	0.045
grafo3442.52	52	73	6	0.051
grafo3443.51	51	73	7	0.116
grafo3444.41	41	53	5	0.009
grafo3445.37	37	46	4	0.004
grafo3446.46	46	62	5	0.008
grafo3447.35	35	42	3	0.003
grafo3448.58	58	85	7	0.299
grafo3449.44	44	61	5	0.008
grafo3450.43	43	52	4	0.005
grafo3451.43	43	51	4	0.005
grafo3452.41	41	54	5	0.007
grafo3453.56	56	72	6	0.082
grafo3454.39	39	50	4	0.005
grafo3455.52	52	65	5	0.022
grafo3456.40	40	48	3	0.004
grafo3457.38	38	43	3	0.003
grafo3458.53	53	65	5	0.033
grafo3459.43	43	66	7	0.033
grafo3460.54	54	82	7	0.081
grafo3461.37	37	59	7	0.028
grafo3462.42	42	52	5	0.007
grafo3463.58	58	77	6	0.063
grafo3464.93	93	124	8	18.06
grafo3465.60	60	80	7	0.415
grafo3466.56	56	79	7	0.161
grafo3467.53	53	60	3	0.005
grafo3468.44	44	53	4	0.005
grafo3469.47	47	57	3	0.004
grafo3470.41	41	51	4	0.004
grafo3471.40	40	51	5	0.008
grafo3472.92	92	120	8	34.52
grafo3473.57	57	73	6	0.177
grafo3474.39	39	51	4	0.005
grafo3475.53	53	70	6	0.071
grafo3476.42	42	60	6	0.008
grafo3477.57	57	88	9	1.685
grafo3478.45	45	53	4	0.006
grafo3479.56	56	73	6	0.082
grafo3480.35	35	35	3	0.002
grafo3481.97	97	117	6	13.38
grafo3482.98	98	134	9	104.7

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3483.35	35	41	3	0.002
grafo3484.51	51	68	6	0.075
grafo3485.38	38	46	5	0.014
grafo3486.53	53	68	5	0.01
grafo3487.55	55	74	6	0.045
grafo3488.36	36	45	5	0.008
grafo3489.63	63	85	7	0.776
grafo3490.52	52	67	6	0.044
grafo3491.43	43	61	5	0.008
grafo3492.51	51	69	6	0.043
grafo3493.46	46	58	4	0.004
grafo3494.39	39	56	6	0.026
grafo3495.42	42	53	4	0.005
grafo3496.54	54	83	7	0.209
grafo3497.37	37	41	3	0.003
grafo3498.41	41	53	5	0.01
grafo3499.35	35	47	4	0.004
grafo3500.64	64	92	7	0.594
grafo3501.44	44	63	6	0.021
grafo3502.58	58	77	5	0.016
grafo3503.57	57	75	5	0.054
grafo3504.35	35	47	5	0.006
grafo3505.43	43	56	5	0.01
grafo3506.34	34	37	3	0.002
grafo3507.51	51	71	7	0.133
grafo3508.42	42	59	6	0.013
grafo3509.45	45	66	6	0.01
grafo3510.96	96	123	7	12.96
grafo3511.54	54	73	6	0.033
grafo3512.33	33	39	3	0.003
grafo3513.43	43	48	3	0.004
grafo3514.35	35	43	4	0.004
grafo3515.43	43	55	5	0.011
grafo3516.44	44	60	6	0.026
grafo3517.55	55	66	5	0.03
grafo3518.36	36	49	4	0.004
grafo3519.40	40	56	5	0.006
grafo3520.40	40	48	4	0.005
grafo3521.40	40	48	4	0.005
grafo3522.37	37	42	4	0.005
grafo3523.59	59	85	7	0.427
grafo3524.38	38	43	4	0.005
grafo3525.40	40	52	5	0.006
grafo3526.49	49	71	7	0.071
grafo3527.41	41	54	5	0.007
grafo3528.45	45	53	4	0.005

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3529.42	42	54	4	0.006
grafo3530.33	33	38	3	0.003
grafo3531.54	54	81	8	0.235
grafo3533.37	37	57	6	0.009
grafo3534.41	41	49	3	0.004
grafo3535.56	56	68	5	0.014
grafo3536.60	60	73	5	0.03
grafo3537.40	40	61	6	0.006
grafo3538.40	40	46	4	0.005
grafo3539.40	40	57	5	0.009
grafo3540.38	38	57	6	0.015
grafo3541.55	55	87	8	0.154
grafo3542.40	40	53	5	0.007
grafo3543.72	72	103	8	5.461
grafo3544.42	42	60	6	0.014
grafo3545.58	58	83	8	0.362
grafo3546.36	36	49	5	0.005
grafo3547.37	37	38	2	0.002
grafo3548.42	42	50	4	0.004
grafo3549.40	40	57	6	0.02
grafo3550.53	53	61	4	0.008
grafo3551.39	39	54	4	0.004
grafo3552.44	44	51	4	0.005
grafo3553.46	46	71	6	0.029
grafo3554.37	37	41	3	0.004
grafo3555.40	40	49	4	0.005
grafo3556.61	61	75	5	0.037
grafo3557.64	64	85	7	0.779
grafo3558.39	39	62	7	0.032
grafo3559.48	48	69	7	0.067
grafo3560.36	36	45	5	0.007
grafo3561.48	48	68	6	0.061
grafo3562.40	40	53	5	0.011
grafo3563.36	36	46	4	0.004
grafo3564.61	61	79	6	0.083
grafo3565.42	42	52	4	0.004
grafo3566.36	36	44	4	0.004
grafo3567.52	52	68	6	0.08
grafo3568.55	55	87	9	0.431
grafo3569.56	56	75	6	0.094
grafo3570.55	55	66	4	0.007
grafo3571.42	42	56	5	0.009
grafo3572.53	53	76	7	0.156
grafo3573.43	43	58	5	0.005
grafo3574.36	36	45	4	0.003
grafo3575.41	41	52	5	0.016

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3576.37	37	49	4	0.003
grafo3577.40	40	50	5	0.01
grafo3578.58	58	79	7	0.246
grafo3579.52	52	67	6	0.109
grafo3580.44	44	64	6	0.022
grafo3581.61	61	81	6	0.133
grafo3582.41	41	51	5	0.015
grafo3583.47	47	61	5	0.01
grafo3584.56	56	80	8	0.53
grafo3585.39	39	46	3	0.003
grafo3586.36	36	41	3	0.002
grafo3587.36	36	48	4	0.003
grafo3588.36	36	40	4	0.004
grafo3589.56	56	68	5	0.599
grafo3590.53	53	78	8	0.693
grafo3591.57	57	72	5	0.035
grafo3592.44	44	56	5	0.014
grafo3593.44	44	59	5	0.007
grafo3594.42	42	56	4	0.004
grafo3595.39	39	56	5	0.008
grafo3596.37	37	46	4	0.003
grafo3597.49	49	64	6	0.034
grafo3598.55	55	73	6	0.041
grafo3599.56	56	80	7	0.162
grafo3600.43	43	61	6	0.046
grafo3601.44	44	53	4	0.005
grafo3602.44	44	53	4	0.006
grafo3603.44	44	66	7	0.03
grafo3604.37	37	48	4	0.003
grafo3605.35	35	40	3	0.004
grafo3606.46	46	54	4	0.007
grafo3607.56	56	91	8	0.141
grafo3608.42	42	53	4	0.005
grafo3609.42	42	55	4	0.003
grafo3610.57	57	80	7	0.165
grafo3611.53	53	67	5	0.027
grafo3612.37	37	57	5	0.003
grafo3613.41	41	54	5	0.009
grafo3614.54	54	75	7	0.161
grafo3615.44	44	56	5	0.02
grafo3616.51	51	73	7	0.123
grafo3617.39	39	48	4	0.004
grafo3618.38	38	55	5	0.004
grafo3619.33	33	45	5	0.004
grafo3620.38	38	47	4	0.004
grafo3621.40	40	50	4	0.004

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3622.36	36	41	3	0.003
grafo3623.39	39	47	4	0.004
grafo3624.44	44	54	3	0.004
grafo3625.55	55	68	5	0.015
grafo3626.49	49	61	5	0.026
grafo3627.37	37	37	2	0.003
grafo3628.52	52	71	5	0.019
grafo3629.42	42	55	5	0.011
grafo3630.54	54	69	5	0.026
grafo3631.35	35	41	3	0.002
grafo3632.56	56	88	8	0.252
grafo3633.38	38	63	6	0.009
grafo3634.40	40	47	4	0.004
grafo3635.54	54	70	5	0.018
grafo3636.46	46	62	4	0.005
grafo3637.38	38	48	5	0.006
grafo3638.57	57	74	5	0.015
grafo3639.42	42	50	4	0.004
grafo3640.41	41	53	5	0.008
grafo3641.52	52	71	6	0.084
grafo3642.63	63	92	8	1.624
grafo3643.36	36	43	4	0.004
grafo3644.44	44	54	4	0.005
grafo3645.35	35	52	5	0.006
grafo3646.37	37	50	5	0.008
grafo3647.41	41	58	6	0.012
grafo3648.53	53	63	4	0.005
grafo3649.38	38	54	5	0.004
grafo3650.41	41	54	5	0.011
grafo3651.58	58	74	5	0.02
grafo3652.42	42	61	5	0.007
grafo3653.60	60	86	8	0.897
grafo3654.43	43	58	5	0.007
grafo3655.39	39	52	5	0.006
grafo3656.58	58	75	6	0.106
grafo3657.42	42	56	5	0.009
grafo3658.56	56	78	7	0.179
grafo3659.44	44	55	5	0.011
grafo3660.45	45	60	5	0.008
grafo3661.46	46	56	4	0.006
grafo3662.46	46	52	4	0.006
grafo3663.36	36	41	3	0.003
grafo3664.37	37	46	4	0.003
grafo3665.54	54	77	7	0.164
grafo3666.53	53	93	9	0.318
grafo3667.44	44	54	4	0.007

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3668.59	59	77	6	0.091
grafo3669.43	43	52	4	0.004
grafo3670.41	41	57	5	0.007
grafo3671.38	38	47	4	0.004
grafo3672.59	59	78	5	0.051
grafo3673.40	40	59	6	0.011
grafo3674.59	59	90	8	0.837
grafo3675.42	42	51	4	0.005
grafo3676.38	38	43	4	0.005
grafo3677.51	51	71	6	0.054
grafo3678.34	34	42	5	0.006
grafo3679.39	39	43	4	0.003
grafo3681.38	38	48	4	0.003
grafo3682.49	49	74	7	0.127
grafo3683.41	41	59	5	0.007
grafo3684.50	50	66	6	0.056
grafo3685.50	50	72	7	0.119
grafo3686.31	31	36	3	0.002
grafo3687.41	41	53	5	0.016
grafo3688.54	54	71	6	0.058
grafo3689.49	49	65	6	0.032
grafo3690.38	38	50	5	0.006
grafo3691.41	41	53	5	0.006
grafo3692.41	41	59	6	0.021
grafo3693.43	43	58	6	0.015
grafo3694.41	41	59	6	0.012
grafo3695.39	39	47	4	0.004
grafo3696.38	38	50	5	0.005
grafo3697.49	49	68	6	0.016
grafo3698.56	56	87	7	0.1
grafo3700.38	38	44	3	0.003
grafo3701.41	41	58	5	0.008
grafo3702.57	57	70	5	0.023
grafo3703.45	45	67	6	0.022
grafo3704.52	52	71	5	0.012
grafo3705.44	44	57	4	0.005
grafo3706.64	64	94	9	6.11
grafo3707.43	43	54	4	0.003
grafo3708.38	38	54	5	0.006
grafo3709.61	61	85	7	0.259
grafo3710.43	43	52	5	0.012
grafo3711.40	40	53	4	0.004
grafo3713.55	55	84	8	0.235
grafo3714.52	52	76	7	0.079
grafo3715.35	35	40	3	0.002
grafo3716.37	37	53	5	0.005

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3717.51	51	72	5	0.011
grafo3718.43	43	59	5	0.007
grafo3719.40	40	50	4	0.003
grafo3720.35	35	47	5	0.005
grafo3721.37	37	57	6	0.009
grafo3722.40	40	58	5	0.006
grafo3723.53	53	73	6	0.048
grafo3724.43	43	54	4	0.005
grafo3725.37	37	44	4	0.003
grafo3726.51	51	70	6	0.048
grafo3727.39	39	53	5	0.007
grafo3728.37	37	47	4	0.004
grafo3729.37	37	45	3	0.003
grafo3730.47	47	63	5	0.014
grafo3731.47	47	69	6	0.022
grafo3732.58	58	75	6	0.066
grafo3733.62	62	91	8	3.122
grafo3734.36	36	46	4	0.004
grafo3735.39	39	53	5	0.005
grafo3736.39	39	52	5	0.005
grafo3737.54	54	77	8	0.318
grafo3738.42	42	47	3	0.004
grafo3739.56	56	67	4	0.006
grafo3740.55	55	71	6	0.159
grafo3741.95	95	120	8	16.91
grafo3742.36	36	45	3	0.003
grafo3743.35	35	47	4	0.004
grafo3744.50	50	72	7	0.112
grafo3745.41	41	54	5	0.006
grafo3746.62	62	80	6	0.125
grafo3747.37	37	52	4	0.004
grafo3748.54	54	73	7	0.249
grafo3749.42	42	52	4	0.004
grafo3750.53	53	66	5	0.017
grafo3751.40	40	54	5	0.007
grafo3752.38	38	46	4	0.003
grafo3753.40	40	53	5	0.007
grafo3754.40	40	45	3	0.003
grafo3755.52	52	72	6	0.021
grafo3756.90	90	127	9	60.64
grafo3757.39	39	62	6	0.011
grafo3758.38	38	56	6	0.013
grafo3759.53	53	72	6	0.126
grafo3760.56	56	69	5	0.019
grafo3761.45	45	57	4	0.005
grafo3762.39	39	52	5	0.008

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3763.53	53	72	6	0.035
grafo3764.45	45	59	5	0.013
grafo3765.38	38	46	5	0.009
grafo3766.38	38	47	4	0.004
grafo3767.36	36	44	4	0.004
grafo3768.42	42	53	4	0.005
grafo3769.48	48	63	5	0.011
grafo3770.42	42	51	4	0.005
grafo3771.40	40	53	5	0.008
grafo3772.56	56	83	7	0.197
grafo3773.40	40	54	5	0.005
grafo3774.41	41	47	4	0.005
grafo3775.45	45	54	5	0.009
grafo3776.53	53	77	6	0.03
grafo3777.40	40	54	4	0.003
grafo3778.37	37	43	4	0.004
grafo3779.52	52	67	6	0.092
grafo3780.50	50	63	5	0.01
grafo3781.41	41	58	6	0.019
grafo3782.34	34	43	4	0.003
grafo3783.46	46	58	5	0.009
grafo3784.36	36	46	5	0.007
grafo3785.54	54	70	6	0.085
grafo3786.41	41	50	4	0.004
grafo3787.61	61	73	5	0.042
grafo3788.38	38	45	4	0.005
grafo3789.56	56	79	7	0.167
grafo3790.51	51	74	7	0.095
grafo3791.57	57	78	6	0.047
grafo3792.39	39	49	4	0.004
grafo3793.39	39	53	5	0.006
grafo3794.41	41	52	4	0.005
grafo3795.56	56	62	4	0.008
grafo3796.44	44	62	5	0.008
grafo3797.55	55	79	7	0.274
grafo3798.41	41	50	4	0.005
grafo3799.44	44	66	7	0.061
grafo3800.42	42	51	4	0.005
grafo3801.43	43	52	4	0.005
grafo3802.41	41	57	6	0.027
grafo3803.40	40	56	6	0.015
grafo3804.40	40	49	4	0.005
grafo3805.37	37	49	4	0.003
grafo3806.47	47	52	3	0.004
grafo3807.38	38	46	4	0.005
grafo3808.97	97	129	9	144.2

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3809.43	43	48	4	0.005
grafo3810.52	52	64	5	0.018
grafo3811.54	54	77	6	0.038
grafo3812.44	44	63	6	0.045
grafo3813.39	39	50	4	0.003
grafo3814.39	39	46	4	0.003
grafo3815.55	55	76	7	0.211
grafo3816.42	42	61	6	0.024
grafo3817.58	58	87	8	0.384
grafo3818.57	57	77	6	0.093
grafo3819.52	52	67	6	0.114
grafo3820.42	42	52	4	0.005
grafo3821.55	55	87	8	0.21
grafo3822.94	94	123	9	100.5
grafo3823.37	37	46	4	0.004
grafo3824.43	43	59	5	0.009
grafo3825.49	49	66	6	0.054
grafo3826.51	51	63	5	0.038
grafo3827.42	42	55	5	0.009
grafo3828.38	38	40	3	0.003
grafo3829.43	43	61	5	0.005
grafo3830.39	39	50	4	0.004
grafo3831.44	44	52	4	0.007
grafo3832.52	52	71	6	0.059
grafo3833.55	55	68	5	0.025
grafo3834.55	55	80	6	0.025
grafo3835.39	39	50	4	0.005
grafo3836.53	53	92	9	0.845
grafo3837.37	37	52	4	0.006
grafo3838.45	45	56	5	0.009
grafo3839.44	44	53	4	0.004
grafo3840.45	45	59	5	0.026
grafo3841.57	57	77	6	0.048
grafo3842.34	34	40	3	0.003
grafo3843.44	44	61	5	0.014
grafo3844.52	52	78	7	0.223
grafo3845.54	54	75	6	0.056
grafo3846.47	47	65	6	0.1
grafo3847.35	35	38	3	0.003
grafo3848.38	38	48	4	0.004
grafo3849.39	39	50	5	0.01
grafo3850.54	54	68	5	0.034
grafo3851.57	57	77	7	0.13
grafo3852.52	52	68	6	0.046
grafo3853.61	61	79	6	0.118
grafo3854.46	46	65	5	0.013

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3855.60	60	78	6	0.197
grafo3856.38	38	56	6	0.012
grafo3857.39	39	51	4	0.004
grafo3858.54	54	68	6	0.076
grafo3859.39	39	53	5	0.01
grafo3860.42	42	47	4	0.004
grafo3861.99	99	140	9	70.15
grafo3862.36	36	41	4	0.003
grafo3863.37	37	43	3	0.003
grafo3864.35	35	42	5	0.006
grafo3865.42	42	56	4	0.005
grafo3866.35	35	43	4	0.003
grafo3867.59	59	80	7	0.261
grafo3868.45	45	51	4	0.006
grafo3869.58	58	73	5	0.056
grafo3870.38	38	54	5	0.004
grafo3872.35	35	42	4	0.004
grafo3873.41	41	51	4	0.004
grafo3874.40	40	46	4	0.005
grafo3875.43	43	49	3	0.003
grafo3876.94	94	123	9	113.0
grafo3877.33	33	51	5	0.006
grafo3878.45	45	55	4	0.004
grafo3879.96	96	130	9	46.03
grafo3880.32	32	41	4	0.003
grafo3881.39	39	61	6	0.009
grafo3882.41	41	52	4	0.005
grafo3883.42	42	65	6	0.017
grafo3884.39	39	56	5	0.005
grafo3885.40	40	51	5	0.006
grafo3886.40	40	52	5	0.008
grafo3887.38	38	52	5	0.005
grafo3888.38	38	53	5	0.007
grafo3889.41	41	55	5	0.007
grafo3890.96	107	135	9	154.6
grafo3891.39	39	49	5	0.009
grafo3892.35	35	41	3	0.003
grafo3893.40	40	44	4	0.005
grafo3894.45	45	57	4	0.005
grafo3895.42	42	55	5	0.01
grafo3896.38	38	50	4	0.004
grafo3897.38	38	48	3	0.003
grafo3899.38	38	54	5	0.005
grafo3900.43	43	60	5	0.015
grafo3901.32	32	38	4	0.003
grafo3902.39	39	53	5	0.006

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3903.59	59	83	7	0.089
grafo3904.57	57	67	5	0.047
grafo3905.36	36	45	4	0.005
grafo3906.49	49	61	4	0.006
grafo3907.33	33	42	4	0.003
grafo3908.41	41	57	6	0.017
grafo3909.92	92	124	9	157.1
grafo3910.41	41	49	4	0.004
grafo3911.34	34	44	4	0.002
grafo3912.54	54	68	5	0.02
grafo3913.43	43	65	7	0.045
grafo3914.42	42	53	4	0.005
grafo3915.38	38	44	4	0.004
grafo3916.40	40	51	5	0.008
grafo3917.38	38	58	6	0.015
grafo3918.42	42	56	4	0.005
grafo3919.38	38	53	5	0.004
grafo3920.39	39	47	3	0.004
grafo3921.34	34	46	5	0.005
grafo3922.39	39	50	4	0.004
grafo3923.35	35	45	5	0.005
grafo3924.44	44	53	4	0.005
grafo3925.65	65	91	8	2.181
grafo3926.54	54	69	6	0.144
grafo3927.45	45	55	5	0.015
grafo3928.44	44	52	4	0.005
grafo3929.62	62	76	5	0.05
grafo3930.37	37	43	3	0.002
grafo3931.37	37	47	6	0.023
grafo3932.38	38	48	4	0.004
grafo3933.43	43	57	6	0.023
grafo3934.44	44	57	5	0.01
grafo3935.64	64	85	7	1.237
grafo3936.39	39	58	5	0.005
grafo3937.58	58	70	4	0.008
grafo3938.43	43	53	5	0.013
grafo3939.39	39	50	4	0.005
grafo3940.41	41	59	5	0.008
grafo3941.40	40	48	4	0.005
grafo3942.40	40	50	4	0.005
grafo3943.51	51	70	6	0.035
grafo3944.39	39	54	5	0.005
grafo3945.59	59	73	6	0.183
grafo3946.37	37	47	4	0.004
grafo3947.43	43	63	6	0.016
grafo3948.47	47	66	7	0.103

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3949.53	53	74	7	0.194
grafo3950.55	55	74	6	0.047
grafo3951.39	39	58	5	0.008
grafo3952.33	33	39	4	0.004
grafo3953.36	36	48	4	0.004
grafo3954.37	37	51	4	0.003
grafo3955.55	55	72	6	0.105
grafo3956.38	38	54	5	0.007
grafo3957.57	57	80	7	0.273
grafo3958.51	51	62	5	0.015
grafo3959.42	42	50	4	0.005
grafo3960.36	36	41	3	0.004
grafo3961.70	70	96	7	0.921
grafo3962.39	39	50	4	0.003
grafo3963.47	47	57	5	0.031
grafo3964.38	38	48	4	0.004
grafo3965.57	57	70	5	0.028
grafo3966.38	38	42	3	0.003
grafo3967.59	59	87	8	1.011
grafo3968.38	38	45	3	0.003
grafo3969.54	54	70	5	0.015
grafo3970.56	56	77	7	0.24
grafo3971.44	44	48	4	0.004
grafo3972.43	43	59	6	0.015
grafo3973.53	53	69	5	0.013
grafo3974.37	37	52	5	0.005
grafo3975.38	38	52	5	0.007
grafo3976.38	38	53	6	0.019
grafo3977.37	37	45	4	0.005
grafo3978.47	47	54	4	0.004
grafo3979.98	98	136	9	61.66
grafo3980.54	54	70	5	0.023
grafo3981.43	43	53	5	0.022
grafo3982.53	53	88	8	0.375
grafo3983.97	97	125	7	8.336
grafo3984.39	39	49	5	0.006
grafo3985.34	34	39	3	0.003
grafo3986.40	40	57	6	0.012
grafo3987.40	40	56	5	0.007
grafo3988.43	43	57	5	0.011
grafo3989.43	43	56	5	0.006
grafo3990.39	39	46	3	0.004
grafo3991.57	57	81	7	0.203
grafo3992.44	44	61	6	0.055
grafo3993.52	52	82	8	0.16
grafo3994.39	39	52	4	0.005

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo3996.35	35	47	5	0.005
grafo3997.40	40	56	5	0.007
grafo3998.48	48	56	3	0.004
grafo3999.42	42	61	7	0.094
grafo4000.35	35	41	4	0.002
grafo4001.41	41	51	4	0.005
grafo4002.55	55	82	8	0.359
grafo4003.53	53	72	6	0.032
grafo4004.41	41	48	4	0.004
grafo4005.39	39	52	5	0.005
grafo4006.54	54	64	4	0.006
grafo4007.37	37	47	5	0.005
grafo4008.62	62	79	6	0.123
grafo4009.43	43	55	5	0.009
grafo4010.40	40	52	4	0.004
grafo4011.48	48	62	5	0.011
grafo4012.49	49	65	6	0.027
grafo4013.38	38	49	5	0.007
grafo4014.43	43	60	5	0.007
grafo4015.47	47	66	5	0.012
grafo4016.54	54	65	4	0.008
grafo4017.44	44	60	6	0.036
grafo4018.48	48	60	4	0.005
grafo4019.40	40	46	3	0.003
grafo4020.40	40	50	4	0.005
grafo4021.40	40	51	4	0.004
grafo4022.44	44	63	5	0.006
grafo4023.43	43	62	6	0.015
grafo4024.42	42	55	5	0.012
grafo4025.52	52	74	8	0.372
grafo4026.43	43	55	5	0.011
grafo4027.45	45	54	4	0.005
grafo4028.39	39	44	3	0.003
grafo4029.34	34	40	3	0.003
grafo4030.52	52	65	5	0.021
grafo4031.41	41	62	6	0.011
grafo4032.42	42	51	4	0.006
grafo4033.42	42	64	6	0.01
grafo4034.40	40	47	4	0.004
grafo4035.40	40	54	5	0.009
grafo4036.45	45	52	3	0.003
grafo4037.35	35	40	3	0.003
grafo4038.40	40	53	5	0.005
grafo4039.60	60	90	9	3.191
grafo4040.30	30	36	3	0.003
grafo4041.57	57	66	5	0.282

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4042.43	43	47	3	0.004
grafo4043.37	37	47	4	0.004
grafo4044.52	52	71	6	0.03
grafo4045.42	42	56	5	0.007
grafo4046.49	49	67	5	0.011
grafo4047.41	41	48	3	0.004
grafo4048.38	38	46	4	0.004
grafo4049.37	37	51	5	0.007
grafo4050.35	35	43	4	0.004
grafo4051.37	37	54	4	0.003
grafo4052.41	41	56	5	0.012
grafo4053.43	43	58	6	0.023
grafo4054.40	40	53	4	0.003
grafo4055.43	43	61	5	0.007
grafo4056.37	37	50	5	0.006
grafo4057.43	43	46	3	0.003
grafo4058.37	37	42	3	0.003
grafo4059.48	48	64	5	0.031
grafo4060.39	39	50	5	0.008
grafo4061.39	39	47	4	0.004
grafo4062.56	56	87	7	0.191
grafo4063.45	45	69	7	0.044
grafo4064.59	59	70	4	0.007
grafo4065.39	39	47	4	0.006
grafo4066.39	39	53	5	0.004
grafo4067.44	44	54	4	0.005
grafo4068.38	38	49	5	0.006
grafo4069.50	50	64	5	0.011
grafo4070.36	36	43	4	0.003
grafo4071.43	43	60	6	0.023
grafo4072.44	44	51	4	0.007
grafo4073.40	40	42	2	0.003
grafo4074.42	42	54	5	0.009
grafo4075.52	52	66	6	0.037
grafo4076.48	48	61	4	0.009
grafo4077.40	40	51	4	0.005
grafo4078.49	49	69	6	0.04
grafo4079.53	53	62	5	0.037
grafo4080.37	37	57	6	0.007
grafo4081.40	40	46	4	0.005
grafo4082.60	60	81	7	0.256
grafo4083.57	57	78	6	0.036
grafo4084.41	41	56	4	0.004
grafo4085.35	35	51	5	0.005
grafo4086.46	46	55	5	0.008
grafo4087.65	65	94	7	0.638

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4088.45	45	56	5	0.01
grafo4089.57	57	80	7	0.292
grafo4090.43	43	62	5	0.005
grafo4091.99	99	136	8	40.87
grafo4092.38	38	49	5	0.007
grafo4093.39	39	56	6	0.015
grafo4094.40	40	51	4	0.004
grafo4095.56	56	79	6	0.049
grafo4096.42	42	65	6	0.01
grafo4097.39	39	55	6	0.013
grafo4098.39	39	45	3	0.003
grafo4099.39	39	39	3	0.003
grafo4100.56	56	75	6	0.05
grafo4102.42	42	62	6	0.026
grafo4103.52	52	65	4	0.008
grafo4104.39	39	55	5	0.008
grafo4105.40	40	43	3	0.004
grafo4106.62	62	79	6	0.097
grafo4107.37	37	49	5	0.007
grafo4108.41	41	52	5	0.009
grafo4109.51	51	75	7	0.136
grafo4110.38	38	52	4	0.003
grafo4111.35	35	50	5	0.003
grafo4112.34	34	40	3	0.003
grafo4113.59	59	84	7	0.189
grafo4114.58	58	81	6	0.127
grafo4115.57	57	80	7	0.187
grafo4116.60	60	88	8	1.282
grafo4117.56	56	73	7	0.639
grafo4118.66	66	79	5	0.059
grafo4119.80	80	114	9	38.73
grafo4120.76	76	99	7	0.772
grafo4121.65	65	81	7	0.787
grafo4122.55	55	80	6	0.052
grafo4123.77	77	108	7	1.29
grafo4124.59	59	82	6	0.097
grafo4125.55	55	74	5	0.009
grafo4126.72	72	89	6	0.322
grafo4127.59	59	79	6	0.091
grafo4128.61	61	88	6	0.041
grafo4129.78	78	108	8	4.967
grafo4130.57	57	79	6	0.066
grafo4131.78	78	108	8	5.364
grafo4132.54	54	66	4	0.007
grafo4133.58	58	89	8	0.607
grafo4134.57	57	84	6	0.05

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4135.68	68	96	8	1.204
grafo4136.63	63	98	8	0.394
grafo4137.82	82	117	9	29.47
grafo4138.60	60	83	7	0.246
grafo4139.64	64	85	6	0.131
grafo4140.54	54	67	5	0.017
grafo4141.64	64	79	6	0.171
grafo4142.53	53	74	6	0.038
grafo4143.60	60	72	4	0.007
grafo4144.83	83	110	7	1.667
grafo4145.57	57	72	4	0.006
grafo4146.50	50	61	5	0.014
grafo4147.81	81	107	9	27.83
grafo4148.78	78	105	8	4.289
grafo4149.60	60	80	5	0.015
grafo4150.64	64	93	7	0.298
grafo4151.58	58	75	5	0.016
grafo4152.70	70	90	5	0.036
grafo4153.67	67	94	7	0.38
grafo4154.51	51	65	5	0.014
grafo4155.63	63	73	4	0.009
grafo4156.75	75	102	6	0.235
grafo4157.67	67	87	6	0.124
grafo4158.77	77	113	9	8.182
grafo4159.50	50	66	5	0.01
grafo4160.51	51	70	6	0.042
grafo4161.55	55	73	6	0.04
grafo4162.63	63	81	6	0.093
grafo4163.70	70	96	7	1.444
grafo4164.51	51	65	5	0.014
grafo4165.61	61	82	5	0.02
grafo4166.53	53	66	4	0.009
grafo4167.53	53	69	6	0.049
grafo4168.76	76	101	8	8.858
grafo4169.83	83	113	8	10.03
grafo4170.58	58	72	6	0.064
grafo4171.57	57	80	6	0.047
grafo4172.58	58	71	4	0.007
grafo4173.61	61	96	8	1.629
grafo4174.76	76	98	7	0.962
grafo4175.56	56	73	6	0.143
grafo4176.81	81	102	7	6.609
grafo4177.57	57	76	6	0.048
grafo4178.74	74	99	7	0.558
grafo4179.79	79	100	7	2.619
grafo4180.57	57	82	7	0.157

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4181.61	61	78	6	0.137
grafo4182.64	64	91	7	0.237
grafo4183.60	60	77	5	0.016
grafo4184.78	78	109	9	15.44
grafo4185.54	54	71	6	0.088
grafo4186.57	57	72	5	0.027
grafo4187.75	75	101	6	0.361
grafo4188.58	58	76	5	0.013
grafo4189.62	62	92	8	0.592
grafo4190.61	61	90	9	3.218
grafo4191.61	61	78	5	0.047
grafo4192.70	70	96	7	1.025
grafo4193.74	74	103	7	0.438
grafo4194.63	63	82	6	0.099
grafo4195.55	55	69	4	0.006
grafo4196.78	78	106	8	5.646
grafo4197.71	71	97	8	2.825
grafo4198.59	59	75	5	0.015
grafo4199.64	64	86	7	0.538
grafo4200.78	78	103	8	5.367
grafo4201.74	74	94	6	0.618
grafo4202.83	83	116	7	2.12
grafo4203.75	75	105	8	2.377
grafo4204.74	74	99	6	0.172
grafo4205.52	52	65	5	0.028
grafo4206.58	58	83	6	0.035
grafo4207.64	64	88	7	0.212
grafo4208.67	67	92	6	0.069
grafo4209.61	61	79	5	0.028
grafo4210.53	53	70	6	0.05
grafo4211.53	53	72	5	0.016
grafo4212.55	55	69	5	0.015
grafo4213.71	71	94	6	0.182
grafo4214.58	58	82	7	0.338
grafo4215.62	62	85	6	0.164
grafo4216.53	53	79	6	0.023
grafo4217.54	54	75	5	0.012
grafo4218.55	55	67	5	0.033
grafo4219.64	64	75	5	0.03
grafo4220.78	78	98	7	1.586
grafo4221.55	55	69	4	0.007
grafo4222.48	48	62	4	0.006
grafo4223.59	59	85	7	0.243
grafo4224.66	66	95	6	0.108
grafo4225.78	78	106	8	5.528
grafo4226.76	76	96	6	0.562

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4227.60	60	74	5	0.028
grafo4228.58	58	81	5	0.015
grafo4229.60	60	79	5	0.03
grafo4230.52	52	73	6	0.045
grafo4231.62	62	83	7	0.28
grafo4232.54	54	60	4	0.007
grafo4233.75	75	105	8	2.737
grafo4234.78	78	107	7	0.551
grafo4235.57	57	88	8	0.29
grafo4236.72	72	103	8	1.425
grafo4237.62	62	88	6	0.068
grafo4238.64	64	85	7	2.055
grafo4239.61	61	76	5	0.048
grafo4240.61	61	82	6	0.04
grafo4241.63	63	89	6	0.048
grafo4242.51	51	70	6	0.055
grafo4243.78	78	102	8	5.648
grafo4244.61	61	89	6	0.059
grafo4245.62	62	84	5	0.023
grafo4246.62	62	88	6	0.077
grafo4247.82	82	115	8	10.44
grafo4248.62	62	81	6	0.215
grafo4249.63	63	85	6	0.074
grafo4250.65	65	79	5	0.025
grafo4251.61	61	90	8	0.639
grafo4252.59	59	83	7	0.237
grafo4253.75	75	100	7	0.737
grafo4254.77	77	110	7	1.432
grafo4255.53	53	68	5	0.025
grafo4256.56	56	75	5	0.023
grafo4257.81	81	107	7	3.94
grafo4258.58	58	76	6	0.062
grafo4259.64	64	87	7	0.648
grafo4260.77	77	100	6	0.528
grafo4261.61	61	90	6	0.126
grafo4262.77	77	106	8	4.602
grafo4263.63	63	77	5	0.015
grafo4264.78	78	111	9	14.24
grafo4265.54	54	70	5	0.024
grafo4266.56	56	85	8	0.539
grafo4267.52	52	71	6	0.093
grafo4268.52	52	65	4	0.01
grafo4269.61	61	93	8	1.126
grafo4270.69	69	81	5	0.062
grafo4271.73	73	91	6	0.364
grafo4272.76	76	98	6	0.226

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4273.73	73	90	5	0.045
grafo4274.75	75	101	7	1.748
grafo4275.56	56	76	6	0.056
grafo4276.75	75	96	7	3.205
grafo4277.59	59	79	6	0.068
grafo4278.55	55	65	4	0.007
grafo4279.57	57	71	5	0.021
grafo4280.58	58	75	6	0.059
grafo4281.59	59	76	6	0.096
grafo4282.77	77	110	8	1.254
grafo4283.56	56	74	6	0.06
grafo4284.72	72	100	8	1.769
grafo4285.58	58	72	5	0.021
grafo4286.74	74	111	10	28.06
grafo4287.76	76	101	7	1.247
grafo4288.64	64	81	6	0.107
grafo4289.79	79	105	7	2.221
grafo4290.66	66	84	6	0.21
grafo4291.59	59	78	6	0.085
grafo4292.75	75	103	8	1.293
grafo4293.62	62	77	4	0.007
grafo4294.85	85	107	6	0.751
grafo4295.64	64	83	6	0.21
grafo4296.55	55	68	5	0.026
grafo4297.79	79	117	9	24.22
grafo4298.73	73	91	6	0.258
grafo4299.55	55	79	7	0.083
grafo4300.60	60	82	6	0.115
grafo4301.63	63	87	7	1.476
grafo4302.60	60	78	5	0.022
grafo4303.74	74	94	6	0.144
grafo4304.56	56	65	4	0.013
grafo4305.80	80	104	7	1.572
grafo4306.56	56	63	3	0.004
grafo4307.64	64	79	6	0.161
grafo4308.61	61	80	6	0.069
grafo4309.54	54	88	8	0.461
grafo4310.74	74	109	9	7.239
grafo4311.79	79	118	9	18.61
grafo4312.62	62	74	5	0.026
grafo4313.61	61	89	8	0.355
grafo4314.67	67	102	9	5.68
grafo4315.59	59	80	7	0.31
grafo4316.77	77	99	6	0.474
grafo4317.77	77	102	6	0.228
grafo4318.55	55	81	6	0.032

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4319.61	61	85	5	0.018
grafo4320.67	67	85	7	0.781
grafo4321.81	81	100	7	5.5
grafo4322.56	56	78	6	0.081
grafo4323.78	78	100	6	0.427
grafo4324.78	78	105	6	0.318
grafo4325.55	55	72	5	0.022
grafo4326.73	73	97	7	0.517
grafo4327.65	65	77	5	0.039
grafo4328.51	51	66	5	0.009
grafo4329.54	54	68	5	0.021
grafo4330.58	58	72	5	0.046
grafo4331.61	61	78	5	0.029
grafo4332.54	54	69	5	0.019
grafo4333.81	81	99	6	0.654
grafo4334.48	48	65	4	0.006
grafo4335.60	60	87	7	0.495
grafo4337.68	68	95	7	0.623
grafo4338.71	71	98	7	0.691
grafo4339.55	55	67	4	0.01
grafo4340.53	53	69	5	0.012
grafo4341.56	56	73	5	0.013
grafo4342.60	60	76	6	0.08
grafo4343.79	79	109	8	3.494
grafo4344.52	52	69	5	0.017
grafo4345.61	61	83	7	0.382
grafo4346.54	54	80	7	0.124
grafo4347.77	77	101	7	5.239
grafo4348.83	83	124	10	123.1
grafo4349.65	65	85	6	0.143
grafo4350.80	80	106	8	6.415
grafo4351.63	63	78	5	0.02
grafo4352.57	57	67	5	0.02
grafo4353.77	77	100	7	2.473
grafo4354.76	76	106	8	10.57
grafo4355.75	75	101	6	0.154
grafo4356.55	55	73	6	0.059
grafo4357.55	55	74	5	0.024
grafo4358.55	55	87	7	0.07
grafo4359.62	62	83	6	0.116
grafo4360.78	78	101	6	0.461
grafo4361.58	58	90	9	0.973
grafo4362.83	83	113	8	8.506
grafo4363.77	77	102	7	3.032
grafo4364.61	61	95	9	0.893
grafo4365.77	77	107	8	3.794

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4366.55	55	75	6	0.051
grafo4367.55	55	72	6	0.032
grafo4368.64	64	82	6	0.156
grafo4369.51	51	67	5	0.021
grafo4370.80	80	112	8	3.415
grafo4371.71	71	96	7	1.291
grafo4372.50	50	62	5	0.024
grafo4373.60	60	82	7	0.486
grafo4374.52	52	73	6	0.055
grafo4375.53	53	63	4	0.007
grafo4376.60	60	73	5	0.037
grafo4377.65	65	82	6	0.138
grafo4378.79	79	103	7	1.271
grafo4379.76	76	101	7	0.473
grafo4380.49	49	64	4	0.005
grafo4381.82	82	120	9	7.011
grafo4382.58	58	72	4	0.006
grafo4383.75	75	105	9	10.58
grafo4384.64	64	88	7	1.015
grafo4385.64	64	85	7	0.409
grafo4386.59	59	73	5	0.017
grafo4387.57	57	77	6	0.125
grafo4388.81	81	118	8	1.614
grafo4389.63	63	87	8	0.795
grafo4390.59	59	89	7	0.15
grafo4391.56	56	70	5	0.016
grafo4392.61	61	75	7	0.199
grafo4393.77	77	97	6	0.481
grafo4394.55	55	76	6	0.041
grafo4395.79	79	123	9	14.84
grafo4396.63	63	83	6	0.104
grafo4397.74	74	104	7	0.733
grafo4398.57	57	71	5	0.023
grafo4399.61	61	76	5	0.021
grafo4400.56	56	86	8	0.432
grafo4401.57	57	86	8	1.073
grafo4402.84	84	103	6	0.637
grafo4403.57	57	79	7	0.165
grafo4404.66	66	81	5	0.061
grafo4405.77	77	101	7	0.862
grafo4406.73	73	98	6	0.533
grafo4407.55	55	70	4	0.008
grafo4408.69	69	91	7	1.185
grafo4409.56	56	67	4	0.01
grafo4410.78	78	111	8	5.443
grafo4411.64	64	79	5	0.039

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4412.61	61	77	6	0.115
grafo4413.64	64	87	6	0.086
grafo4414.66	66	91	7	0.362
grafo4415.56	56	70	5	0.021
grafo4416.56	56	70	6	0.087
grafo4417.65	65	90	7	1.143
grafo4418.53	53	63	5	0.035
grafo4419.61	61	80	6	0.083
grafo4420.64	64	81	6	0.123
grafo4421.60	60	73	5	0.023
grafo4422.71	71	97	7	0.47
grafo4423.77	77	96	6	0.573
grafo4424.56	56	74	6	0.067
grafo4425.50	50	68	5	0.011
grafo4426.55	55	72	6	0.127
grafo4427.57	57	79	7	0.421
grafo4428.64	64	90	7	0.281
grafo4429.79	79	105	8	5.069
grafo4430.72	72	99	7	1.351
grafo4431.62	62	80	7	0.525
grafo4432.78	78	105	7	0.821
grafo4433.61	61	79	7	0.299
grafo4434.57	57	80	7	0.22
grafo4435.54	54	69	5	0.013
grafo4436.60	60	78	5	0.032
grafo4437.80	80	111	9	50.14
grafo4438.55	55	66	5	0.032
grafo4439.80	80	102	6	1.763
grafo4440.63	63	86	6	0.073
grafo4441.61	61	75	5	0.023
grafo4442.84	84	109	7	2.577
grafo4443.60	60	83	6	0.043
grafo4444.52	52	73	6	0.058
grafo4445.59	59	81	6	0.067
grafo4446.60	60	82	6	0.116
grafo4447.61	61	75	5	0.022
grafo4449.75	75	104	7	0.925
grafo4450.70	70	93	6	0.142
grafo4451.51	51	72	6	0.028
grafo4452.57	57	76	5	0.019
grafo4453.57	57	72	6	0.127
grafo4454.68	68	96	7	0.574
grafo4455.60	60	93	9	0.713
grafo4456.58	58	74	5	0.013
grafo4457.74	74	88	5	0.105
grafo4458.63	63	87	7	5.209

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4459.77	77	110	8	5.96
grafo4460.55	55	68	5	0.014
grafo4461.59	59	79	6	0.06
grafo4462.57	57	67	4	0.008
grafo4463.59	59	76	6	0.081
grafo4464.59	59	79	5	0.033
grafo4465.55	55	84	8	0.558
grafo4466.66	66	102	9	2.519
grafo4467.54	54	69	5	0.011
grafo4468.50	50	78	7	0.082
grafo4469.62	62	77	6	0.116
grafo4470.73	73	95	7	0.722
grafo4471.77	77	107	8	2.016
grafo4472.68	68	90	6	0.108
grafo4473.48	48	61	4	0.007
grafo4474.68	68	99	9	9.848
grafo4475.55	55	67	5	0.017
grafo4476.68	68	95	7	0.481
grafo4477.76	76	103	7	0.636
grafo4478.64	64	83	5	0.039
grafo4479.68	68	90	6	0.214
grafo4480.64	64	88	8	2.205
grafo4481.77	77	121	10	21.84
grafo4482.61	61	76	5	0.034
grafo4483.61	61	79	5	0.021
grafo4484.76	76	101	7	0.663
grafo4485.61	61	85	5	0.016
grafo4486.53	53	70	6	0.038
grafo4487.62	62	86	8	0.93
grafo4488.54	54	69	6	0.045
grafo4489.77	77	107	8	12.25
grafo4490.65	65	96	7	0.333
grafo4491.61	61	79	6	0.149
grafo4492.76	76	102	5	0.065
grafo4493.76	76	113	10	23.71
grafo4494.62	62	78	6	0.416
grafo4495.63	63	94	8	1.989
grafo4496.56	56	79	6	0.061
grafo4497.61	61	82	6	0.1
grafo4498.77	77	105	8	5.789
grafo4499.55	55	72	5	0.018
grafo4500.77	77	101	6	0.338
grafo4501.60	60	72	4	0.009
grafo4502.55	55	76	6	0.042
grafo4503.59	59	82	7	0.279
grafo4504.62	62	88	8	0.713

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4505.53	53	69	6	0.048
grafo4506.55	55	68	5	0.026
grafo4507.80	80	123	10	68.49
grafo4508.60	60	77	5	0.02
grafo4509.64	64	83	6	0.178
grafo4510.55	55	75	5	0.02
grafo4511.77	77	103	8	9.343
grafo4512.60	60	73	5	0.038
grafo4513.53	53	70	5	0.013
grafo4514.66	66	81	6	0.22
grafo4515.62	62	78	6	0.082
grafo4516.59	59	79	6	0.072
grafo4517.80	80	112	8	8.137
grafo4518.50	50	66	5	0.016
grafo4519.75	75	98	5	0.05
grafo4520.66	66	84	6	0.136
grafo4521.66	66	92	7	0.969
grafo4522.81	81	94	5	0.091
grafo4523.74	74	93	7	1.321
grafo4524.82	82	118	9	23.05
grafo4525.72	72	96	7	0.731
grafo4526.66	66	91	7	0.27
grafo4527.64	64	80	4	0.009
grafo4528.55	55	67	4	0.007
grafo4529.77	77	107	8	3.777
grafo4530.54	54	76	7	0.199
grafo4531.78	78	109	9	13.86
grafo4532.63	63	73	4	0.008
grafo4533.77	77	105	8	8.77
grafo4534.81	81	101	7	1.8
grafo4535.52	52	67	5	0.021
grafo4536.83	83	102	6	0.357
grafo4537.75	75	106	7	0.411
grafo4538.62	62	85	7	0.493
grafo4539.64	64	86	6	0.077
grafo4540.54	54	66	4	0.005
grafo4541.61	61	80	5	0.04
grafo4542.59	59	80	7	0.709
grafo4543.84	84	111	7	1.431
grafo4544.82	82	104	6	2.004
grafo4545.80	80	114	7	1.709
grafo4546.59	59	74	6	0.078
grafo4547.64	64	88	8	2.072
grafo4548.60	60	72	5	0.014
grafo4549.60	60	79	5	0.027
grafo4550.65	65	91	7	0.781

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4551.61	61	77	6	0.067
grafo4552.78	78	108	8	6.822
grafo4553.62	62	88	8	1.725
grafo4554.77	77	100	6	1.286
grafo4555.77	77	99	7	1.714
grafo4556.52	52	68	5	0.02
grafo4557.60	60	74	5	0.037
grafo4558.70	70	92	6	0.09
grafo4559.65	65	93	8	1.027
grafo4561.62	62	82	6	0.066
grafo4562.60	60	79	7	0.4
grafo4563.64	64	87	6	0.161
grafo4564.72	72	97	6	0.102
grafo4565.56	56	71	5	0.016
grafo4566.62	62	85	8	2.897
grafo4567.51	51	64	4	0.006
grafo4568.80	80	115	8	5.535
grafo4569.58	58	78	6	0.047
grafo4570.72	72	90	6	0.378
grafo4571.54	54	76	6	0.042
grafo4572.74	74	98	7	1.701
grafo4573.57	57	82	7	0.33
grafo4574.77	77	103	8	7.615
grafo4575.60	60	77	6	0.134
grafo4576.71	71	92	6	0.165
grafo4577.51	51	68	6	0.027
grafo4578.63	63	80	6	0.095
grafo4579.53	53	65	5	0.024
grafo4580.50	50	63	5	0.015
grafo4581.67	67	82	5	0.051
grafo4582.64	64	83	5	0.037
grafo4583.59	59	80	7	0.315
grafo4584.64	64	89	7	0.151
grafo4585.66	66	85	6	0.166
grafo4586.80	80	111	8	5.247
grafo4587.72	72	96	7	0.98
grafo4588.56	56	74	6	0.078
grafo4589.73	73	99	6	0.099
grafo4590.54	54	72	6	0.032
grafo4591.59	59	83	6	0.048
grafo4592.56	56	71	6	0.055
grafo4593.62	62	76	5	0.02
grafo4594.79	79	104	7	0.99
grafo4595.77	77	95	5	0.033
grafo4596.59	59	83	7	0.068
grafo4597.55	55	60	4	0.007

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4598.61	61	79	7	0.328
grafo4599.73	73	85	5	0.089
grafo4600.51	51	62	4	0.006
grafo4601.56	56	71	6	0.124
grafo4602.51	51	64	4	0.006
grafo4603.50	50	69	5	0.01
grafo4604.78	78	106	8	4.003
grafo4605.58	58	84	7	0.164
grafo4606.64	64	82	6	0.082
grafo4607.82	82	108	8	9.182
grafo4608.83	83	114	9	36.83
grafo4609.65	65	98	8	0.602
grafo4610.82	82	109	7	1.502
grafo4611.59	59	81	7	0.463
grafo4612.61	61	94	7	0.241
grafo4613.77	77	120	10	47.18
grafo4614.76	76	102	8	3.297
grafo4615.59	59	75	5	0.017
grafo4616.61	61	81	6	0.201
grafo4617.76	76	108	9	28.72
grafo4618.80	80	104	8	9.956
grafo4619.63	63	87	7	0.891
grafo4620.60	60	75	4	0.009
grafo4621.56	56	67	5	0.021
grafo4622.48	48	59	4	0.005
grafo4623.70	70	101	8	0.853
grafo4624.53	53	64	4	0.006
grafo4625.66	66	85	6	0.118
grafo4626.80	80	99	7	13.76
grafo4627.53	53	72	6	0.087
grafo4628.59	59	80	6	0.045
grafo4629.64	64	90	7	0.617
grafo4630.64	64	79	5	0.037
grafo4631.63	63	96	8	0.489
grafo4632.77	77	109	8	3.522
grafo4633.65	65	83	7	0.446
grafo4634.61	61	87	7	0.377
grafo4635.67	67	79	5	0.063
grafo4636.82	82	117	8	7.712
grafo4637.63	63	85	7	0.722
grafo4638.68	68	98	8	1.7
grafo4639.82	82	107	7	1.56
grafo4640.75	75	103	8	9.3
grafo4641.79	79	104	7	3.305
grafo4642.63	63	84	7	0.426
grafo4643.71	71	96	6	0.091

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4644.84	84	121	9	12.2
grafo4645.54	54	66	4	0.005
grafo4646.62	62	78	5	0.043
grafo4647.62	62	89	7	0.113
grafo4648.59	59	74	6	0.113
grafo4649.85	85	112	9	52.44
grafo4650.76	76	110	7	0.83
grafo4651.56	56	76	6	0.101
grafo4652.74	74	99	7	3.612
grafo4653.62	62	95	8	0.379
grafo4654.74	74	109	7	0.987
grafo4655.56	56	80	6	0.044
grafo4656.66	66	81	6	0.171
grafo4657.79	79	113	8	2.633
grafo4658.76	76	109	8	4.408
grafo4659.59	59	79	5	0.01
grafo4660.63	63	88	7	0.425
grafo4661.55	55	69	5	0.029
grafo4662.50	50	63	4	0.005
grafo4663.70	70	104	8	1.547
grafo4664.63	63	77	5	0.061
grafo4665.76	76	109	7	0.556
grafo4666.56	56	75	5	0.027
grafo4667.55	55	72	5	0.011
grafo4668.61	61	90	7	0.169
grafo4669.75	75	96	6	0.286
grafo4670.58	58	74	6	0.076
grafo4671.62	62	84	6	0.094
grafo4672.76	76	119	8	0.728
grafo4674.75	75	113	9	9.053
grafo4675.55	55	83	7	0.186
grafo4676.64	64	91	6	0.073
grafo4677.52	52	72	6	0.046
grafo4678.58	58	75	5	0.013
grafo4679.63	63	87	7	0.684
grafo4680.76	76	96	6	0.375
grafo4681.63	63	79	5	0.031
grafo4682.55	55	70	5	0.057
grafo4683.75	75	87	6	0.847
grafo4684.63	63	82	6	0.041
grafo4685.56	56	71	5	0.044
grafo4686.65	65	85	7	0.959
grafo4687.79	79	111	9	27.78
grafo4688.59	59	76	6	0.084
grafo4689.59	59	71	4	0.009
grafo4690.61	61	83	6	0.092

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4691.62	62	85	6	0.1
grafo4692.76	76	101	7	0.567
grafo4693.63	63	82	6	0.121
grafo4694.76	76	110	9	2.708
grafo4695.62	62	85	6	0.094
grafo4696.80	80	121	9	4.172
grafo4697.59	59	77	7	0.333
grafo4698.55	55	74	5	0.014
grafo4699.55	55	78	6	0.084
grafo4700.57	57	76	5	0.018
grafo4701.54	54	67	5	0.019
grafo4702.63	63	89	8	3.778
grafo4703.78	78	108	7	1.042
grafo4704.60	60	88	7	0.171
grafo4705.64	64	74	4	0.011
grafo4706.58	58	83	7	0.292
grafo4707.54	54	75	6	0.087
grafo4708.76	76	91	5	0.085
grafo4709.70	70	97	7	0.449
grafo4710.78	78	110	9	12.9
grafo4711.65	65	85	7	0.511
grafo4712.64	64	85	6	0.153
grafo4713.61	61	88	8	0.528
grafo4714.62	62	80	5	0.06
grafo4715.62	62	76	5	0.036
grafo4716.53	53	76	7	0.11
grafo4717.59	59	82	7	0.11
grafo4718.64	64	97	7	0.24
grafo4719.54	54	78	7	0.264
grafo4720.81	81	109	8	4.955
grafo4721.77	77	98	6	0.424
grafo4722.64	64	80	5	0.03
grafo4723.58	58	70	5	0.021
grafo4724.75	75	107	9	5.635
grafo4725.75	75	106	9	8.861
grafo4726.51	51	67	5	0.074
grafo4727.66	66	88	7	0.954
grafo4728.51	51	65	4	0.006
grafo4729.63	63	80	7	0.333
grafo4730.58	58	86	6	0.037
grafo4731.63	63	86	7	0.452
grafo4732.74	74	96	7	0.916
grafo4733.73	73	95	6	0.141
grafo4734.49	49	59	5	0.026
grafo4735.80	80	108	8	1.706
grafo4736.52	52	65	5	0.021

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4737.66	66	86	6	0.131
grafo4738.65	65	89	7	0.413
grafo4739.57	57	72	5	0.019
grafo4740.60	60	79	5	0.026
grafo4741.61	61	85	7	0.235
grafo4742.77	77	95	6	0.353
grafo4743.76	76	109	8	5.088
grafo4744.58	58	75	5	0.02
grafo4745.81	81	115	8	5.118
grafo4746.67	67	92	7	0.62
grafo4747.55	55	69	6	0.085
grafo4748.66	66	85	6	0.337
grafo4749.61	61	73	5	0.054
grafo4750.53	53	64	5	0.03
grafo4751.57	57	71	6	0.048
grafo4752.81	81	109	9	26.98
grafo4753.69	69	92	6	0.205
grafo4754.61	61	81	6	0.397
grafo4755.70	70	91	6	0.289
grafo4756.51	51	70	6	0.045
grafo4757.72	72	97	8	5.245
grafo4758.72	72	89	6	0.281
grafo4759.79	79	108	7	2.312
grafo4760.55	55	73	5	0.021
grafo4761.64	64	93	8	0.607
grafo4762.54	54	70	5	0.014
grafo4763.68	68	84	6	0.061
grafo4764.83	83	112	8	9.765
grafo4765.80	80	103	7	3.744
grafo4766.51	51	73	6	0.033
grafo4767.78	78	106	8	4.125
grafo4768.51	51	57	4	0.008
grafo4769.53	53	72	6	0.098
grafo4770.60	60	74	5	0.015
grafo4771.73	73	102	8	1.534
grafo4772.58	58	75	6	0.069
grafo4773.57	57	79	6	0.042
grafo4774.65	65	85	5	0.02
grafo4775.62	62	90	7	0.413
grafo4776.65	65	95	7	0.522
grafo4777.61	61	75	5	0.049
grafo4778.77	77	106	6	0.466
grafo4779.58	58	84	7	0.16
grafo4780.56	56	69	5	0.022
grafo4781.57	57	74	7	0.391
grafo4782.66	66	100	9	5.684

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4783.80	80	107	7	1.813
grafo4785.79	79	109	9	18.98
grafo4786.62	62	81	5	0.042
grafo4787.58	58	72	5	0.042
grafo4788.60	60	75	6	0.106
grafo4789.71	71	94	6	0.228
grafo4790.62	62	85	6	0.213
grafo4791.78	78	99	7	2.334
grafo4792.58	58	69	4	0.012
grafo4793.63	63	86	7	0.48
grafo4794.71	71	101	7	0.475
grafo4795.60	60	93	8	0.289
grafo4796.58	58	73	6	0.244
grafo4797.75	75	105	9	6.106
grafo4798.58	58	78	6	0.071
grafo4799.58	58	76	6	0.092
grafo4800.73	73	89	6	0.257
grafo4801.69	69	95	8	2.83
grafo4802.75	75	98	6	0.156
grafo4803.53	53	70	7	0.407
grafo4804.65	65	83	7	0.634
grafo4805.70	70	88	6	0.284
grafo4806.49	49	63	5	0.01
grafo4807.72	72	91	6	0.181
grafo4808.59	59	78	5	0.015
grafo4809.59	59	80	5	0.027
grafo4810.72	72	88	5	0.04
grafo4811.62	62	79	5	0.026
grafo4812.57	57	75	6	0.09
grafo4813.60	60	74	6	0.141
grafo4814.68	68	90	7	0.618
grafo4815.57	57	69	5	0.037
grafo4816.57	57	77	5	0.054
grafo4817.55	55	80	8	1.548
grafo4818.65	65	84	6	0.059
grafo4819.72	72	97	7	0.565
grafo4820.66	66	100	8	0.872
grafo4821.55	55	79	7	0.288
grafo4822.72	72	100	7	1.231
grafo4823.62	62	76	4	0.01
grafo4824.53	53	69	5	0.011
grafo4825.83	83	110	8	11.91
grafo4826.79	79	102	6	0.2
grafo4827.55	55	73	6	0.063
grafo4828.65	65	88	6	0.136
grafo4829.56	56	69	5	0.022

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4830.72	72	101	8	2.248
grafo4831.56	56	86	8	0.598
grafo4832.59	59	74	5	0.021
grafo4833.83	83	120	10	38.34
grafo4834.74	74	91	6	0.245
grafo4835.59	59	80	6	0.16
grafo4836.56	56	78	6	0.054
grafo4837.77	77	106	7	0.726
grafo4838.58	58	86	6	0.051
grafo4839.63	63	87	7	0.22
grafo4840.59	59	82	5	0.027
grafo4841.67	67	90	6	0.185
grafo4842.58	58	81	7	0.156
grafo4843.53	53	70	6	0.049
grafo4844.58	58	69	4	0.007
grafo4845.79	79	99	7	2.663
grafo4846.62	62	76	5	0.019
grafo4847.56	56	86	8	0.22
grafo4848.65	65	80	5	0.034
grafo4849.54	54	68	4	0.006
grafo4850.55	55	75	7	0.282
grafo4851.58	58	80	7	0.124
grafo4852.58	58	79	6	0.048
grafo4853.49	49	62	4	0.006
grafo4854.57	57	76	5	0.015
grafo4855.77	77	106	8	5.285
grafo4856.60	60	80	5	0.015
grafo4857.62	62	76	5	0.016
grafo4858.74	74	105	7	0.788
grafo4859.59	59	78	5	0.015
grafo4860.54	54	75	6	0.051
grafo4861.55	55	76	7	0.113
grafo4862.51	51	67	5	0.023
grafo4863.61	61	84	6	0.078
grafo4864.58	58	73	5	0.037
grafo4865.80	80	117	9	15.16
grafo4866.78	78	104	8	4.039
grafo4867.57	57	76	6	0.12
grafo4868.78	78	114	9	10.81
grafo4869.50	50	69	5	0.01
grafo4870.75	75	102	8	3.181
grafo4871.53	53	71	5	0.016
grafo4872.60	60	103	10	1.943
grafo4873.56	56	73	5	0.026
grafo4874.52	52	70	5	0.015
grafo4875.78	78	117	9	8.685

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4876.60	60	78	5	0.033
grafo4877.62	62	85	7	0.309
grafo4878.61	61	79	6	0.051
grafo4879.73	73	97	6	0.234
grafo4880.56	56	77	5	0.029
grafo4881.66	66	83	6	0.186
grafo4882.53	53	75	6	0.026
grafo4883.62	62	82	5	0.017
grafo4884.63	63	86	5	0.024
grafo4885.71	71	105	9	4.546
grafo4886.60	60	73	5	0.035
grafo4887.78	78	99	7	2.267
grafo4888.62	62	80	6	0.103
grafo4889.58	58	77	6	0.051
grafo4890.80	80	108	7	1.497
grafo4891.63	63	87	6	0.112
grafo4892.61	61	79	6	0.166
grafo4893.51	51	64	4	0.006
grafo4894.55	55	76	7	0.172
grafo4895.53	53	75	7	0.231
grafo4896.68	68	86	6	0.169
grafo4898.64	64	85	7	1.208
grafo4899.58	58	80	7	0.498
grafo4900.59	59	83	7	0.358
grafo4901.58	58	76	5	0.042
grafo4902.83	83	106	7	2.351
grafo4903.75	75	108	9	4.054
grafo4904.65	65	78	4	0.016
grafo4905.56	56	66	5	0.018
grafo4906.61	61	83	6	0.053
grafo4907.63	63	83	6	0.085
grafo4908.80	80	102	7	3.193
grafo4909.61	61	77	6	0.221
grafo4910.60	60	76	5	0.02
grafo4911.57	57	85	7	0.162
grafo4912.65	65	92	8	0.776
grafo4913.79	79	109	8	4.192
grafo4914.54	54	71	6	0.044
grafo4915.55	55	74	6	0.094
grafo4916.78	78	117	10	14.84
grafo4917.76	76	100	8	5.662
grafo4918.55	55	65	4	0.009
grafo4919.57	57	74	5	0.02
grafo4920.63	63	85	7	0.421
grafo4921.83	83	115	9	20.21
grafo4922.61	61	91	7	0.239

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4923.63	63	72	5	0.095
grafo4924.62	62	84	7	0.22
grafo4925.71	71	89	6	0.383
grafo4926.78	78	103	8	4.142
grafo4927.78	78	96	6	0.786
grafo4928.54	54	72	6	0.225
grafo4929.81	81	99	7	5.659
grafo4930.64	64	87	5	0.029
grafo4931.53	53	64	4	0.007
grafo4932.58	58	87	7	0.387
grafo4933.58	58	67	3	0.005
grafo4934.59	59	72	5	0.054
grafo4935.63	63	77	6	0.497
grafo4936.83	83	112	9	12.24
grafo4937.56	56	81	7	0.162
grafo4938.71	71	94	7	1.408
grafo4939.59	59	71	4	0.007
grafo4940.56	56	72	6	0.123
grafo4941.74	74	95	7	1.137
grafo4942.54	54	77	6	0.033
grafo4943.61	61	74	4	0.01
grafo4944.58	58	78	5	0.032
grafo4945.50	50	69	5	0.008
grafo4946.85	85	120	8	7.384
grafo4947.53	53	66	5	0.013
grafo4948.78	78	104	7	1.213
grafo4949.56	56	66	4	0.006
grafo4950.50	50	64	5	0.022
grafo4951.60	60	80	7	0.162
grafo4952.62	62	78	5	0.021
grafo4953.81	81	114	9	21.46
grafo4954.81	81	101	7	11.51
grafo4955.59	59	73	6	0.26
grafo4956.51	51	59	3	0.003
grafo4957.87	87	107	6	1.825
grafo4958.66	66	81	6	0.176
grafo4959.59	59	69	4	0.007
grafo4960.58	58	79	5	0.013
grafo4961.79	79	100	7	1.667
grafo4962.76	76	105	9	18.28
grafo4963.64	64	82	5	0.018
grafo4964.49	49	63	4	0.006
grafo4965.52	52	68	6	0.047
grafo4966.53	53	66	4	0.005
grafo4967.55	55	66	5	0.018
grafo4968.77	77	97	7	1.162

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo4969.54	54	85	7	0.19
grafo4970.57	57	80	8	1.542
grafo4971.81	81	101	6	0.907
grafo4972.58	58	75	6	0.212
grafo4973.66	66	93	8	0.757
grafo4974.58	58	79	6	0.05
grafo4975.74	74	98	6	0.32
grafo4976.81	81	103	7	3.836
grafo4977.65	65	91	7	0.52
grafo4978.79	79	100	6	0.241
grafo4979.68	68	97	7	0.306
grafo4980.59	59	80	7	0.181
grafo4981.65	65	81	6	0.362
grafo4982.63	63	90	7	0.377
grafo4983.77	77	105	6	0.546
grafo4984.74	74	103	8	2.359
grafo4985.58	58	76	5	0.019
grafo4986.83	83	107	7	3.075
grafo4987.64	64	77	5	0.043
grafo4988.62	62	79	6	0.416
grafo4989.75	75	99	6	0.171
grafo4990.61	61	80	6	0.126
grafo4991.67	67	89	7	0.941
grafo4992.75	75	97	6	0.205
grafo4993.65	65	100	9	2.918
grafo4994.65	65	96	8	1.455
grafo4995.59	59	76	6	0.097
grafo4996.53	53	69	5	0.014
grafo4997.81	81	106	7	5.05
grafo4998.61	61	73	5	0.043
grafo4999.55	55	72	6	0.07
grafo5000.80	80	110	8	4.682
grafo5001.74	74	91	6	0.894
grafo5002.54	54	64	4	0.007
grafo5003.58	58	71	4	0.008
grafo5004.67	67	101	7	0.202
grafo5005.82	82	105	7	5.805
grafo5006.58	58	75	6	0.054
grafo5007.64	64	78	5	0.058
grafo5008.58	58	77	6	0.071
grafo5010.56	56	71	4	0.007
grafo5011.62	62	85	6	0.045
grafo5012.53	53	72	6	0.033
grafo5013.82	82	107	6	0.238
grafo5014.61	61	89	8	1.727
grafo5015.80	80	96	5	0.083

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5016.61	61	77	5	0.017
grafo5017.63	63	89	7	0.162
grafo5018.81	81	102	7	3.395
grafo5019.63	63	80	6	0.171
grafo5020.62	62	89	9	1.962
grafo5021.66	66	84	6	0.111
grafo5022.67	67	103	9	4.086
grafo5023.55	55	78	6	0.07
grafo5024.84	84	116	8	11.55
grafo5025.79	79	110	8	5.085
grafo5026.52	52	70	6	0.07
grafo5027.60	60	85	7	0.484
grafo5028.83	83	117	8	5.638
grafo5029.80	80	108	8	5.102
grafo5030.67	67	95	9	5.339
grafo5031.64	64	95	7	0.343
grafo5032.57	57	69	5	0.286
grafo5033.66	66	88	7	0.768
grafo5034.78	78	92	5	0.088
grafo5035.56	56	71	5	0.02
grafo5036.62	62	84	7	0.422
grafo5037.75	75	97	6	1.048
grafo5038.55	55	73	5	0.018
grafo5039.71	71	96	6	0.146
grafo5040.53	53	72	6	0.037
grafo5041.57	57	63	3	0.005
grafo5042.56	56	72	5	0.024
grafo5043.64	64	84	7	0.726
grafo5044.59	59	84	8	2.188
grafo5045.55	55	76	5	0.016
grafo5046.80	80	108	8	6.397
grafo5047.60	60	92	7	0.126
grafo5048.61	61	80	5	0.034
grafo5049.63	63	88	6	0.051
grafo5050.55	55	69	5	0.02
grafo5051.80	80	116	9	52.54
grafo5052.53	53	77	7	0.109
grafo5053.60	60	86	7	0.173
grafo5054.69	69	102	7	0.274
grafo5055.56	56	77	6	0.047
grafo5056.58	58	77	6	0.055
grafo5057.53	53	68	4	0.006
grafo5058.62	62	92	8	0.543
grafo5059.69	69	100	7	0.697
grafo5060.75	75	99	6	0.411
grafo5061.58	58	71	4	0.008

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5062.64	64	78	5	0.024
grafo5063.78	78	102	6	0.364
grafo5064.58	58	67	3	0.005
grafo5065.60	60	74	5	0.03
grafo5066.51	51	70	5	0.013
grafo5067.64	64	82	5	0.033
grafo5068.63	63	87	7	0.402
grafo5069.64	64	82	6	0.123
grafo5070.52	52	63	4	0.012
grafo5071.56	56	74	6	0.07
grafo5072.64	64	86	8	1.191
grafo5073.78	78	100	7	0.937
grafo5074.73	73	95	8	1.655
grafo5075.58	58	75	5	0.021
grafo5076.78	78	105	7	1.758
grafo5077.56	56	79	7	0.07
grafo5078.49	49	64	5	0.016
grafo5079.64	64	83	7	0.434
grafo5080.79	79	107	6	0.26
grafo5081.55	55	70	4	0.007
grafo5082.60	60	80	7	0.199
grafo5083.59	59	71	5	0.025
grafo5084.62	62	81	5	0.048
grafo5085.81	81	117	7	0.996
grafo5086.83	83	112	8	4.454
grafo5087.77	77	100	6	0.498
grafo5088.54	54	72	6	0.075
grafo5089.56	56	83	7	0.104
grafo5090.76	76	112	9	10.99
grafo5091.53	53	77	7	0.209
grafo5092.52	52	66	5	0.011
grafo5093.80	80	103	5	0.05
grafo5094.70	70	91	6	0.157
grafo5095.62	62	90	7	1.157
grafo5096.60	60	76	6	0.148
grafo5097.71	71	104	9	12.16
grafo5098.58	58	79	7	0.238
grafo5099.78	78	93	5	0.055
grafo5100.67	67	89	7	0.394
grafo5101.78	78	106	7	0.723
grafo5102.51	51	60	4	0.007
grafo5103.53	53	72	6	0.058
grafo5104.57	57	78	7	0.249
grafo5105.52	52	81	6	0.039
grafo5106.73	73	95	6	0.195
grafo5107.67	67	80	4	0.015

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5108.72	72	88	6	1.06
grafo5109.83	83	114	9	12.0
grafo5110.58	58	85	7	0.106
grafo5111.69	69	102	9	5.423
grafo5112.61	61	77	6	0.105
grafo5113.63	63	85	6	0.219
grafo5114.53	53	69	5	0.022
grafo5115.65	65	98	7	0.169
grafo5116.74	74	101	6	0.263
grafo5117.56	56	72	6	0.072
grafo5118.62	62	78	6	0.05
grafo5119.76	76	115	9	3.773
grafo5120.60	60	76	6	0.259
grafo5121.74	74	107	8	1.295
grafo5122.39	39	51	5	0.008
grafo5123.68	68	94	7	0.822
grafo5124.36	36	43	5	0.007
grafo5125.35	35	41	4	0.003
grafo5126.43	43	53	4	0.005
grafo5127.33	33	40	4	0.002
grafo5128.37	37	47	4	0.003
grafo5129.53	53	74	6	0.044
grafo5130.44	44	56	5	0.007
grafo5131.48	48	59	4	0.008
grafo5132.80	80	106	7	2.24
grafo5133.33	33	46	4	0.003
grafo5134.62	62	80	6	0.095
grafo5135.39	39	47	4	0.004
grafo5136.58	58	81	6	0.068
grafo5137.59	59	87	7	0.628
grafo5138.45	45	62	6	0.027
grafo5139.56	56	74	5	0.014
grafo5140.62	62	76	5	0.053
grafo5141.42	42	51	4	0.005
grafo5142.36	36	48	5	0.006
grafo5143.34	34	40	3	0.002
grafo5144.71	71	101	8	1.123
grafo5145.40	40	50	4	0.006
grafo5146.41	41	50	4	0.006
grafo5147.67	67	88	6	0.356
grafo5148.34	34	37	3	0.003
grafo5149.41	41	55	6	0.022
grafo5150.52	52	70	5	0.034
grafo5151.38	38	58	6	0.009
grafo5152.39	39	50	4	0.003
grafo5153.33	33	40	3	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5154.39	39	57	6	0.01
grafo5155.36	36	47	4	0.004
grafo5156.56	56	72	6	0.163
grafo5157.39	39	54	4	0.004
grafo5158.43	43	63	7	0.05
grafo5159.59	59	84	6	0.059
grafo5160.42	42	53	5	0.006
grafo5161.45	45	73	8	0.156
grafo5162.43	43	58	5	0.007
grafo5163.62	62	94	7	0.115
grafo5164.47	47	68	6	0.028
grafo5165.42	42	58	6	0.013
grafo5166.42	42	54	4	0.004
grafo5167.40	40	54	5	0.006
grafo5168.45	45	64	6	0.027
grafo5169.75	75	95	7	1.666
grafo5170.59	59	76	6	0.128
grafo5171.77	77	91	5	0.069
grafo5172.62	62	87	8	1.96
grafo5173.58	58	83	6	0.058
grafo5174.44	44	60	5	0.007
grafo5175.36	36	45	4	0.003
grafo5176.74	74	100	7	0.869
grafo5177.33	33	41	4	0.003
grafo5178.42	42	58	5	0.005
grafo5179.71	71	98	8	3.158
grafo5180.77	77	102	6	0.24
grafo5181.39	39	47	4	0.004
grafo5182.33	33	38	3	0.002
grafo5183.42	42	58	5	0.007
grafo5184.36	36	47	5	0.006
grafo5185.41	41	49	4	0.005
grafo5186.55	55	79	6	0.058
grafo5187.43	43	61	6	0.019
grafo5188.70	70	89	5	0.023
grafo5189.72	72	92	7	1.025
grafo5190.36	36	43	4	0.003
grafo5191.41	41	61	6	0.027
grafo5192.34	34	39	4	0.002
grafo5193.37	37	45	5	0.005
grafo5194.48	48	65	6	0.029
grafo5195.60	60	78	5	0.021
grafo5196.73	73	90	6	0.816
grafo5197.34	34	36	3	0.002
grafo5198.45	45	66	6	0.016
grafo5199.42	42	61	6	0.017

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5200.35	35	43	5	0.007
grafo5201.53	53	66	4	0.006
grafo5202.35	35	40	4	0.003
grafo5203.33	33	41	4	0.003
grafo5204.36	36	49	6	0.011
grafo5205.35	35	42	4	0.003
grafo5206.33	33	43	4	0.003
grafo5207.43	43	66	6	0.008
grafo5208.39	39	51	4	0.004
grafo5209.60	60	81	6	0.095
grafo5210.74	74	93	6	0.208
grafo5211.40	40	54	5	0.008
grafo5212.63	63	78	6	0.373
grafo5213.31	31	37	4	0.003
grafo5214.59	59	80	6	0.1
grafo5215.39	39	43	3	0.003
grafo5216.43	43	57	5	0.009
grafo5217.78	78	100	7	3.79
grafo5218.36	36	44	4	0.005
grafo5219.38	38	47	4	0.004
grafo5220.49	49	64	5	0.011
grafo5221.44	44	57	5	0.017
grafo5222.38	38	43	3	0.003
grafo5223.60	60	83	7	0.605
grafo5224.42	42	58	5	0.005
grafo5225.41	41	52	5	0.009
grafo5226.36	36	46	5	0.007
grafo5227.38	38	48	5	0.006
grafo5228.43	43	56	4	0.006
grafo5229.37	37	53	5	0.005
grafo5230.69	69	101	9	6.762
grafo5231.40	40	56	5	0.006
grafo5232.46	46	63	5	0.011
grafo5233.37	37	47	3	0.003
grafo5234.41	41	51	4	0.004
grafo5235.32	32	38	4	0.003
grafo5236.38	38	43	3	0.003
grafo5237.72	72	98	8	1.359
grafo5238.32	32	37	3	0.003
grafo5239.59	59	84	7	0.442
grafo5240.43	43	58	4	0.005
grafo5241.42	42	55	5	0.017
grafo5242.39	39	49	5	0.007
grafo5243.44	44	61	6	0.033
grafo5244.32	32	38	3	0.002
grafo5245.43	43	59	5	0.016

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5246.83	83	115	8	6.076
grafo5247.33	33	38	3	0.003
grafo5248.36	36	43	4	0.004
grafo5249.56	56	85	7	0.05
grafo5250.42	42	51	5	0.013
grafo5251.58	58	72	5	0.014
grafo5252.38	38	44	4	0.003
grafo5253.41	41	51	4	0.004
grafo5254.45	45	53	4	0.005
grafo5255.47	47	64	5	0.007
grafo5256.38	38	43	4	0.005
grafo5257.38	38	47	4	0.003
grafo5258.36	36	50	5	0.006
grafo5259.40	40	56	5	0.006
grafo5260.35	35	53	5	0.004
grafo5261.72	72	95	7	1.432
grafo5262.37	37	44	4	0.003
grafo5263.75	75	99	8	5.53
grafo5264.36	36	41	3	0.003
grafo5265.40	40	56	6	0.027
grafo5266.81	81	100	6	1.134
grafo5267.43	43	58	5	0.01
grafo5268.43	43	53	4	0.004
grafo5269.42	42	54	5	0.01
grafo5270.35	35	39	4	0.003
grafo5271.39	39	46	4	0.004
grafo5272.54	54	78	6	0.041
grafo5273.41	41	59	5	0.006
grafo5274.35	35	43	4	0.003
grafo5275.37	37	43	4	0.004
grafo5276.34	34	44	5	0.005
grafo5277.44	44	61	5	0.006
grafo5278.39	39	61	7	0.033
grafo5279.78	78	114	9	11.25
grafo5280.75	75	96	7	1.938
grafo5281.61	61	87	7	0.331
grafo5282.58	58	81	6	0.116
grafo5283.38	38	61	7	0.019
grafo5284.39	39	54	6	0.016
grafo5285.76	76	94	7	3.562
grafo5286.37	37	48	4	0.003
grafo5287.61	61	88	8	3.054
grafo5288.36	36	42	4	0.003
grafo5289.37	37	41	3	0.003
grafo5290.38	38	48	4	0.003
grafo5291.37	37	43	4	0.004

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5292.37	37	48	4	0.004
grafo5293.76	76	108	9	18.76
grafo5294.58	58	77	5	0.018
grafo5295.36	36	41	4	0.003
grafo5296.44	44	58	5	0.012
grafo5297.44	44	63	7	0.035
grafo5298.43	43	56	5	0.008
grafo5299.35	35	44	4	0.003
grafo5300.59	59	80	5	0.011
grafo5301.37	37	44	3	0.003
grafo5302.49	49	72	7	0.185
grafo5303.34	34	44	3	0.002
grafo5304.33	33	53	5	0.004
grafo5305.63	63	89	7	0.136
grafo5306.43	43	58	6	0.016
grafo5307.39	39	54	5	0.006
grafo5308.39	39	49	5	0.01
grafo5309.39	39	46	3	0.004
grafo5310.69	69	87	6	0.071
grafo5311.54	54	74	6	0.046
grafo5312.39	39	51	5	0.007
grafo5313.58	58	80	7	0.248
grafo5314.38	38	43	4	0.003
grafo5315.37	37	55	5	0.004
grafo5316.36	36	41	3	0.003
grafo5317.57	57	73	6	0.041
grafo5318.43	43	57	5	0.008
grafo5319.36	36	44	3	0.003
grafo5320.45	45	53	5	0.011
grafo5321.34	34	41	5	0.005
grafo5322.67	67	91	7	0.562
grafo5323.44	44	52	5	0.015
grafo5324.62	62	81	5	0.016
grafo5325.44	44	62	5	0.007
grafo5326.44	44	68	6	0.007
grafo5327.40	40	47	4	0.004
grafo5328.41	41	53	5	0.008
grafo5329.57	57	71	5	0.029
grafo5330.48	48	67	6	0.055
grafo5331.46	46	58	5	0.011
grafo5332.61	61	83	5	0.034
grafo5333.43	43	58	4	0.004
grafo5334.41	41	57	6	0.019
grafo5335.32	32	37	4	0.004
grafo5336.36	36	49	5	0.005
grafo5337.43	43	61	4	0.004

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5338.46	46	62	6	0.025
grafo5339.43	43	54	4	0.005
grafo5340.34	34	47	5	0.005
grafo5341.56	56	79	6	0.029
grafo5342.44	44	60	5	0.014
grafo5343.38	38	44	3	0.003
grafo5344.41	41	52	5	0.006
grafo5345.42	42	55	4	0.005
grafo5346.40	40	44	4	0.005
grafo5347.80	80	95	4	0.022
grafo5348.46	46	64	5	0.009
grafo5349.39	39	53	5	0.006
grafo5350.58	58	74	5	0.038
grafo5351.35	35	51	5	0.003
grafo5352.44	44	70	7	0.056
grafo5353.39	39	45	3	0.003
grafo5354.42	42	57	5	0.007
grafo5355.35	35	41	3	0.002
grafo5356.39	39	49	3	0.003
grafo5357.48	48	64	6	0.03
grafo5358.47	47	75	7	0.05
grafo5359.41	41	59	6	0.032
grafo5360.36	36	44	4	0.004
grafo5361.76	76	107	8	3.425
grafo5362.37	37	45	4	0.003
grafo5363.75	75	101	8	5.888
grafo5364.47	47	58	4	0.006
grafo5365.37	37	46	4	0.004
grafo5366.51	51	72	7	0.199
grafo5367.38	38	47	4	0.003
grafo5368.35	35	45	4	0.004
grafo5369.36	36	44	4	0.003
grafo5370.80	80	111	9	45.39
grafo5371.43	43	57	5	0.008
grafo5372.36	36	47	4	0.004
grafo5373.40	40	58	5	0.006
grafo5374.35	35	41	4	0.003
grafo5375.71	71	93	7	0.55
grafo5376.48	48	68	7	0.158
grafo5377.74	74	109	9	5.21
grafo5378.38	38	46	4	0.005
grafo5379.39	39	43	3	0.003
grafo5380.36	36	45	5	0.007
grafo5381.36	36	45	5	0.006
grafo5382.45	45	62	5	0.009
grafo5383.78	78	106	7	1.079

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5384.58	58	72	4	0.005
grafo5385.36	36	47	4	0.004
grafo5386.66	66	96	7	0.368
grafo5387.34	34	39	3	0.003
grafo5388.36	36	47	5	0.005
grafo5389.58	58	84	7	0.179
grafo5390.37	37	45	4	0.003
grafo5391.74	74	100	7	0.513
grafo5392.37	37	49	4	0.003
grafo5393.73	73	94	6	0.279
grafo5394.40	40	48	4	0.005
grafo5395.33	33	46	5	0.003
grafo5396.59	59	84	6	0.129
grafo5397.41	41	46	3	0.003
grafo5398.82	82	111	9	14.41
grafo5399.35	35	36	3	0.004
grafo5400.74	74	99	8	2.424
grafo5401.74	74	96	7	0.971
grafo5402.43	43	57	5	0.007
grafo5403.58	58	77	6	0.273
grafo5404.44	44	60	5	0.014
grafo5405.45	45	58	5	0.021
grafo5406.62	62	77	5	0.042
grafo5407.39	39	53	5	0.005
grafo5408.37	37	57	6	0.008
grafo5409.36	36	45	5	0.006
grafo5410.36	36	45	4	0.004
grafo5411.77	77	100	8	12.44
grafo5412.78	78	101	7	1.962
grafo5413.77	77	101	8	5.167
grafo5414.41	41	44	3	0.003
grafo5415.62	62	83	6	0.084
grafo5416.33	33	38	4	0.003
grafo5417.44	44	56	5	0.011
grafo5418.61	61	83	6	0.132
grafo5419.35	35	42	4	0.004
grafo5420.41	41	43	3	0.004
grafo5421.34	34	41	4	0.003
grafo5422.44	44	63	6	0.016
grafo5423.76	76	97	7	1.695
grafo5424.34	34	41	4	0.003
grafo5425.56	56	81	6	0.059
grafo5426.40	40	50	5	0.01
grafo5427.38	38	44	3	0.002
grafo5428.44	44	62	6	0.024
grafo5429.36	36	48	5	0.004

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5430.41	41	49	4	0.004
grafo5431.68	68	96	8	0.674
grafo5432.47	47	68	7	0.069
grafo5433.34	34	40	4	0.003
grafo5434.75	75	93	6	0.532
grafo5435.60	60	85	7	0.319
grafo5436.42	42	59	5	0.008
grafo5437.50	50	69	6	0.039
grafo5438.47	47	68	6	0.026
grafo5439.78	78	106	7	4.17
grafo5440.44	44	60	5	0.016
grafo5441.43	43	61	6	0.014
grafo5442.38	38	46	3	0.002
grafo5443.43	43	59	5	0.007
grafo5444.55	55	70	5	0.023
grafo5445.39	39	50	5	0.006
grafo5446.40	40	50	5	0.007
grafo5447.46	46	62	5	0.011
grafo5448.35	35	44	3	0.002
grafo5449.82	82	101	7	7.862
grafo5450.36	36	42	4	0.003
grafo5451.41	41	56	5	0.007
grafo5452.34	34	42	4	0.003
grafo5453.40	40	57	6	0.014
grafo5454.38	38	48	4	0.004
grafo5455.55	55	76	5	0.016
grafo5456.42	42	59	5	0.004
grafo5457.36	36	43	4	0.003
grafo5458.41	41	58	6	0.011
grafo5459.39	39	46	3	0.004
grafo5460.80	80	113	9	5.384
grafo5461.38	38	44	3	0.003
grafo5462.55	55	78	7	0.26
grafo5463.42	42	63	6	0.023
grafo5464.46	46	68	6	0.025
grafo5465.40	40	47	5	0.026
grafo5466.42	42	60	5	0.01
grafo5467.43	43	73	7	0.019
grafo5468.42	42	58	5	0.013
grafo5469.81	81	98	6	1.748
grafo5470.34	34	38	3	0.003
grafo5471.39	39	53	5	0.006
grafo5472.43	43	58	6	0.029
grafo5473.46	46	64	5	0.01
grafo5474.48	48	69	5	0.009
grafo5475.40	40	50	4	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5476.43	43	51	4	0.005
grafo5477.42	42	50	4	0.005
grafo5478.32	32	42	4	0.004
grafo5479.41	41	50	4	0.005
grafo5480.46	46	63	6	0.022
grafo5481.62	62	101	9	1.597
grafo5482.36	36	46	4	0.004
grafo5483.60	60	75	5	0.023
grafo5484.31	31	32	3	0.002
grafo5485.34	34	43	5	0.004
grafo5486.43	43	54	5	0.007
grafo5487.36	36	40	3	0.003
grafo5488.58	58	77	6	0.141
grafo5489.78	78	95	6	0.996
grafo5490.53	53	65	5	0.021
grafo5491.74	74	97	7	0.799
grafo5492.47	47	61	5	0.012
grafo5493.35	35	53	5	0.003
grafo5494.54	54	73	6	0.135
grafo5495.34	34	43	4	0.003
grafo5496.44	44	58	4	0.004
grafo5497.77	77	95	6	0.344
grafo5498.34	34	41	4	0.003
grafo5499.38	38	48	4	0.003
grafo5500.37	37	48	5	0.005
grafo5501.48	48	65	6	0.024
grafo5502.37	37	50	5	0.006
grafo5503.78	78	97	7	2.054
grafo5504.40	40	53	4	0.004
grafo5505.35	35	40	4	0.003
grafo5506.43	43	65	6	0.014
grafo5507.46	46	62	5	0.011
grafo5508.33	33	41	4	0.003
grafo5509.46	46	66	7	0.118
grafo5510.34	34	44	4	0.002
grafo5511.43	43	63	6	0.014
grafo5512.35	35	40	3	0.003
grafo5513.71	71	93	7	0.844
grafo5514.39	39	46	4	0.003
grafo5515.43	43	64	6	0.013
grafo5516.64	64	98	9	5.165
grafo5517.37	37	42	3	0.003
grafo5518.56	56	72	5	0.034
grafo5519.43	43	60	5	0.008
grafo5520.35	35	43	4	0.003
grafo5521.36	36	40	4	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5522.35	35	40	3	0.003
grafo5523.34	34	40	4	0.003
grafo5524.36	36	48	4	0.003
grafo5525.40	40	58	4	0.003
grafo5526.46	46	64	6	0.019
grafo5527.34	34	47	5	0.005
grafo5528.36	36	44	4	0.003
grafo5529.36	36	44	4	0.004
grafo5530.77	77	96	6	0.476
grafo5531.37	37	42	3	0.003
grafo5532.81	81	98	5	0.033
grafo5533.47	47	61	6	0.073
grafo5534.41	41	49	4	0.004
grafo5535.44	44	47	3	0.004
grafo5536.38	38	50	5	0.007
grafo5537.43	43	54	4	0.004
grafo5538.58	58	76	6	0.056
grafo5539.36	36	45	4	0.003
grafo5540.75	75	95	7	1.924
grafo5541.69	69	86	6	0.243
grafo5542.60	60	76	5	0.029
grafo5543.32	32	37	3	0.002
grafo5544.67	67	86	7	1.45
grafo5545.40	40	62	6	0.011
grafo5546.36	36	52	6	0.007
grafo5547.33	33	41	3	0.003
grafo5548.42	42	51	4	0.006
grafo5549.41	41	61	6	0.015
grafo5550.42	42	57	5	0.008
grafo5551.37	37	44	4	0.004
grafo5552.47	47	57	5	0.031
grafo5553.37	37	46	5	0.006
grafo5554.44	44	61	5	0.013
grafo5555.39	39	53	5	0.004
grafo5556.34	34	39	4	0.003
grafo5557.42	42	50	4	0.006
grafo5558.80	80	108	7	2.178
grafo5559.61	61	75	5	0.045
grafo5560.45	45	60	5	0.015
grafo5561.36	36	38	3	0.003
grafo5562.38	38	48	4	0.004
grafo5563.42	42	52	5	0.009
grafo5564.68	68	94	7	0.299
grafo5565.41	41	53	5	0.011
grafo5566.43	43	58	5	0.01
grafo5567.39	39	52	5	0.01

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5568.40	40	59	5	0.007
grafo5569.37	37	46	4	0.004
grafo5570.37	37	49	4	0.003
grafo5571.39	39	55	5	0.005
grafo5572.82	82	118	10	54.31
grafo5573.34	34	42	3	0.003
grafo5574.35	35	37	3	0.003
grafo5575.39	39	49	5	0.008
grafo5576.59	59	84	6	0.087
grafo5577.80	80	104	7	4.287
grafo5578.36	36	41	3	0.003
grafo5579.39	39	46	4	0.004
grafo5580.47	47	57	4	0.005
grafo5581.45	45	62	6	0.016
grafo5582.38	38	59	5	0.004
grafo5583.33	33	42	4	0.003
grafo5584.48	48	63	4	0.005
grafo5585.34	34	41	4	0.004
grafo5586.60	60	78	6	0.151
grafo5587.48	48	55	4	0.005
grafo5588.75	75	96	6	0.34
grafo5589.44	44	59	5	0.008
grafo5590.44	44	49	4	0.009
grafo5591.38	38	49	4	0.004
grafo5592.48	48	59	5	0.014
grafo5593.34	34	41	4	0.003
grafo5594.75	75	92	7	0.517
grafo5595.42	42	56	5	0.016
grafo5596.37	37	53	4	0.004
grafo5597.36	36	43	4	0.003
grafo5598.37	37	48	5	0.007
grafo5599.65	65	87	7	0.439
grafo5600.59	59	78	5	0.023
grafo5601.35	35	38	3	0.002
grafo5602.45	45	64	5	0.007
grafo5603.38	38	52	5	0.004
grafo5604.39	39	61	5	0.005
grafo5605.51	51	77	7	0.113
grafo5606.77	77	111	9	17.53
grafo5607.38	38	52	5	0.005
grafo5608.74	74	104	8	5.07
grafo5609.35	35	41	3	0.003
grafo5610.62	62	95	8	0.82
grafo5611.76	76	102	8	2.727
grafo5612.36	36	42	4	0.004
grafo5613.35	35	46	4	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5614.42	42	56	6	0.024
grafo5615.38	38	46	4	0.004
grafo5616.43	43	52	3	0.004
grafo5617.45	45	54	4	0.006
grafo5618.34	34	42	4	0.003
grafo5619.39	39	49	4	0.005
grafo5620.42	42	51	5	0.012
grafo5621.43	43	54	5	0.01
grafo5622.37	37	43	4	0.003
grafo5623.45	45	55	4	0.006
grafo5624.37	37	42	4	0.004
grafo5625.34	34	40	4	0.003
grafo5626.57	57	78	5	0.016
grafo5627.34	34	44	4	0.003
grafo5628.34	34	41	4	0.003
grafo5629.39	39	41	3	0.003
grafo5630.43	43	55	5	0.012
grafo5631.67	67	85	7	2.491
grafo5632.36	36	43	5	0.004
grafo5633.45	45	55	4	0.007
grafo5634.43	43	60	5	0.008
grafo5635.47	47	56	5	0.018
grafo5636.44	44	49	3	0.003
grafo5637.41	41	49	5	0.01
grafo5638.36	36	43	4	0.003
grafo5639.77	77	94	5	0.151
grafo5640.50	50	58	4	0.299
grafo5641.37	37	44	4	0.006
grafo5642.46	46	68	6	0.016
grafo5643.40	40	51	4	0.003
grafo5644.42	42	47	4	0.004
grafo5645.41	41	52	5	0.007
grafo5646.33	33	38	3	0.003
grafo5647.78	78	96	6	0.421
grafo5648.77	77	94	6	0.396
grafo5649.40	40	46	3	0.003
grafo5650.78	78	106	8	9.596
grafo5651.41	41	56	5	0.007
grafo5652.40	40	53	5	0.01
grafo5653.43	43	46	3	0.004
grafo5654.49	49	68	6	0.038
grafo5655.35	35	43	4	0.003
grafo5656.45	45	66	6	0.029
grafo5657.33	33	43	5	0.004
grafo5658.65	65	84	6	0.17
grafo5659.46	46	60	5	0.014

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5660.43	43	62	7	0.13
grafo5661.48	48	58	4	0.006
grafo5662.37	37	47	4	0.004
grafo5663.34	34	39	4	0.003
grafo5664.72	72	95	7	0.517
grafo5665.67	67	83	5	0.072
grafo5666.43	43	56	4	0.005
grafo5667.36	36	40	3	0.003
grafo5668.37	37	44	3	0.003
grafo5669.43	43	55	5	0.01
grafo5670.37	37	40	3	0.002
grafo5671.55	55	83	7	0.202
grafo5672.48	48	70	7	0.087
grafo5673.73	73	90	6	0.164
grafo5674.38	38	48	4	0.004
grafo5675.40	40	44	3	0.003
grafo5676.39	39	50	5	0.008
grafo5677.42	42	58	5	0.008
grafo5678.77	77	101	7	1.476
grafo5679.60	60	76	5	0.029
grafo5680.37	37	53	6	0.01
grafo5681.79	79	121	11	48.62
grafo5682.38	38	47	3	0.003
grafo5683.39	39	52	4	0.003
grafo5684.78	78	95	5	0.12
grafo5685.62	62	90	7	0.407
grafo5686.37	37	47	5	0.007
grafo5687.43	43	55	5	0.011
grafo5688.34	34	44	4	0.003
grafo5689.61	61	88	8	5.98
grafo5690.74	74	89	5	0.057
grafo5691.46	46	54	4	0.005
grafo5692.35	35	48	5	0.004
grafo5693.34	34	46	4	0.003
grafo5694.45	45	63	6	0.052
grafo5695.34	34	41	4	0.003
grafo5696.42	42	55	5	0.008
grafo5697.40	40	59	5	0.007
grafo5698.37	37	46	4	0.003
grafo5699.85	85	103	7	2.475
grafo5700.36	36	49	5	0.004
grafo5701.45	45	58	5	0.007
grafo5702.33	33	47	4	0.003
grafo5703.38	38	41	3	0.003
grafo5704.78	78	107	8	10.29
grafo5705.46	46	67	6	0.017

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5706.62	62	87	6	0.075
grafo5707.47	47	57	4	0.006
grafo5708.48	48	75	7	0.047
grafo5709.59	59	76	6	0.065
grafo5710.47	47	62	5	0.007
grafo5711.38	38	44	4	0.004
grafo5712.36	36	42	4	0.003
grafo5713.46	46	66	6	0.024
grafo5714.40	40	52	5	0.006
grafo5715.47	47	69	6	0.023
grafo5716.40	40	54	5	0.005
grafo5717.41	41	51	5	0.007
grafo5718.46	46	50	3	0.004
grafo5719.40	40	64	6	0.013
grafo5720.47	47	64	6	0.024
grafo5721.49	49	64	5	0.017
grafo5722.44	44	55	4	0.005
grafo5723.43	43	59	5	0.006
grafo5724.34	34	39	3	0.003
grafo5725.76	76	95	6	0.368
grafo5726.45	45	57	6	0.021
grafo5727.43	43	58	5	0.008
grafo5728.60	60	87	7	0.274
grafo5729.53	53	75	6	0.068
grafo5730.33	33	41	4	0.003
grafo5731.45	45	70	6	0.014
grafo5732.45	45	61	5	0.008
grafo5733.39	39	50	5	0.005
grafo5734.36	36	52	6	0.011
grafo5735.77	77	100	7	2.476
grafo5736.37	37	48	4	0.003
grafo5737.34	34	37	3	0.002
grafo5738.35	35	44	4	0.007
grafo5739.81	81	113	9	20.72
grafo5740.61	61	90	8	0.967
grafo5741.42	42	58	6	0.034
grafo5742.39	39	56	6	0.008
grafo5743.61	61	92	8	0.642
grafo5744.34	34	44	4	0.002
grafo5745.50	50	76	8	0.226
grafo5746.45	45	55	4	0.004
grafo5747.40	40	50	5	0.008
grafo5748.57	57	76	5	0.03
grafo5749.36	36	41	3	0.003
grafo5750.44	44	62	6	0.028
grafo5751.60	60	75	6	0.16

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5752.35	35	45	4	0.003
grafo5753.46	46	56	4	0.006
grafo5754.62	62	89	7	0.299
grafo5755.61	61	85	8	0.764
grafo5756.32	32	36	3	0.003
grafo5757.69	69	100	8	1.221
grafo5758.60	60	86	8	2.56
grafo5759.35	35	39	3	0.003
grafo5760.43	43	55	5	0.009
grafo5761.38	38	46	4	0.004
grafo5762.39	39	59	6	0.019
grafo5763.39	39	54	5	0.005
grafo5764.36	36	43	4	0.003
grafo5765.44	44	59	5	0.008
grafo5766.46	46	72	6	0.009
grafo5767.44	44	55	5	0.01
grafo5768.43	43	50	3	0.004
grafo5769.35	35	40	4	0.003
grafo5770.33	33	38	3	0.003
grafo5771.42	42	51	4	0.004
grafo5772.40	40	49	3	0.004
grafo5773.41	41	50	4	0.005
grafo5774.42	42	53	4	0.004
grafo5775.45	45	63	6	0.028
grafo5776.36	36	45	4	0.003
grafo5777.38	38	49	5	0.005
grafo5778.46	46	69	6	0.014
grafo5779.45	45	57	5	0.007
grafo5780.48	48	68	6	0.032
grafo5781.35	35	43	4	0.004
grafo5782.36	36	43	4	0.003
grafo5783.36	36	46	4	0.003
grafo5784.66	66	84	6	0.249
grafo5785.37	37	50	5	0.006
grafo5786.43	43	53	4	0.004
grafo5787.33	33	40	4	0.003
grafo5788.64	64	77	5	0.125
grafo5789.39	39	58	6	0.012
grafo5790.37	37	46	5	0.006
grafo5791.44	44	62	6	0.017
grafo5792.60	60	76	5	0.023
grafo5793.45	45	52	4	0.008
grafo5794.54	54	71	6	0.053
grafo5795.44	44	66	7	0.028
grafo5796.37	37	54	6	0.008
grafo5797.47	47	64	5	0.013

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5798.39	39	55	5	0.006
grafo5799.79	79	106	7	4.129
grafo5800.34	34	39	3	0.003
grafo5801.45	45	55	4	0.006
grafo5802.34	34	41	3	0.002
grafo5803.45	45	50	3	0.004
grafo5804.37	37	46	4	0.003
grafo5805.42	42	53	4	0.004
grafo5806.48	48	65	6	0.04
grafo5807.32	32	41	5	0.003
grafo5808.33	33	38	4	0.003
grafo5809.36	36	45	4	0.003
grafo5810.59	59	79	6	0.07
grafo5811.41	41	59	5	0.008
grafo5812.46	46	58	5	0.013
grafo5813.37	37	46	4	0.003
grafo5814.36	36	43	4	0.004
grafo5815.34	34	39	3	0.002
grafo5816.33	33	37	3	0.003
grafo5817.42	42	60	6	0.019
grafo5818.77	77	111	10	21.47
grafo5819.38	38	50	5	0.006
grafo5820.35	35	38	2	0.002
grafo5821.33	33	43	4	0.003
grafo5822.36	36	45	4	0.004
grafo5823.41	41	60	6	0.024
grafo5824.77	77	95	6	0.255
grafo5825.35	35	44	4	0.003
grafo5826.73	73	94	7	1.019
grafo5827.34	34	40	3	0.002
grafo5828.43	43	52	4	0.005
grafo5829.34	34	41	4	0.003
grafo5830.40	40	47	3	0.003
grafo5831.61	61	72	5	0.047
grafo5832.46	46	58	5	0.018
grafo5833.39	39	54	5	0.005
grafo5834.31	31	36	3	0.003
grafo5835.44	44	53	4	0.005
grafo5836.78	78	95	5	0.141
grafo5837.36	36	56	5	0.003
grafo5838.35	35	41	4	0.003
grafo5839.36	36	40	4	0.003
grafo5840.41	41	58	5	0.009
grafo5841.76	76	100	7	0.93
grafo5842.45	45	51	4	0.006
grafo5843.38	38	45	3	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5844.39	39	48	5	0.009
grafo5845.55	55	80	6	0.076
grafo5846.44	44	62	5	0.006
grafo5847.35	35	41	3	0.003
grafo5848.32	32	39	4	0.002
grafo5849.57	57	82	6	0.039
grafo5850.43	43	56	5	0.014
grafo5851.56	56	75	6	0.049
grafo5852.35	35	50	4	0.003
grafo5853.57	57	80	5	0.018
grafo5854.78	78	111	8	5.447
grafo5855.34	34	37	3	0.002
grafo5856.34	34	41	4	0.003
grafo5857.38	38	48	5	0.007
grafo5858.63	63	83	6	0.099
grafo5859.75	75	96	7	1.685
grafo5860.55	55	74	5	0.032
grafo5861.82	82	113	8	7.495
grafo5862.60	60	87	7	0.324
grafo5863.74	74	101	8	7.577
grafo5864.59	59	84	6	0.038
grafo5865.36	36	44	4	0.003
grafo5866.76	76	107	9	11.93
grafo5867.42	42	52	4	0.005
grafo5868.43	43	55	4	0.004
grafo5869.45	45	60	5	0.008
grafo5870.80	80	107	7	3.222
grafo5871.39	39	52	6	0.01
grafo5872.33	33	39	3	0.003
grafo5873.46	46	57	4	0.006
grafo5874.76	76	104	8	4.725
grafo5875.37	37	44	4	0.004
grafo5876.40	40	50	4	0.004
grafo5877.37	37	54	5	0.003
grafo5878.44	44	56	4	0.005
grafo5879.36	36	42	3	0.003
grafo5880.38	38	52	5	0.005
grafo5881.62	62	80	7	1.046
grafo5882.34	34	40	4	0.004
grafo5883.36	36	39	3	0.002
grafo5884.55	55	79	6	0.025
grafo5885.46	46	58	5	0.01
grafo5886.41	41	58	5	0.006
grafo5887.44	44	52	4	0.005
grafo5888.37	37	50	5	0.005
grafo5889.60	60	84	5	0.02

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5890.48	48	67	5	0.008
grafo5891.37	37	43	4	0.004
grafo5892.42	42	53	5	0.01
grafo5893.38	38	52	5	0.005
grafo5894.39	39	56	5	0.005
grafo5895.41	41	52	4	0.004
grafo5896.60	60	84	7	0.329
grafo5897.80	80	105	8	6.072
grafo5898.76	76	96	6	0.983
grafo5899.38	38	42	3	0.003
grafo5900.46	46	60	5	0.012
grafo5901.35	35	50	5	0.005
grafo5902.74	74	102	8	4.204
grafo5903.38	38	48	5	0.007
grafo5904.37	37	50	5	0.004
grafo5905.46	46	56	5	0.013
grafo5906.34	34	39	3	0.002
grafo5907.58	58	85	5	0.008
grafo5908.79	79	100	7	0.933
grafo5909.47	47	63	6	0.05
grafo5910.40	40	59	6	0.011
grafo5911.49	49	66	6	0.043
grafo5912.62	62	75	5	0.084
grafo5913.37	37	50	6	0.007
grafo5914.60	60	82	6	0.063
grafo5915.45	45	54	4	0.005
grafo5916.44	44	55	4	0.005
grafo5917.34	34	41	4	0.003
grafo5918.45	45	65	5	0.017
grafo5919.40	40	56	5	0.006
grafo5920.38	38	54	4	0.003
grafo5921.38	38	52	5	0.004
grafo5922.42	42	54	5	0.01
grafo5923.65	65	92	6	0.093
grafo5924.57	57	74	6	0.071
grafo5925.45	45	56	5	0.013
grafo5926.43	43	62	5	0.006
grafo5927.37	37	52	5	0.005
grafo5928.77	77	91	5	0.178
grafo5929.71	71	98	8	1.192
grafo5930.55	55	77	6	0.062
grafo5931.46	46	63	6	0.016
grafo5932.44	44	54	4	0.007
grafo5933.75	75	103	8	3.223
grafo5934.35	35	48	6	0.005
grafo5935.36	36	42	4	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5936.46	46	61	5	0.021
grafo5937.35	35	38	3	0.003
grafo5938.75	75	116	10	21.76
grafo5939.33	33	40	4	0.002
grafo5940.73	73	89	6	0.112
grafo5941.41	41	48	4	0.004
grafo5942.34	34	46	4	0.003
grafo5943.39	39	49	4	0.004
grafo5944.44	44	57	4	0.005
grafo5945.45	45	60	6	0.036
grafo5946.39	39	55	4	0.004
grafo5947.34	34	44	4	0.003
grafo5948.59	59	80	6	0.095
grafo5949.38	38	50	5	0.005
grafo5950.43	43	56	5	0.006
grafo5951.34	34	43	4	0.003
grafo5952.38	38	48	5	0.006
grafo5953.37	37	55	5	0.004
grafo5954.49	49	61	5	0.016
grafo5955.43	43	58	5	0.01
grafo5956.79	79	97	6	0.759
grafo5957.37	37	39	3	0.003
grafo5958.42	42	56	5	0.007
grafo5959.74	74	91	6	0.435
grafo5960.55	55	79	7	0.243
grafo5961.33	33	41	4	0.002
grafo5962.69	69	88	6	0.101
grafo5963.61	61	83	6	0.087
grafo5964.60	60	78	5	0.028
grafo5965.37	37	52	6	0.007
grafo5966.35	35	45	4	0.004
grafo5967.37	37	44	4	0.004
grafo5968.35	35	44	4	0.004
grafo5969.38	38	49	4	0.003
grafo5970.36	36	46	5	0.005
grafo5971.53	53	83	7	0.165
grafo5972.40	40	64	6	0.01
grafo5973.46	46	60	4	0.005
grafo5974.39	39	53	5	0.006
grafo5975.45	45	52	4	0.005
grafo5976.43	43	54	5	0.013
grafo5977.35	35	45	4	0.003
grafo5978.41	41	50	4	0.004
grafo5979.56	56	69	5	0.037
grafo5980.40	40	54	5	0.009
grafo5981.35	35	46	4	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo5982.44	44	57	4	0.005
grafo5983.41	41	50	5	0.008
grafo5984.42	42	53	4	0.004
grafo5985.62	62	87	8	1.717
grafo5986.62	62	88	8	2.099
grafo5987.43	43	63	6	0.015
grafo5988.37	37	47	4	0.004
grafo5989.49	49	60	4	0.005
grafo5990.34	34	45	4	0.003
grafo5991.34	34	41	3	0.003
grafo5992.44	44	67	7	0.038
grafo5993.38	38	44	4	0.004
grafo5994.33	33	36	3	0.002
grafo5995.42	42	59	6	0.024
grafo5996.78	78	103	7	1.071
grafo5997.62	62	93	7	0.393
grafo5998.38	38	44	3	0.003
grafo5999.36	36	43	4	0.003
grafo6000.76	76	101	8	3.577
grafo6001.33	33	40	4	0.003
grafo6002.76	76	101	8	5.423
grafo6003.37	37	50	5	0.005
grafo6004.42	42	60	5	0.012
grafo6005.75	75	109	9	8.686
grafo6006.36	36	44	4	0.004
grafo6007.45	45	58	5	0.009
grafo6008.43	43	68	7	0.02
grafo6009.42	42	66	6	0.009
grafo6010.35	35	44	4	0.002
grafo6011.35	35	45	5	0.005
grafo6012.51	51	81	7	0.169
grafo6013.42	42	57	5	0.008
grafo6014.44	44	59	6	0.046
grafo6015.39	39	44	4	0.003
grafo6016.75	75	101	8	3.967
grafo6017.62	62	84	7	1.46
grafo6018.42	42	58	5	0.009
grafo6019.39	39	50	5	0.007
grafo6020.39	39	49	4	0.004
grafo6021.50	50	74	6	0.039
grafo6022.61	61	86	6	0.034
grafo6023.37	37	50	4	0.004
grafo6024.36	36	44	4	0.004
grafo6025.56	56	79	5	0.014
grafo6026.39	39	61	5	0.005
grafo6027.40	40	55	5	0.005

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6028.36	36	43	4	0.003
grafo6029.39	39	52	5	0.006
grafo6030.59	59	80	6	0.055
grafo6031.58	58	82	6	0.168
grafo6032.42	42	51	4	0.005
grafo6033.43	43	50	4	0.004
grafo6034.60	60	75	5	0.037
grafo6035.35	35	50	4	0.002
grafo6036.44	44	61	5	0.01
grafo6037.36	36	48	5	0.004
grafo6038.53	53	63	5	0.026
grafo6039.46	46	59	5	0.011
grafo6040.34	34	35	2	0.003
grafo6041.76	76	99	7	2.53
grafo6042.36	36	43	3	0.003
grafo6043.44	44	64	6	0.014
grafo6044.47	47	59	5	0.01
grafo6045.72	72	87	6	0.126
grafo6046.41	41	57	6	0.013
grafo6047.32	32	35	3	0.003
grafo6048.45	45	62	4	0.005
grafo6049.36	36	45	4	0.003
grafo6050.34	34	41	3	0.003
grafo6051.37	37	45	4	0.004
grafo6052.37	37	51	4	0.004
grafo6053.38	38	48	5	0.004
grafo6054.45	45	60	5	0.012
grafo6055.43	43	56	5	0.007
grafo6056.39	39	49	4	0.004
grafo6057.42	42	55	4	0.004
grafo6058.42	42	54	5	0.009
grafo6059.41	41	49	4	0.005
grafo6060.59	59	72	5	0.043
grafo6061.45	45	60	4	0.005
grafo6062.38	38	52	5	0.005
grafo6063.43	43	59	6	0.019
grafo6064.46	46	69	7	0.082
grafo6065.76	76	110	9	12.76
grafo6066.36	36	39	3	0.003
grafo6067.36	36	43	5	0.004
grafo6068.72	72	92	6	0.207
grafo6069.38	38	45	4	0.003
grafo6070.45	45	61	6	0.011
grafo6071.36	36	43	4	0.003
grafo6072.32	32	38	4	0.002
grafo6073.62	62	75	5	0.05

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6074.46	46	62	4	0.005
grafo6075.36	36	53	5	0.005
grafo6076.34	34	44	4	0.003
grafo6077.47	47	54	4	0.008
grafo6078.76	76	97	7	1.676
grafo6079.40	40	49	4	0.004
grafo6080.62	62	91	7	0.399
grafo6081.42	42	60	6	0.016
grafo6082.42	42	58	5	0.005
grafo6083.76	76	110	9	6.802
grafo6084.57	57	80	6	0.042
grafo6085.79	79	101	7	3.472
grafo6086.33	33	41	4	0.002
grafo6087.39	39	46	4	0.004
grafo6088.41	41	48	4	0.004
grafo6089.47	47	53	3	0.004
grafo6090.78	78	94	6	0.643
grafo6091.33	33	37	3	0.002
grafo6092.34	34	39	2	0.003
grafo6093.36	36	43	4	0.003
grafo6094.39	39	45	4	0.003
grafo6095.35	35	49	4	0.002
grafo6096.47	47	59	5	0.008
grafo6097.37	37	48	4	0.003
grafo6098.40	40	47	3	0.003
grafo6099.74	74	93	7	1.166
grafo6100.34	34	44	4	0.003
grafo6101.36	36	42	4	0.004
grafo6102.33	33	37	3	0.003
grafo6103.41	41	59	6	0.013
grafo6104.35	35	41	3	0.003
grafo6105.45	45	68	7	0.03
grafo6106.38	38	47	4	0.004
grafo6107.57	57	75	6	0.038
grafo6108.38	38	44	3	0.002
grafo6109.36	36	52	5	0.013
grafo6110.62	62	80	6	0.116
grafo6111.33	33	40	4	0.003
grafo6112.36	36	48	5	0.006
grafo6113.35	35	38	3	0.003
grafo6114.31	31	39	5	0.004
grafo6115.40	40	46	4	0.005
grafo6116.35	35	43	5	0.006
grafo6117.44	44	49	3	0.003
grafo6118.34	34	42	4	0.003
grafo6119.42	42	52	4	0.004

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6120.43	43	52	4	0.004
grafo6121.33	33	41	3	0.003
grafo6122.41	41	50	4	0.004
grafo6123.38	38	50	5	0.006
grafo6124.46	46	64	6	0.037
grafo6125.53	53	65	5	0.038
grafo6126.39	39	49	4	0.003
grafo6127.55	55	79	6	0.019
grafo6128.47	47	60	6	0.029
grafo6129.45	45	55	4	0.006
grafo6130.52	52	65	6	0.051
grafo6131.61	61	79	6	0.132
grafo6132.44	44	64	6	0.041
grafo6133.39	39	52	5	0.005
grafo6134.45	45	55	4	0.006
grafo6135.46	46	69	6	0.023
grafo6136.53	53	79	7	0.156
grafo6137.39	39	47	4	0.004
grafo6138.45	45	57	5	0.009
grafo6139.40	40	51	4	0.004
grafo6140.41	41	52	5	0.014
grafo6141.42	42	54	6	0.039
grafo6142.40	40	49	4	0.004
grafo6143.39	39	55	5	0.005
grafo6144.43	43	56	4	0.004
grafo6145.44	44	54	4	0.004
grafo6146.79	79	106	8	5.54
grafo6147.53	53	63	5	0.018
grafo6148.39	39	50	5	0.006
grafo6149.40	40	48	4	0.004
grafo6150.41	41	52	4	0.004
grafo6151.59	59	75	6	0.083
grafo6152.41	41	57	5	0.005
grafo6153.39	39	52	4	0.004
grafo6154.44	44	63	5	0.005
grafo6155.39	39	50	4	0.004
grafo6156.34	34	45	5	0.004
grafo6157.42	42	66	6	0.007
grafo6158.42	42	51	4	0.004
grafo6159.52	52	65	5	0.025
grafo6160.49	49	58	5	0.019
grafo6161.47	47	68	5	0.011
grafo6162.44	44	56	4	0.005
grafo6163.37	37	43	4	0.004
grafo6164.41	41	55	5	0.005
grafo6165.43	43	52	5	0.023

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6166.46	46	66	6	0.03
grafo6167.40	40	57	5	0.006
grafo6168.47	47	50	3	0.006
grafo6169.47	47	70	7	0.033
grafo6170.36	36	43	3	0.003
grafo6171.42	42	59	6	0.02
grafo6172.41	41	50	3	0.003
grafo6173.62	62	73	5	0.044
grafo6174.40	40	63	6	0.013
grafo6175.41	41	42	2	0.003
grafo6176.45	45	65	7	0.096
grafo6177.52	52	69	6	0.056
grafo6178.40	40	49	4	0.006
grafo6179.45	45	57	4	0.006
grafo6180.41	41	50	4	0.005
grafo6181.40	40	57	6	0.01
grafo6182.40	40	53	4	0.003
grafo6183.43	43	51	4	0.005
grafo6184.81	81	107	8	21.18
grafo6185.51	51	69	6	0.056
grafo6186.67	67	76	5	0.115
grafo6187.81	81	112	7	1.32
grafo6188.44	44	64	6	0.015
grafo6189.40	40	55	6	0.014
grafo6190.41	41	51	4	0.004
grafo6191.41	41	52	5	0.009
grafo6192.41	41	54	5	0.007
grafo6193.58	58	77	6	0.101
grafo6194.58	58	77	6	0.099
grafo6195.40	40	48	4	0.004
grafo6196.42	42	69	7	0.027
grafo6197.40	40	56	6	0.02
grafo6198.41	41	61	6	0.013
grafo6199.42	42	53	5	0.01
grafo6200.45	45	59	5	0.013
grafo6201.53	53	72	6	0.054
grafo6202.38	38	44	4	0.004
grafo6203.42	42	59	5	0.007
grafo6204.45	45	62	6	0.024
grafo6205.42	42	56	5	0.006
grafo6206.62	62	95	7	0.229
grafo6207.40	40	52	4	0.004
grafo6208.40	40	53	4	0.004
grafo6209.43	43	58	5	0.005
grafo6210.49	49	63	6	0.046
grafo6211.54	54	64	3	0.005

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6212.46	46	67	6	0.052
grafo6213.59	59	88	8	0.742
grafo6214.39	39	51	4	0.005
grafo6215.38	38	45	4	0.005
grafo6216.45	45	51	4	0.005
grafo6217.37	37	53	5	0.003
grafo6218.34	34	40	3	0.003
grafo6219.37	37	45	4	0.004
grafo6220.36	36	44	3	0.003
grafo6221.53	53	64	5	0.021
grafo6222.39	39	49	4	0.004
grafo6223.42	42	45	3	0.003
grafo6224.44	44	61	6	0.028
grafo6225.54	54	82	7	0.137
grafo6226.82	82	110	8	6.729
grafo6227.36	36	47	4	0.003
grafo6228.46	46	62	5	0.006
grafo6229.44	44	56	5	0.007
grafo6230.52	52	64	4	0.006
grafo6231.39	39	52	5	0.006
grafo6232.39	39	51	5	0.005
grafo6233.36	36	47	4	0.003
grafo6234.39	39	52	5	0.008
grafo6235.45	45	53	4	0.005
grafo6236.77	77	94	6	0.444
grafo6237.46	46	58	4	0.005
grafo6238.57	57	87	7	0.139
grafo6239.56	56	76	6	0.02
grafo6240.43	43	53	5	0.013
grafo6241.46	46	60	5	0.01
grafo6242.93	93	130	8	130.2
grafo6243.37	37	55	6	0.009
grafo6244.39	39	52	5	0.008
grafo6245.38	38	49	4	0.003
grafo6246.41	41	55	4	0.004
grafo6247.88	88	114	7	3.811
grafo6248.39	39	50	4	0.005
grafo6249.50	50	68	6	0.025
grafo6250.56	56	65	4	0.007
grafo6251.49	49	68	6	0.073
grafo6252.43	43	62	6	0.017
grafo6253.41	41	48	3	0.004
grafo6254.37	37	46	4	0.004
grafo6255.48	48	67	6	0.028
grafo6256.41	41	53	5	0.01
grafo6257.42	42	60	5	0.008

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6258.41	41	57	5	0.006
grafo6259.44	44	67	6	0.014
grafo6260.44	44	56	5	0.011
grafo6261.40	40	55	5	0.007
grafo6262.46	46	64	5	0.01
grafo6263.44	44	66	7	0.056
grafo6264.50	50	72	7	0.098
grafo6265.41	41	58	6	0.013
grafo6266.44	44	60	5	0.011
grafo6267.38	38	40	3	0.002
grafo6268.57	57	75	6	0.083
grafo6269.57	57	75	6	0.088
grafo6270.42	42	54	5	0.007
grafo6271.44	44	51	5	0.012
grafo6272.67	67	73	4	0.015
grafo6273.43	43	56	6	0.023
grafo6274.48	48	73	7	0.119
grafo6275.39	39	54	5	0.005
grafo6276.44	44	62	5	0.007
grafo6277.42	42	61	6	0.011
grafo6278.98	98	131	8	32.82
grafo6279.40	40	52	5	0.005
grafo6280.65	65	83	6	0.631
grafo6281.56	56	75	7	0.153
grafo6282.45	45	56	5	0.028
grafo6283.36	36	45	4	0.003
grafo6284.40	40	55	6	0.014
grafo6285.44	44	54	5	0.012
grafo6286.41	41	51	4	0.005
grafo6287.38	38	53	4	0.003
grafo6288.41	41	62	5	0.005
grafo6289.48	48	65	5	0.006
grafo6290.43	43	62	6	0.013
grafo6291.85	85	108	7	1.894
grafo6292.74	74	104	8	3.381
grafo6293.68	68	92	7	3.198
grafo6294.39	39	58	6	0.022
grafo6295.45	45	67	7	0.059
grafo6296.43	43	59	6	0.011
grafo6297.45	45	60	5	0.007
grafo6298.44	44	61	7	0.066
grafo6299.39	39	55	5	0.006
grafo6300.47	47	72	6	0.019
grafo6301.55	55	69	5	0.015
grafo6302.38	38	47	4	0.003
grafo6303.45	45	58	5	0.013

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6304.42	42	55	5	0.013
grafo6305.62	62	81	6	0.096
grafo6306.42	42	61	7	0.024
grafo6307.92	92	126	9	72.64
grafo6308.42	42	62	6	0.014
grafo6309.41	41	55	4	0.003
grafo6310.42	42	63	6	0.017
grafo6311.37	37	41	3	0.003
grafo6312.58	58	87	7	0.103
grafo6313.37	37	42	3	0.003
grafo6314.44	44	58	5	0.01
grafo6315.60	60	82	6	0.12
grafo6316.60	60	82	6	0.12
grafo6317.43	43	78	8	0.081
grafo6318.43	43	71	7	0.026
grafo6319.80	80	109	7	0.978
grafo6320.49	49	61	4	0.005
grafo6321.54	54	71	6	0.072
grafo6322.44	44	61	4	0.005
grafo6323.41	41	51	5	0.011
grafo6324.37	37	47	4	0.004
grafo6325.42	42	51	4	0.003
grafo6326.56	56	84	6	0.036
grafo6327.51	51	70	6	0.017
grafo6328.43	43	50	3	0.004
grafo6329.44	44	58	5	0.009
grafo6330.39	39	52	4	0.005
grafo6331.42	42	65	6	0.007
grafo6332.47	47	62	5	0.011
grafo6333.42	42	54	4	0.004
grafo6334.84	84	103	6	42.74
grafo6335.39	39	54	6	0.021
grafo6336.43	43	54	5	0.011
grafo6337.39	39	44	3	0.003
grafo6338.56	56	69	4	0.008
grafo6339.47	47	64	5	0.007
grafo6340.37	37	44	4	0.004
grafo6341.39	39	51	4	0.004
grafo6342.37	37	42	3	0.002
grafo6343.43	43	55	5	0.008
grafo6344.47	47	63	5	0.007
grafo6345.43	43	57	5	0.013
grafo6346.43	43	62	5	0.007
grafo6347.46	46	66	6	0.014
grafo6348.43	43	56	6	0.022
grafo6349.56	56	74	6	0.024

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6350.56	56	74	6	0.024
grafo6351.79	79	108	8	8.469
grafo6352.44	44	60	6	0.013
grafo6353.39	100	50	3	0.014
grafo6354.41	41	56	6	0.02
grafo6355.41	41	60	7	0.033
grafo6356.37	37	43	3	0.003
grafo6357.46	46	59	6	0.049
grafo6358.42	42	61	6	0.012
grafo6359.43	43	59	6	0.015
grafo6360.40	40	57	5	0.004
grafo6361.41	41	60	6	0.01
grafo6362.44	44	53	4	0.006
grafo6363.48	48	62	5	0.008
grafo6364.45	45	59	5	0.009
grafo6365.34	34	38	3	0.003
grafo6366.41	41	51	4	0.005
grafo6367.45	45	72	6	0.017
grafo6368.45	45	65	5	0.008
grafo6369.56	56	84	7	0.151
grafo6370.51	51	79	7	0.06
grafo6371.41	41	55	5	0.01
grafo6372.43	43	59	6	0.039
grafo6373.49	49	56	4	0.005
grafo6374.39	39	51	5	0.006
grafo6375.52	52	79	7	0.219
grafo6376.48	48	62	5	0.015
grafo6377.42	42	63	6	0.009
grafo6378.44	44	62	6	0.027
grafo6379.39	39	50	4	0.005
grafo6380.39	39	46	4	0.004
grafo6381.42	42	50	4	0.005
grafo6382.40	40	52	5	0.008
grafo6383.49	49	74	7	0.14
grafo6384.47	47	72	7	0.047
grafo6385.49	49	70	6	0.025
grafo6386.52	52	79	7	0.219
grafo6387.44	44	60	6	0.025
grafo6388.34	34	46	5	0.004
grafo6389.84	84	97	6	1.598
grafo6390.48	48	66	7	0.069
grafo6391.43	43	62	7	0.045
grafo6392.40	40	57	6	0.02
grafo6393.43	43	62	6	0.021
grafo6394.67	67	85	6	0.308
grafo6395.57	57	73	6	0.108

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6396.45	45	65	6	0.029
grafo6397.44	44	56	5	0.011
grafo6398.41	41	53	4	0.003
grafo6399.55	55	79	7	0.189
grafo6400.45	45	58	5	0.011
grafo6401.45	45	67	7	0.029
grafo6402.39	39	50	5	0.007
grafo6403.41	41	56	5	0.006
grafo6404.55	55	69	5	0.019
grafo6405.55	55	69	5	0.019
grafo6406.43	43	57	5	0.009
grafo6407.47	47	61	5	0.01
grafo6408.47	47	57	5	0.015
grafo6409.40	40	53	5	0.007
grafo6410.50	50	69	4	0.004
grafo6411.45	45	59	5	0.011
grafo6412.65	65	82	5	0.078
grafo6413.62	62	95	8	0.686
grafo6414.84	84	99	6	0.572
grafo6415.55	55	59	4	0.011
grafo6416.38	38	57	6	0.007
grafo6417.39	39	47	5	0.008
grafo6418.89	89	130	10	111.5
grafo6419.45	45	59	5	0.011
grafo6420.39	39	57	6	0.011
grafo6421.44	44	54	4	0.005
grafo6422.89	89	113	8	94.62
grafo6423.57	57	77	6	0.088
grafo6424.78	78	96	6	1.114
grafo6425.78	78	96	6	1.12
grafo6426.48	48	60	5	0.009
grafo6427.44	44	62	5	0.009
grafo6428.51	51	67	5	0.015
grafo6429.41	41	64	7	0.011
grafo6430.71	71	81	5	0.097
grafo6431.41	41	51	5	0.015
grafo6432.44	44	54	4	0.005
grafo6433.48	48	64	5	0.011
grafo6434.78	78	97	5	0.111
grafo6435.36	36	50	5	0.004
grafo6436.74	74	95	6	0.813
grafo6437.47	47	70	7	0.051
grafo6438.45	45	58	5	0.008
grafo6439.41	41	54	4	0.004
grafo6440.49	49	64	5	0.02
grafo6441.41	41	54	5	0.008

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6442.45	45	55	5	0.009
grafo6443.46	46	62	6	0.05
grafo6444.64	64	82	7	0.485
grafo6445.49	49	63	5	0.015
grafo6446.57	57	68	5	0.035
grafo6447.87	87	124	8	3.658
grafo6448.80	80	93	5	0.08
grafo6449.51	51	65	5	0.022
grafo6450.37	37	46	4	0.004
grafo6451.47	47	67	6	0.022
grafo6452.58	58	79	7	0.184
grafo6453.49	49	56	3	0.004
grafo6454.60	60	78	5	0.02
grafo6455.39	39	51	5	0.007
grafo6456.58	58	84	8	0.89
grafo6457.58	58	84	8	0.891
grafo6458.40	40	57	5	0.007
grafo6459.57	57	72	6	0.063
grafo6460.40	40	56	4	0.004
grafo6461.48	48	58	4	0.006
grafo6462.46	46	56	4	0.005
grafo6463.84	84	106	7	2.467
grafo6464.42	42	57	4	0.003
grafo6465.39	39	46	4	0.005
grafo6466.51	51	64	4	0.005
grafo6467.38	38	43	3	0.003
grafo6468.83	83	110	8	3.949
grafo6469.47	47	70	6	0.031
grafo6470.45	45	66	5	0.019
grafo6471.46	46	61	5	0.008
grafo6472.40	40	57	5	0.006
grafo6473.39	39	49	5	0.005
grafo6474.46	46	59	5	0.014
grafo6475.51	51	66	6	0.078
grafo6476.39	39	50	5	0.008
grafo6477.37	37	43	3	0.003
grafo6478.38	38	51	5	0.005
grafo6479.38	38	51	5	0.005
grafo6480.38	38	50	5	0.007
grafo6481.38	38	46	4	0.003
grafo6482.87	87	115	8	3.871
grafo6483.60	60	83	6	0.178
grafo6484.45	45	50	3	0.003
grafo6485.40	40	51	5	0.005
grafo6486.75	75	107	7	1.28
grafo6487.53	53	62	4	0.006

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6488.49	49	63	5	0.017
grafo6489.48	48	66	5	0.011
grafo6490.57	57	78	7	0.247
grafo6491.51	51	57	3	0.004
grafo6492.38	38	50	5	0.007
grafo6493.39	39	50	5	0.006
grafo6494.62	62	81	6	0.124
grafo6495.39	39	56	6	0.007
grafo6496.52	52	75	6	0.047
grafo6497.46	46	62	5	0.021
grafo6498.40	40	52	5	0.008
grafo6499.46	46	68	6	0.017
grafo6500.55	55	75	6	0.065
grafo6501.40	40	50	4	0.005
grafo6502.77	77	95	6	0.971
grafo6503.59	59	73	5	0.016
grafo6504.56	56	65	4	0.007
grafo6505.80	80	106	8	13.87
grafo6506.80	80	106	8	13.92
grafo6507.59	59	80	6	0.049
grafo6508.62	62	70	5	0.055
grafo6509.38	38	52	4	0.004
grafo6510.49	49	59	4	0.006
grafo6511.46	46	56	4	0.004
grafo6512.46	46	56	5	0.046
grafo6513.47	47	56	4	0.004
grafo6514.39	39	55	5	0.007
grafo6515.47	47	62	5	0.009
grafo6516.35	35	46	5	0.005
grafo6517.35	35	49	5	0.004
grafo6518.85	85	107	6	1.823
grafo6519.56	56	74	6	0.076
grafo6520.84	84	110	7	1.747
grafo6521.59	59	84	7	0.555
grafo6522.59	59	91	8	0.99
grafo6523.47	47	65	7	0.125
grafo6524.45	45	59	6	0.034
grafo6525.45	45	51	3	0.003
grafo6526.51	51	65	5	0.014
grafo6527.69	69	98	8	2.367
grafo6528.72	72	87	5	0.051
grafo6529.54	54	67	5	0.013
grafo6530.41	41	54	4	0.004
grafo6531.38	38	51	5	0.005
grafo6532.83	83	115	10	129.5
grafo6533.83	83	115	10	130.4

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6534.48	48	58	5	0.022
grafo6535.49	49	65	5	0.013
grafo6536.93	93	116	7	6.643
grafo6537.46	46	52	4	0.006
grafo6538.81	81	99	6	0.471
grafo6539.47	47	65	6	0.033
grafo6540.56	56	79	6	0.076
grafo6541.39	39	54	6	0.015
grafo6542.79	79	99	7	2.519
grafo6543.37	37	53	5	0.007
grafo6544.48	48	61	5	0.009
grafo6545.71	71	90	7	0.897
grafo6546.56	56	70	5	0.034
grafo6547.38	38	64	7	0.013
grafo6548.46	46	59	6	0.081
grafo6549.45	45	58	5	0.01
grafo6550.83	83	118	9	40.55
grafo6551.49	49	66	6	0.026
grafo6552.45	45	54	3	0.004
grafo6553.46	46	66	6	0.029
grafo6554.48	48	70	5	0.008
grafo6555.50	50	63	6	0.024
grafo6556.60	60	88	8	0.465
grafo6557.45	45	58	5	0.008
grafo6558.67	67	88	6	0.068
grafo6559.38	38	47	3	0.003
grafo6560.37	37	42	4	0.003
grafo6561.48	48	68	5	0.018
grafo6563.44	44	61	6	0.01
grafo6564.42	42	58	4	0.004
grafo6565.59	59	73	6	0.076
grafo6566.57	57	79	5	0.029
grafo6567.60	60	85	6	0.06
grafo6568.56	56	69	5	0.042
grafo6569.45	45	58	5	0.008
grafo6570.65	65	93	7	0.363
grafo6571.45	45	67	6	0.036
grafo6572.38	38	43	3	0.003
grafo6573.77	77	92	6	2.808
grafo6574.47	47	62	5	0.013
grafo6575.68	68	100	9	12.78
grafo6576.49	49	58	4	0.009
grafo6577.38	38	49	4	0.003
grafo6578.38	38	53	6	0.016
grafo6579.38	38	49	4	0.004
grafo6580.51	51	67	6	0.033

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6581.61	61	92	8	1.075
grafo6582.49	49	62	6	0.024
grafo6583.61	61	84	6	0.048
grafo6584.61	61	84	6	0.047
grafo6585.97	97	132	9	24.33
grafo6586.48	48	69	6	0.024
grafo6587.45	45	53	4	0.004
grafo6588.49	49	64	5	0.007
grafo6589.37	37	47	5	0.007
grafo6590.38	38	49	4	0.005
grafo6591.55	55	76	6	0.048
grafo6592.55	55	76	6	0.048
grafo6593.38	38	48	5	0.006
grafo6594.50	50	77	7	0.054
grafo6595.38	38	53	7	0.02
grafo6596.38	38	45	3	0.003
grafo6597.49	49	71	5	0.013
grafo6598.71	71	104	8	5.001
grafo6599.36	36	47	5	0.006
grafo6600.47	47	68	6	0.026
grafo6601.46	46	66	6	0.016
grafo6602.76	76	106	8	3.969
grafo6603.49	49	84	8	0.082
grafo6604.38	38	44	3	0.004
grafo6605.46	46	57	4	0.005
grafo6606.70	70	92	7	2.36
grafo6607.51	51	61	4	0.006
grafo6608.53	53	76	7	0.166
grafo6609.54	54	66	5	0.02
grafo6610.45	45	63	5	0.007
grafo6611.37	37	54	6	0.007
grafo6612.59	59	83	7	0.259
grafo6613.59	59	83	7	0.263
grafo6614.74	74	95	5	0.067
grafo6615.46	46	63	5	0.011
grafo6616.45	45	63	5	0.01
grafo6617.84	84	117	8	7.249
grafo6618.82	82	101	6	0.422
grafo6619.48	48	57	5	0.014
grafo6620.56	56	71	4	0.009
grafo6621.60	60	78	7	0.72
grafo6622.68	68	77	4	0.011
grafo6623.59	59	73	5	0.015
grafo6624.59	59	73	5	0.015
grafo6626.54	54	65	4	0.032
grafo6627.57	57	84	7	0.084

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6628.46	46	63	5	0.006
grafo6629.37	37	45	4	0.003
grafo6630.56	56	68	5	0.019
grafo6631.46	46	55	5	0.016
grafo6632.46	46	60	5	0.012
grafo6633.53	53	77	7	0.131
grafo6634.47	47	52	4	0.005
grafo6635.56	56	74	5	0.018
grafo6636.56	56	74	5	0.018
grafo6637.59	59	73	6	0.108
grafo6638.48	48	60	4	0.005
grafo6639.48	48	60	5	0.014
grafo6640.79	79	103	7	1.923
grafo6641.40	40	54	6	0.018
grafo6642.35	35	42	4	0.003
grafo6643.34	34	45	4	0.003
grafo6644.38	38	51	4	0.003
grafo6645.47	47	77	7	0.065
grafo6646.77	77	104	7	2.133
grafo6647.97	97	127	8	18.02
grafo6648.56	56	74	7	0.249
grafo6649.56	56	74	7	0.26
grafo6650.54	54	67	5	0.024
grafo6651.54	54	67	5	0.024
grafo6652.54	54	74	6	0.035
grafo6653.49	49	64	5	0.012
grafo6654.87	87	117	8	20.86
grafo6655.38	38	53	4	0.004
grafo6656.38	38	46	3	0.003
grafo6657.59	59	79	7	0.455
grafo6658.59	59	79	7	0.454
grafo6659.36	36	54	6	0.008
grafo6660.98	98	134	9	136.1
grafo6661.55	55	72	5	0.013
grafo6662.46	46	64	6	0.018
grafo6663.39	39	46	4	0.004
grafo6664.47	47	63	5	0.007
grafo6665.46	46	59	4	0.005
grafo6666.37	37	45	4	0.004
grafo6667.77	77	109	9	26.8
grafo6668.49	49	61	5	0.02
grafo6669.64	64	84	7	1.573
grafo6670.84	84	121	9	22.43
grafo6671.36	36	48	4	0.003
grafo6672.48	48	64	6	0.032
grafo6673.57	57	77	6	0.103

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6674.46	46	62	5	0.01
grafo6675.44	44	58	6	0.023
grafo6676.68	68	84	5	0.067
grafo6677.37	37	43	3	0.003
grafo6678.46	46	55	3	0.003
grafo6679.82	82	107	7	2.35
grafo6680.60	60	80	6	0.07
grafo6681.75	75	106	8	4.792
grafo6682.63	63	78	5	0.023
grafo6683.58	58	69	4	0.008
grafo6684.56	56	76	6	0.058
grafo6685.47	47	63	5	0.01
grafo6686.42	42	54	5	0.006
grafo6687.51	51	72	6	0.038
grafo6688.46	46	65	7	0.07
grafo6689.48	48	57	4	0.004
grafo6690.58	58	70	5	0.075
grafo6691.47	47	67	6	0.025
grafo6692.46	46	66	6	0.04
grafo6693.58	58	67	4	0.011
grafo6694.89	89	103	5	0.253
grafo6695.59	59	79	6	0.061
grafo6696.47	47	66	6	0.064
grafo6697.42	42	55	5	0.007
grafo6698.37	37	54	5	0.004
grafo6699.46	46	69	6	0.02
grafo6700.75	75	99	7	1.782
grafo6701.47	47	74	7	0.044
grafo6702.52	52	73	6	0.044
grafo6703.52	52	73	6	0.043
grafo6704.47	47	60	5	0.023
grafo6705.51	51	60	3	0.005
grafo6706.52	52	67	5	0.014
grafo6707.49	49	64	5	0.008
grafo6708.49	49	62	4	0.006
grafo6709.47	47	55	4	0.01
grafo6710.73	73	94	6	0.164
grafo6711.81	81	98	5	0.078
grafo6712.37	37	39	2	0.003
grafo6713.48	48	67	5	0.009
grafo6714.72	72	95	7	0.621
grafo6715.52	52	72	6	0.035
grafo6716.46	46	61	5	0.011
grafo6717.38	38	47	4	0.004
grafo6718.59	59	74	5	0.027
grafo6719.42	42	59	5	0.007

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6720.79	79	102	7	1.912
grafo6721.56	56	77	7	0.258
grafo6722.58	58	69	5	0.031
grafo6723.46	46	64	5	0.009
grafo6724.46	46	66	7	0.172
grafo6725.86	86	106	7	2.832
grafo6726.47	47	57	4	0.005
grafo6727.38	38	49	5	0.005
grafo6728.60	60	76	6	0.08
grafo6729.38	38	51	6	0.036
grafo6730.38	38	54	5	0.006
grafo6731.51	51	67	7	0.163
grafo6732.54	54	69	6	0.457
grafo6733.57	57	68	4	0.008
grafo6734.38	38	41	3	0.003
grafo6735.65	65	88	6	0.188
grafo6736.38	38	53	5	0.006
grafo6737.49	49	63	5	0.014
grafo6738.47	47	68	6	0.052
grafo6739.46	46	66	6	0.025
grafo6740.50	50	66	5	0.02
grafo6741.55	55	80	7	0.194
grafo6742.77	77	104	7	1.082
grafo6743.82	82	104	7	2.552
grafo6744.46	46	61	5	0.01
grafo6745.35	35	53	5	0.004
grafo6746.38	38	47	5	0.006
grafo6747.51	51	65	5	0.03
grafo6748.38	38	50	5	0.006
grafo6749.86	86	103	6	0.967
grafo6750.49	49	79	7	0.072
grafo6751.72	72	92	6	0.254
grafo6752.39	39	51	5	0.008
grafo6753.62	62	89	7	0.313
grafo6754.50	50	63	4	0.005
grafo6755.48	48	58	4	0.007
grafo6756.38	38	53	4	0.003
grafo6757.58	58	86	7	0.283
grafo6758.46	46	66	5	0.008
grafo6759.52	52	61	4	0.005
grafo6760.54	54	68	4	0.007
grafo6761.78	78	105	7	1.531
grafo6762.34	34	44	4	0.003
grafo6763.40	40	60	6	0.01
grafo6764.94	94	118	7	20.09
grafo6765.68	68	82	5	0.102

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6766.85	85	111	7	0.888
grafo6767.53	53	73	6	0.079
grafo6768.50	50	62	5	0.031
grafo6769.61	61	83	6	0.101
grafo6770.46	46	60	4	0.005
grafo6771.46	46	55	4	0.006
grafo6772.75	75	103	7	1.796
grafo6773.53	53	71	6	0.028
grafo6774.48	48	62	5	0.011
grafo6775.50	50	63	5	0.015
grafo6776.46	46	69	7	0.067
grafo6777.65	65	81	6	0.133
grafo6778.37	37	45	4	0.004
grafo6779.77	77	99	7	0.827
grafo6780.50	50	70	6	0.101
grafo6781.47	47	66	6	0.033
grafo6782.46	46	68	6	0.015
grafo6783.38	38	45	4	0.004
grafo6784.55	55	72	5	0.025
grafo6785.37	37	53	5	0.005
grafo6786.45	45	68	7	0.114
grafo6787.47	47	57	5	0.011
grafo6788.55	55	60	3	0.004
grafo6789.55	55	60	3	0.005
grafo6790.46	46	74	7	0.043
grafo6791.59	59	76	6	0.277
grafo6792.59	59	76	6	0.277
grafo6793.67	67	100	9	5.016
grafo6794.48	48	69	7	0.185
grafo6795.38	38	48	5	0.006
grafo6796.37	37	49	4	0.003
grafo6797.39	39	57	6	0.017
grafo6798.37	37	50	5	0.006
grafo6799.36	36	42	4	0.004
grafo6800.53	53	69	6	0.072
grafo6801.55	55	78	7	0.135
grafo6802.74	74	99	8	213.4
grafo6803.61	61	87	6	0.05
grafo6804.48	48	59	6	0.066
grafo6805.62	62	75	5	0.047
grafo6806.83	83	109	9	71.27
grafo6807.38	38	50	4	0.003
grafo6808.39	39	45	3	0.003
grafo6809.46	46	71	7	0.052
grafo6810.82	82	101	6	0.671
grafo6811.36	36	44	3	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6812.37	37	50	4	0.003
grafo6813.84	84	120	9	30.74
grafo6814.47	47	64	6	0.03
grafo6815.84	84	108	8	17.61
grafo6816.84	84	108	8	17.6
grafo6818.57	57	76	6	0.043
grafo6819.42	42	61	5	0.005
grafo6820.46	46	55	5	0.009
grafo6821.47	47	68	7	0.068
grafo6822.47	47	56	4	0.005
grafo6823.47	47	61	5	0.021
grafo6824.38	38	49	4	0.004
grafo6825.35	35	44	4	0.004
grafo6826.36	36	43	4	0.003
grafo6827.53	53	69	6	0.042
grafo6828.47	47	81	8	0.052
grafo6829.67	67	89	7	0.693
grafo6830.43	43	57	5	0.008
grafo6831.47	47	65	5	0.01
grafo6832.38	38	45	4	0.003
grafo6833.48	48	69	6	0.027
grafo6834.46	46	67	7	0.061
grafo6835.36	36	41	4	0.006
grafo6836.72	72	95	7	3.567
grafo6837.54	54	70	5	0.026
grafo6838.50	50	60	5	0.009
grafo6839.47	47	53	4	0.006
grafo6840.58	58	73	5	0.023
grafo6841.43	43	56	5	0.009
grafo6842.57	57	74	6	0.071
grafo6843.43	43	58	6	0.033
grafo6844.41	41	53	5	0.011
grafo6845.40	40	49	5	0.01
grafo6846.51	51	71	5	0.02
grafo6847.37	37	47	4	0.004
grafo6848.39	39	52	4	0.004
grafo6849.82	82	104	7	3.094
grafo6850.45	45	62	4	0.004
grafo6851.49	49	64	5	0.009
grafo6852.44	44	61	6	0.021
grafo6853.41	41	50	4	0.003
grafo6854.49	49	63	5	0.024
grafo6855.45	45	54	4	0.005
grafo6856.46	46	65	6	0.017
grafo6857.41	41	54	5	0.007
grafo6858.43	43	61	6	0.024

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6859.69	69	87	5	0.038
grafo6860.44	44	60	5	0.01
grafo6861.40	40	47	4	0.004
grafo6862.47	47	64	5	0.014
grafo6863.40	40	59	6	0.007
grafo6864.55	55	75	5	0.013
grafo6865.42	42	52	4	0.005
grafo6866.44	44	59	6	0.048
grafo6867.45	45	73	7	0.029
grafo6868.80	80	111	8	4.992
grafo6869.43	43	57	5	0.011
grafo6870.44	44	64	6	0.009
grafo6871.54	54	76	7	0.079
grafo6872.54	54	76	7	0.08
grafo6873.40	40	54	5	0.007
grafo6874.42	42	62	6	0.015
grafo6875.54	54	67	5	0.033
grafo6876.41	41	50	4	0.004
grafo6877.85	85	120	10	51.06
grafo6878.43	43	48	3	0.004
grafo6879.41	41	51	4	0.004
grafo6880.44	44	58	6	0.129
grafo6881.40	40	55	5	0.006
grafo6882.65	65	72	4	0.011
grafo6883.43	43	54	5	0.007
grafo6884.39	39	51	5	0.005
grafo6885.44	44	56	5	0.012
grafo6886.43	43	62	5	0.006
grafo6887.39	39	51	5	0.006
grafo6888.40	40	44	4	0.006
grafo6889.38	38	50	5	0.007
grafo6890.71	71	107	9	2.173
grafo6891.39	39	51	5	0.007
grafo6892.39	39	57	6	0.009
grafo6893.51	51	68	5	0.012
grafo6894.51	51	68	5	0.012
grafo6895.37	37	54	5	0.004
grafo6896.82	82	105	7	2.272
grafo6897.35	35	47	4	0.003
grafo6898.61	61	72	6	0.188
grafo6899.40	40	47	4	0.005
grafo6900.39	39	53	4	0.003
grafo6901.43	43	55	5	0.009
grafo6902.44	44	57	5	0.009
grafo6903.82	82	102	6	0.469
grafo6904.49	49	63	5	0.013

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6905.37	37	48	5	0.007
grafo6906.45	45	66	6	0.029
grafo6907.38	38	50	5	0.009
grafo6908.43	43	48	4	0.006
grafo6909.67	67	77	5	0.027
grafo6910.41	41	55	5	0.007
grafo6911.44	44	59	6	0.02
grafo6912.37	37	46	4	0.003
grafo6913.44	44	56	5	0.011
grafo6914.59	59	86	7	0.317
grafo6915.44	44	58	6	0.037
grafo6916.42	42	52	4	0.003
grafo6917.37	37	42	4	0.004
grafo6918.36	36	40	3	0.002
grafo6919.39	39	57	6	0.008
grafo6920.40	40	57	5	0.005
grafo6921.43	43	55	5	0.006
grafo6922.40	40	47	4	0.005
grafo6923.39	39	48	4	0.003
grafo6924.48	48	63	5	0.011
grafo6925.44	44	62	5	0.007
grafo6926.42	42	50	4	0.004
grafo6927.50	50	69	5	0.02
grafo6928.43	43	56	6	0.019
grafo6929.40	40	56	5	0.008
grafo6930.39	39	58	6	0.018
grafo6931.38	38	51	4	0.003
grafo6932.64	64	88	7	0.64
grafo6933.47	47	61	6	0.031
grafo6934.41	41	51	5	0.008
grafo6935.45	45	64	6	0.021
grafo6936.43	43	52	4	0.005
grafo6937.34	34	41	3	0.003
grafo6938.44	44	61	6	0.031
grafo6939.38	38	51	4	0.004
grafo6940.42	42	60	5	0.007
grafo6941.63	63	82	6	0.156
grafo6942.46	46	64	6	0.023
grafo6943.82	82	116	8	3.169
grafo6944.47	47	60	5	0.022
grafo6945.44	44	60	5	0.011
grafo6946.42	42	58	6	0.01
grafo6947.44	44	55	5	0.006
grafo6948.38	38	44	3	0.003
grafo6949.43	43	50	4	0.008
grafo6950.49	49	64	5	0.009

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6951.41	41	54	4	0.004
grafo6952.39	39	41	2	0.003
grafo6953.73	73	102	8	9.526
grafo6954.75	75	91	6	0.27
grafo6955.40	40	52	5	0.006
grafo6956.39	39	58	6	0.008
grafo6957.39	39	54	6	0.016
grafo6958.76	76	107	7	0.456
grafo6959.37	37	55	6	0.005
grafo6960.44	44	61	6	0.028
grafo6961.46	46	52	4	0.005
grafo6962.40	40	53	5	0.008
grafo6963.45	45	58	5	0.02
grafo6964.83	83	103	7	6.953
grafo6965.83	83	103	7	7.02
grafo6966.45	45	65	6	0.016
grafo6967.69	69	87	6	0.282
grafo6968.44	44	67	6	0.03
grafo6969.59	59	79	7	0.499
grafo6970.44	44	53	5	0.009
grafo6971.81	81	108	7	1.352
grafo6972.40	40	51	4	0.004
grafo6973.41	41	58	6	0.018
grafo6974.39	39	51	5	0.008
grafo6976.40	40	55	5	0.008
grafo6977.74	74	101	7	1.103
grafo6978.43	43	70	8	0.107
grafo6979.47	47	64	6	0.027
grafo6980.59	59	79	7	0.499
grafo6981.54	54	74	7	0.215
grafo6982.85	85	108	7	1.615
grafo6983.85	85	108	7	1.615
grafo6984.39	39	52	5	0.005
grafo6985.41	41	49	4	0.005
grafo6986.46	46	63	5	0.013
grafo6987.39	39	46	3	0.003
grafo6988.47	47	62	5	0.009
grafo6989.42	42	56	5	0.009
grafo6990.46	46	56	4	0.007
grafo6991.44	44	59	6	0.033
grafo6992.45	45	60	6	0.011
grafo6993.40	40	53	5	0.011
grafo6994.46	46	64	7	0.117
grafo6995.75	75	94	5	0.077
grafo6996.38	38	51	5	0.008
grafo6997.69	69	88	6	0.14

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo6998.44	44	59	5	0.009
grafo6999.94	94	121	7	5.554
grafo7000.40	40	50	4	0.004
grafo7001.40	40	51	3	0.003
grafo7002.38	38	48	5	0.005
grafo7003.56	56	73	5	0.011
grafo7004.43	43	49	3	0.003
grafo7005.42	42	57	5	0.012
grafo7006.43	43	56	5	0.007
grafo7007.41	41	55	5	0.008
grafo7008.37	37	50	4	0.003
grafo7009.37	37	47	4	0.003
grafo7010.49	49	67	5	0.008
grafo7011.64	64	80	6	0.154
grafo7012.42	42	59	6	0.018
grafo7013.44	44	54	4	0.004
grafo7014.47	47	63	6	0.037
grafo7015.45	45	53	4	0.008
grafo7016.58	58	74	6	0.093
grafo7017.45	45	66	5	0.008
grafo7018.45	45	67	6	0.019
grafo7019.62	62	90	8	0.805
grafo7020.43	43	61	6	0.011
grafo7021.71	71	89	7	1.159
grafo7022.58	58	80	6	0.073
grafo7023.45	45	56	5	0.012
grafo7024.45	45	50	3	0.004
grafo7025.47	47	64	6	0.019
grafo7026.42	42	55	5	0.011
grafo7027.76	76	100	6	0.198
grafo7028.37	37	48	4	0.004
grafo7029.39	39	51	5	0.006
grafo7030.46	46	61	5	0.011
grafo7031.43	43	63	7	0.039
grafo7032.41	41	53	5	0.008
grafo7033.41	41	48	4	0.004
grafo7034.39	39	48	4	0.003
grafo7035.37	37	55	6	0.009
grafo7036.55	55	72	6	0.097
grafo7037.45	45	63	5	0.01
grafo7038.84	84	113	8	9.682
grafo7039.45	45	63	5	0.006
grafo7040.43	43	52	4	0.005
grafo7041.44	44	52	4	0.005
grafo7042.57	57	79	7	0.1
grafo7043.96	96	126	8	42.08

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7044.41	41	59	6	0.023
grafo7045.45	45	66	5	0.035
grafo7046.48	48	54	3	0.003
grafo7047.43	43	55	5	0.01
grafo7048.57	57	74	6	0.098
grafo7049.42	42	54	5	0.01
grafo7050.40	40	51	5	0.006
grafo7051.42	42	53	5	0.007
grafo7052.59	59	73	5	0.016
grafo7053.55	55	73	6	0.069
grafo7054.55	55	79	5	0.008
grafo7055.55	55	79	5	0.008
grafo7056.41	41	51	4	0.005
grafo7057.50	50	74	7	0.059
grafo7058.76	76	96	6	0.193
grafo7059.46	46	53	4	0.005
grafo7060.42	42	63	6	0.014
grafo7061.53	53	74	7	0.228
grafo7062.53	53	74	7	0.227
grafo7063.44	44	52	5	0.009
grafo7064.44	44	59	6	0.023
grafo7065.37	37	46	4	0.004
grafo7066.53	53	77	6	0.016
grafo7067.44	44	55	5	0.013
grafo7068.49	49	69	5	0.01
grafo7069.83	83	106	7	1.763
grafo7070.59	59	82	7	0.162
grafo7071.39	39	56	5	0.005
grafo7072.43	43	53	4	0.005
grafo7073.43	43	51	4	0.006
grafo7074.41	41	50	4	0.004
grafo7075.45	45	63	6	0.014
grafo7076.44	44	54	4	0.007
grafo7077.53	53	73	6	0.101
grafo7078.38	38	47	4	0.004
grafo7079.41	41	58	6	0.014
grafo7080.41	41	62	6	0.007
grafo7081.38	38	59	5	0.005
grafo7082.53	53	65	5	0.074
grafo7083.91	91	112	7	6.336
grafo7084.47	47	65	6	0.044
grafo7085.39	39	57	5	0.004
grafo7086.47	47	58	5	0.01
grafo7087.37	37	44	4	0.003
grafo7088.43	43	57	6	0.021
grafo7089.59	59	82	7	0.221

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7090.54	54	72	6	0.065
grafo7091.44	44	56	5	0.007
grafo7092.37	37	47	4	0.004
grafo7093.36	36	49	5	0.004
grafo7094.44	44	61	5	0.008
grafo7095.53	53	68	5	0.013
grafo7096.45	45	61	5	0.006
grafo7097.42	42	56	5	0.008
grafo7098.41	41	59	6	0.021
grafo7099.45	45	56	5	0.013
grafo7100.86	86	120	10	64.16
grafo7101.86	86	120	10	64.44
grafo7102.49	49	65	5	0.01
grafo7103.39	39	53	6	0.053
grafo7104.41	41	56	5	0.006
grafo7105.48	48	58	5	0.016
grafo7106.44	44	61	6	0.02
grafo7107.42	42	54	4	0.004
grafo7108.86	86	106	7	2.484
grafo7109.87	87	112	8	24.98
grafo7110.40	40	52	5	0.006
grafo7111.40	40	51	5	0.007
grafo7112.47	47	61	5	0.008
grafo7113.57	57	81	7	0.286
grafo7114.40	40	49	4	0.005
grafo7115.52	52	64	5	0.015
grafo7116.43	43	53	4	0.006
grafo7117.42	42	55	5	0.008
grafo7118.45	45	65	6	0.036
grafo7119.42	42	46	3	0.003
grafo7120.84	84	111	8	7.634
grafo7121.40	40	50	4	0.004
grafo7122.54	54	76	7	0.13
grafo7123.45	45	63	5	0.007
grafo7124.41	41	59	5	0.005
grafo7125.42	42	52	4	0.006
grafo7126.88	88	118	8	13.19
grafo7127.54	54	78	7	0.165
grafo7128.48	48	60	5	0.01
grafo7129.41	41	55	5	0.007
grafo7131.43	43	56	5	0.011
grafo7132.87	87	112	8	4.673
grafo7133.35	35	38	3	0.003
grafo7134.39	39	50	5	0.011
grafo7135.48	48	68	6	0.052
grafo7136.55	55	73	6	0.134

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7137.41	41	59	7	0.046
grafo7138.42	42	53	5	0.008
grafo7139.43	43	57	5	0.008
grafo7140.41	41	53	5	0.008
grafo7141.42	42	53	4	0.005
grafo7142.47	47	56	4	0.006
grafo7143.43	43	54	5	0.006
grafo7144.42	42	53	4	0.004
grafo7145.56	56	70	4	0.008
grafo7146.42	42	54	4	0.004
grafo7147.47	47	62	5	0.008
grafo7148.39	39	50	5	0.005
grafo7149.74	74	93	6	0.31
grafo7150.41	41	52	5	0.01
grafo7151.85	85	120	8	19.57
grafo7152.57	57	78	7	0.198
grafo7153.85	85	120	8	19.57
grafo7154.60	60	70	4	0.013
grafo7155.60	60	70	4	0.013
grafo7156.67	67	86	7	1.169
grafo7157.43	43	53	5	0.005
grafo7158.39	39	54	5	0.008
grafo7159.54	54	66	5	0.02
grafo7160.54	54	66	5	0.021
grafo7161.37	37	42	4	0.003
grafo7162.44	44	59	5	0.007
grafo7163.44	44	56	5	0.008
grafo7164.56	56	68	4	0.009
grafo7165.40	40	55	6	0.015
grafo7166.52	52	69	5	0.011
grafo7167.87	87	126	10	71.24
grafo7168.39	39	56	6	0.008
grafo7169.44	44	56	5	0.017
grafo7170.43	43	58	5	0.005
grafo7171.44	44	70	6	0.01
grafo7172.40	40	54	5	0.007
grafo7173.78	78	95	7	4.216
grafo7174.74	74	96	7	1.309
grafo7175.46	46	67	6	0.012
grafo7176.49	49	59	5	0.012
grafo7177.69	69	88	7	1.63
grafo7178.37	37	53	5	0.004
grafo7179.56	56	81	7	0.218
grafo7180.40	40	52	4	0.003
grafo7181.52	52	81	6	0.019
grafo7182.39	39	55	4	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7183.53	53	80	8	0.345
grafo7184.39	39	54	5	0.005
grafo7185.55	55	60	3	0.004
grafo7186.52	52	68	5	0.009
grafo7187.38	38	52	5	0.006
grafo7188.44	44	62	5	0.006
grafo7189.52	52	71	5	0.013
grafo7190.52	52	71	5	0.013
grafo7191.41	41	54	6	0.019
grafo7192.45	45	59	5	0.015
grafo7193.43	43	64	7	0.038
grafo7194.53	53	69	6	0.046
grafo7195.42	42	51	4	0.004
grafo7196.45	45	65	6	0.015
grafo7197.52	52	68	5	0.01
grafo7198.37	37	50	4	0.003
grafo7199.56	56	79	6	0.069
grafo7200.42	42	58	5	0.011
grafo7201.47	47	62	5	0.01
grafo7202.42	42	58	6	0.017
grafo7203.57	57	85	7	0.071
grafo7204.41	41	54	5	0.012
grafo7205.39	39	49	4	0.004
grafo7206.43	43	50	4	0.006
grafo7207.55	55	77	6	0.044
grafo7208.43	43	48	4	0.004
grafo7209.40	40	56	4	0.004
grafo7210.43	43	67	6	0.013
grafo7211.37	37	47	4	0.003
grafo7212.42	42	53	4	0.004
grafo7213.73	73	101	7	0.75
grafo7214.43	43	55	5	0.024
grafo7215.44	44	54	4	0.007
grafo7216.47	47	77	8	0.079
grafo7217.44	44	53	5	0.02
grafo7218.46	46	54	4	0.005
grafo7219.45	45	59	5	0.01
grafo7220.42	42	57	6	0.013
grafo7222.40	40	54	5	0.006
grafo7223.40	110	134	8	53.22
grafo7224.41	41	58	4	0.003
grafo7225.37	37	49	5	0.006
grafo7226.38	38	53	5	0.004
grafo7227.38	38	54	5	0.008
grafo7228.41	41	67	7	0.023
grafo7229.43	43	49	3	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7230.61	61	95	7	0.092
grafo7231.51	51	62	4	0.007
grafo7232.38	38	53	5	0.004
grafo7233.37	37	49	4	0.004
grafo7234.46	46	63	6	0.034
grafo7235.38	38	45	4	0.004
grafo7236.47	47	70	6	0.017
grafo7237.44	44	56	6	0.034
grafo7238.65	65	82	7	1.011
grafo7239.60	60	87	7	0.327
grafo7240.60	60	87	7	0.328
grafo7241.45	45	62	5	0.007
grafo7242.37	37	53	5	0.004
grafo7243.37	37	46	4	0.003
grafo7244.41	41	53	5	0.006
grafo7245.49	49	65	5	0.014
grafo7246.42	42	53	4	0.004
grafo7247.39	39	47	4	0.004
grafo7248.41	41	55	4	0.004
grafo7249.42	42	56	6	0.027
grafo7250.47	47	67	6	0.028
grafo7251.40	40	43	3	0.003
grafo7252.40	40	64	6	0.01
grafo7253.39	39	51	5	0.008
grafo7254.44	44	72	7	0.026
grafo7255.49	49	58	4	0.006
grafo7256.69	69	95	8	4.128
grafo7257.37	37	48	4	0.003
grafo7258.46	46	67	7	0.06
grafo7259.44	44	61	5	0.006
grafo7260.45	45	61	5	0.009
grafo7261.42	42	62	6	0.019
grafo7262.57	57	81	7	0.267
grafo7263.99	99	136	9	103.8
grafo7264.39	39	51	5	0.006
grafo7265.44	44	57	5	0.008
grafo7266.70	70	84	5	0.061
grafo7267.39	39	49	4	0.004
grafo7268.38	38	46	3	0.004
grafo7269.40	40	49	5	0.007
grafo7270.54	54	69	5	0.047
grafo7271.41	41	54	5	0.009
grafo7272.48	48	57	4	0.008
grafo7273.69	69	93	7	1.097
grafo7274.38	38	54	6	0.011
grafo7275.41	41	59	4	0.006

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7276.49	49	64	5	0.016
grafo7277.46	46	61	5	0.012
grafo7278.42	42	58	4	0.004
grafo7279.40	40	53	4	0.005
grafo7280.52	52	71	6	0.051
grafo7281.46	46	54	5	0.015
grafo7282.36	36	47	4	0.003
grafo7283.39	39	50	5	0.01
grafo7284.69	69	87	6	0.435
grafo7285.40	40	56	6	0.009
grafo7286.43	43	56	4	0.004
grafo7287.43	43	62	7	0.033
grafo7288.45	45	60	6	0.048
grafo7289.57	57	72	6	0.058
grafo7290.38	38	47	4	0.005
grafo7291.39	39	59	7	0.019
grafo7292.50	50	62	5	0.017
grafo7293.68	68	79	5	0.034
grafo7294.57	57	73	4	0.007
grafo7295.43	43	67	8	0.24
grafo7296.42	42	56	5	0.008
grafo7297.39	39	61	5	0.004
grafo7298.41	41	54	5	0.007
grafo7299.41	41	58	5	0.006
grafo7300.41	41	53	5	0.007
grafo7301.40	40	50	5	0.006
grafo7302.41	41	57	5	0.007
grafo7303.46	46	57	5	0.016
grafo7304.45	45	53	4	0.005
grafo7305.38	38	53	6	0.01
grafo7306.36	36	48	5	0.004
grafo7307.37	37	47	4	0.004
grafo7308.40	40	65	6	0.017
grafo7309.41	41	60	6	0.012
grafo7310.47	47	61	5	0.01
grafo7311.41	41	45	4	0.004
grafo7312.41	105	47	2	0.013
grafo7313.43	43	52	4	0.006
grafo7314.43	43	53	4	0.004
grafo7315.50	50	64	5	0.01
grafo7316.39	39	50	4	0.004
grafo7317.67	67	92	6	0.155
grafo7318.55	55	70	6	0.154
grafo7319.76	76	102	7	1.555
grafo7320.38	38	58	5	0.005
grafo7321.39	39	48	4	0.004

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7322.58	58	79	6	0.072
grafo7323.45	45	60	5	0.008
grafo7324.61	61	78	6	0.093
grafo7325.43	43	50	4	0.029
grafo7326.41	41	50	5	0.008
grafo7327.39	39	51	4	0.004
grafo7328.59	59	71	5	0.038
grafo7329.59	59	71	5	0.037
grafo7330.40	40	50	5	0.008
grafo7331.41	41	50	4	0.005
grafo7332.49	49	88	9	0.306
grafo7333.45	45	73	8	0.118
grafo7334.43	43	63	5	0.006
grafo7335.53	53	69	5	0.01
grafo7336.53	53	69	5	0.01
grafo7337.45	45	62	6	0.026
grafo7338.41	41	50	5	0.008
grafo7339.46	46	52	4	0.006
grafo7340.46	46	60	5	0.015
grafo7341.60	60	78	6	0.128
grafo7342.44	44	55	4	0.006
grafo7343.44	44	53	5	0.009
grafo7344.39	39	51	5	0.008
grafo7345.38	38	49	4	0.004
grafo7346.58	58	78	6	0.098
grafo7347.40	40	56	5	0.006
grafo7348.60	60	83	7	1.074
grafo7349.43	43	51	5	0.011
grafo7350.45	45	62	6	0.032
grafo7351.47	47	59	4	0.006
grafo7352.42	42	51	4	0.005
grafo7353.49	49	67	5	0.009
grafo7354.93	93	130	9	41.85
grafo7355.45	45	53	4	0.004
grafo7356.49	49	71	6	0.081
grafo7357.37	37	56	5	0.006
grafo7358.60	60	78	6	0.082
grafo7359.38	38	49	4	0.004
grafo7360.44	44	58	5	0.009
grafo7361.76	76	92	6	0.162
grafo7362.38	38	44	4	0.004
grafo7363.39	39	43	4	0.005
grafo7364.36	36	43	4	0.003
grafo7365.45	45	51	4	0.007
grafo7366.35	35	43	3	0.002
grafo7367.44	44	54	5	0.027

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7368.42	42	51	4	0.003
grafo7369.48	48	62	5	0.008
grafo7370.49	49	64	6	0.04
grafo7371.61	61	88	7	0.356
grafo7372.41	41	56	5	0.005
grafo7373.41	41	58	6	0.024
grafo7374.39	39	52	5	0.007
grafo7375.46	46	60	5	0.005
grafo7376.45	45	65	7	0.058
grafo7377.43	43	58	5	0.007
grafo7378.88	88	121	8	9.554
grafo7379.43	43	58	5	0.006
grafo7380.36	36	47	4	0.003
grafo7381.44	44	65	6	0.021
grafo7382.48	48	70	6	0.022
grafo7383.38	38	44	4	0.005
grafo7384.45	45	56	5	0.013
grafo7385.37	37	42	3	0.003
grafo7386.46	46	66	7	0.048
grafo7387.39	39	48	4	0.004
grafo7388.50	50	66	5	0.007
grafo7389.42	42	62	7	0.039
grafo7390.39	39	59	6	0.017
grafo7391.45	45	61	5	0.008
grafo7392.40	40	53	5	0.005
grafo7393.42	42	50	5	0.012
grafo7394.47	47	57	5	0.016
grafo7395.40	40	55	5	0.006
grafo7396.42	42	48	4	0.005
grafo7397.40	40	52	5	0.008
grafo7398.44	44	58	5	0.007
grafo7399.46	46	63	6	0.025
grafo7400.57	57	70	5	0.032
grafo7401.40	40	52	5	0.006
grafo7402.57	57	70	5	0.032
grafo7403.43	43	57	6	0.027
grafo7404.43	43	55	5	0.01
grafo7405.46	46	64	6	0.012
grafo7406.41	41	48	4	0.004
grafo7407.54	54	66	5	0.019
grafo7408.38	38	49	4	0.003
grafo7409.40	40	48	4	0.003
grafo7410.37	37	51	4	0.003
grafo7411.89	89	120	8	22.98
grafo7412.43	43	52	5	0.012
grafo7413.44	44	67	7	0.033

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7414.45	45	66	6	0.022
grafo7415.39	39	53	5	0.008
grafo7416.36	36	47	4	0.004
grafo7418.99	99	132	8	25.57
grafo7419.44	44	58	6	0.047
grafo7420.41	41	58	6	0.014
grafo7421.40	40	55	4	0.003
grafo7422.40	40	50	4	0.004
grafo7423.43	43	54	5	0.006
grafo7424.45	45	58	5	0.014
grafo7425.44	44	53	5	0.123
grafo7426.47	47	57	4	0.005
grafo7427.66	66	84	7	0.699
grafo7428.43	43	52	4	0.004
grafo7429.44	44	65	6	0.021
grafo7430.43	43	70	7	0.021
grafo7431.44	44	64	6	0.019
grafo7432.40	40	47	3	0.004
grafo7433.44	44	55	5	0.011
grafo7434.52	52	64	5	0.019
grafo7435.44	44	53	4	0.006
grafo7436.67	67	89	6	0.298
grafo7437.44	44	52	4	0.004
grafo7438.39	39	47	3	0.003
grafo7439.45	45	54	4	0.004
grafo7440.42	42	47	4	0.006
grafo7441.43	43	60	6	0.03
grafo7442.45	45	53	4	0.005
grafo7443.42	42	57	5	0.01
grafo7444.43	43	55	5	0.008
grafo7445.49	49	72	7	0.081
grafo7446.45	45	56	4	0.005
grafo7448.60	60	81	7	0.768
grafo7449.40	40	47	4	0.004
grafo7450.82	82	117	7	2.429
grafo7451.82	82	117	7	2.418
grafo7452.45	45	54	4	0.007
grafo7453.43	43	66	6	0.008
grafo7454.44	44	57	4	0.012
grafo7455.41	41	63	6	0.007
grafo7456.43	43	70	7	0.041
grafo7457.56	56	82	8	0.427
grafo7458.43	43	61	7	0.039
grafo7459.42	42	55	5	0.013
grafo7460.45	45	58	6	0.033
grafo7461.72	72	97	7	0.956

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7462.38	38	47	5	0.008
grafo7463.84	84	113	8	11.04
grafo7464.81	81	108	7	1.676
grafo7465.43	43	60	5	0.012
grafo7466.42	42	62	6	0.017
grafo7467.54	54	72	5	0.016
grafo7468.54	54	81	7	0.192
grafo7469.41	41	60	7	0.035
grafo7470.43	43	52	5	0.008
grafo7471.64	64	76	4	0.012
grafo7472.45	45	53	3	0.004
grafo7473.35	35	41	3	0.003
grafo7474.43	43	54	5	0.009
grafo7475.40	40	53	5	0.011
grafo7476.38	38	55	5	0.005
grafo7477.48	48	70	7	0.065
grafo7478.38	38	47	4	0.003
grafo7479.39	39	53	5	0.006
grafo7480.45	45	69	7	0.04
grafo7481.41	41	59	6	0.017
grafo7482.41	41	48	4	0.004
grafo7483.73	73	92	6	0.415
grafo7484.43	43	49	4	0.019
grafo7485.42	42	56	5	0.009
grafo7486.42	42	57	5	0.005
grafo7487.42	42	53	5	0.007
grafo7488.46	46	59	4	0.004
grafo7489.39	39	52	4	0.003
grafo7490.48	48	68	6	0.023
grafo7491.45	45	61	6	0.02
grafo7492.38	38	57	6	0.015
grafo7493.60	60	83	6	0.055
grafo7494.44	44	58	5	0.013
grafo7495.41	41	48	4	0.005
grafo7496.42	42	56	5	0.007
grafo7497.46	46	67	6	0.028
grafo7498.41	41	52	4	0.004
grafo7499.92	92	120	8	6.428
grafo7500.53	53	65	4	0.007
grafo7501.53	53	65	4	0.006
grafo7502.35	35	43	4	0.004
grafo7503.44	44	58	5	0.01
grafo7504.50	50	69	6	0.041
grafo7505.72	72	89	5	0.082
grafo7506.41	41	55	5	0.006
grafo7507.67	67	86	6	0.237

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7508.56	56	81	8	0.953
grafo7509.36	36	45	4	0.004
grafo7510.70	70	100	8	1.768
grafo7511.55	55	76	7	0.149
grafo7512.37	37	45	4	0.004
grafo7513.39	39	55	5	0.005
grafo7514.43	43	56	5	0.007
grafo7515.81	81	97	7	1.763
grafo7516.69	69	88	6	0.346
grafo7517.38	38	51	4	0.003
grafo7518.46	46	69	7	0.029
grafo7519.36	36	42	3	0.002
grafo7520.45	45	53	4	0.005
grafo7521.37	37	56	6	0.007
grafo7522.46	46	68	7	0.044
grafo7523.50	50	68	6	0.038
grafo7524.90	90	113	8	29.34
grafo7525.60	60	76	5	0.039
grafo7526.38	38	52	5	0.004
grafo7527.41	41	56	5	0.009
grafo7528.66	66	81	6	0.241
grafo7529.93	93	131	9	46.14
grafo7530.44	44	59	6	0.021
grafo7531.38	38	44	4	0.004
grafo7532.51	51	71	6	0.07
grafo7533.50	50	66	5	0.008
grafo7534.40	40	54	4	0.004
grafo7535.43	43	59	6	0.015
grafo7536.60	60	76	5	0.039
grafo7537.41	41	55	5	0.007
grafo7538.63	63	79	6	0.203
grafo7539.37	37	49	5	0.006
grafo7540.46	46	71	6	0.016
grafo7541.40	40	53	5	0.005
grafo7542.40	40	51	5	0.006
grafo7543.43	43	54	4	0.004
grafo7544.40	40	53	5	0.008
grafo7545.44	44	60	5	0.01
grafo7546.42	42	49	5	0.009
grafo7547.47	47	59	4	0.007
grafo7548.35	35	42	3	0.003
grafo7549.38	38	50	4	0.003
grafo7550.51	51	66	6	0.113
grafo7551.39	39	48	4	0.003
grafo7552.43	43	64	6	0.013
grafo7553.36	36	52	6	0.009

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7554.38	38	48	4	0.003
grafo7555.45	45	58	5	0.007
grafo7556.54	54	76	6	0.053
grafo7557.48	48	67	6	0.063
grafo7558.45	45	74	7	0.022
grafo7559.52	52	67	5	0.011
grafo7560.35	35	45	5	0.005
grafo7561.37	37	49	4	0.003
grafo7562.51	51	81	7	0.057
grafo7563.42	42	58	6	0.025
grafo7564.57	57	71	6	0.064
grafo7565.57	57	71	6	0.064
grafo7566.47	47	54	4	0.007
grafo7567.45	45	59	5	0.009
grafo7568.38	38	55	5	0.004
grafo7569.39	39	50	4	0.005
grafo7570.40	40	52	4	0.004
grafo7571.41	41	61	6	0.012
grafo7572.42	42	50	5	0.009
grafo7573.59	59	75	5	0.049
grafo7574.86	86	110	7	12.69
grafo7575.41	41	55	6	0.015
grafo7576.38	38	47	4	0.003
grafo7577.41	41	54	4	0.004
grafo7578.49	49	57	4	0.007
grafo7579.58	58	73	5	0.052
grafo7580.79	79	98	6	0.46
grafo7581.39	39	51	4	0.003
grafo7582.45	45	55	5	0.01
grafo7583.42	42	56	5	0.009
grafo7584.69	69	80	5	0.057
grafo7585.48	48	70	6	0.016
grafo7586.36	36	50	4	0.003
grafo7587.95	95	127	9	30.42
grafo7588.42	42	62	6	0.012
grafo7589.47	47	73	6	0.01
grafo7590.43	43	54	4	0.004
grafo7591.44	44	61	5	0.007
grafo7592.59	59	94	9	1.29
grafo7593.43	43	60	5	0.009
grafo7594.88	88	120	8	27.45
grafo7595.74	74	97	6	0.513
grafo7596.61	61	85	7	0.271
grafo7597.44	44	61	6	0.02
grafo7598.43	43	57	4	0.004
grafo7599.40	40	56	6	0.016

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7600.40	40	55	6	0.01
grafo7601.48	48	64	6	0.085
grafo7602.42	42	56	5	0.007
grafo7603.45	45	73	7	0.034
grafo7604.45	45	65	6	0.038
grafo7605.44	44	65	6	0.013
grafo7606.51	51	71	6	0.024
grafo7607.42	42	60	6	0.016
grafo7608.88	88	114	7	3.242
grafo7609.42	42	62	6	0.014
grafo7610.42	42	55	4	0.003
grafo7611.40	40	54	6	0.011
grafo7612.54	54	78	6	0.047
grafo7613.54	54	78	6	0.048
grafo7614.42	42	57	6	0.029
grafo7615.37	37	44	4	0.004
grafo7616.43	43	64	6	0.013
grafo7617.54	54	81	7	0.27
grafo7618.54	54	81	7	0.27
grafo7619.44	44	68	6	0.017
grafo7620.37	37	46	4	0.004
grafo7621.44	44	65	5	0.005
grafo7622.45	45	62	5	0.014
grafo7623.45	45	62	6	0.02
grafo7624.41	41	54	4	0.003
grafo7625.47	47	67	6	0.039
grafo7626.38	38	41	3	0.003
grafo7627.57	57	85	8	0.562
grafo7628.47	47	66	6	0.012
grafo7629.42	42	65	6	0.042
grafo7630.39	39	46	4	0.004
grafo7631.39	39	44	3	0.003
grafo7632.46	46	68	6	0.021
grafo7633.43	43	58	5	0.011
grafo7634.56	56	86	8	0.541
grafo7635.41	41	53	6	0.016
grafo7636.43	43	59	5	0.01
grafo7637.99	99	128	8	28.92
grafo7638.41	41	54	4	0.004
grafo7639.40	40	54	5	0.007
grafo7640.45	45	65	7	0.086
grafo7641.39	39	58	6	0.013
grafo7642.42	42	62	6	0.01
grafo7643.61	61	85	7	0.227
grafo7644.47	47	75	8	0.106
grafo7645.37	37	51	6	0.011

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7646.50	50	62	5	0.011
grafo7647.42	42	46	3	0.003
grafo7648.58	58	85	7	0.125
grafo7649.58	58	85	7	0.125
grafo7650.37	37	52	5	0.004
grafo7651.42	42	54	5	0.007
grafo7652.40	40	55	5	0.006
grafo7653.39	39	49	4	0.004
grafo7654.45	45	59	6	0.037
grafo7655.49	49	65	5	0.012
grafo7656.40	40	58	5	0.008
grafo7657.41	41	55	6	0.015
grafo7658.44	44	61	5	0.006
grafo7659.34	34	47	5	0.004
grafo7660.59	59	81	6	0.08
grafo7661.42	42	60	7	0.115
grafo7662.38	38	48	4	0.004
grafo7663.45	45	72	7	0.051
grafo7664.56	56	74	7	0.336
grafo7665.42	42	67	7	0.037
grafo7666.42	42	63	7	0.032
grafo7667.47	47	62	5	0.011
grafo7668.43	43	57	5	0.007
grafo7669.56	56	73	6	0.029
grafo7670.40	40	56	5	0.006
grafo7671.86	86	110	7	4.891
grafo7672.37	37	46	4	0.003
grafo7673.46	46	56	3	0.004
grafo7674.93	93	129	9	103.2
grafo7675.39	39	47	3	0.003
grafo7676.45	45	61	6	0.017
grafo7677.43	43	57	5	0.011
grafo7678.52	52	58	4	0.008
grafo7679.41	41	51	5	0.008
grafo7680.40	40	55	5	0.007
grafo7681.40	40	54	6	0.012
grafo7682.50	50	67	5	0.008
grafo7683.38	38	58	5	0.004
grafo7684.38	38	54	5	0.006
grafo7685.40	40	63	6	0.008
grafo7686.41	41	57	5	0.005
grafo7687.53	53	65	4	0.006
grafo7688.53	53	65	4	0.007
grafo7689.37	37	44	3	0.003
grafo7690.44	44	59	5	0.008
grafo7691.71	71	95	7	1.298

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7692.42	42	54	4	0.003
grafo7693.52	52	74	7	0.147
grafo7694.39	39	46	4	0.004
grafo7695.56	56	79	6	0.069
grafo7696.61	61	88	8	1.56
grafo7697.45	45	65	6	0.033
grafo7698.40	40	47	4	0.038
grafo7699.39	39	50	5	0.007
grafo7700.43	43	59	5	0.016
grafo7701.43	43	64	6	0.015
grafo7702.48	48	69	7	0.043
grafo7703.84	84	109	7	2.278
grafo7704.42	42	51	4	0.004
grafo7705.42	42	52	4	0.006
grafo7706.40	40	51	4	0.004
grafo7707.44	44	63	5	0.009
grafo7708.43	43	57	5	0.01
grafo7709.42	42	58	5	0.005
grafo7710.37	37	48	4	0.003
grafo7711.45	45	53	4	0.01
grafo7712.50	50	67	5	0.015
grafo7713.46	46	67	6	0.035
grafo7714.44	44	72	7	0.026
grafo7715.40	40	56	5	0.006
grafo7716.39	39	49	4	0.004
grafo7717.42	42	49	3	0.004
grafo7718.40	40	52	5	0.005
grafo7719.42	42	60	6	0.017
grafo7720.44	44	61	6	0.017
grafo7721.52	52	71	6	0.032
grafo7722.43	43	56	5	0.007
grafo7723.54	54	73	6	0.048
grafo7724.54	54	73	6	0.048
grafo7725.41	41	57	5	0.006
grafo7726.46	46	64	5	0.006
grafo7727.42	42	55	4	0.006
grafo7728.49	49	62	5	0.013
grafo7729.44	44	52	4	0.005
grafo7730.51	51	67	5	0.012
grafo7731.56	56	70	5	0.017
grafo7732.42	42	53	5	0.006
grafo7733.46	46	56	4	0.005
grafo7734.45	45	55	5	0.01
grafo7735.46	46	60	6	0.015
grafo7736.45	45	70	8	0.128
grafo7737.56	56	79	6	0.029

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7738.56	56	79	6	0.029
grafo7739.40	40	44	4	0.004
grafo7740.38	38	42	3	0.003
grafo7741.52	52	63	5	0.028
grafo7742.46	46	58	5	0.012
grafo7743.37	37	55	5	0.005
grafo7744.42	42	52	4	0.004
grafo7745.38	38	46	4	0.004
grafo7746.43	43	59	5	0.009
grafo7747.40	40	48	4	0.005
grafo7748.51	51	65	5	0.021
grafo7749.41	41	48	4	0.004
grafo7750.48	48	68	5	0.014
grafo7751.44	44	58	5	0.013
grafo7752.56	56	69	4	0.007
grafo7753.40	40	59	7	0.091
grafo7754.49	49	68	6	0.031
grafo7755.40	40	57	5	0.007
grafo7756.44	44	62	5	0.005
grafo7757.56	56	64	4	0.011
grafo7758.53	53	77	8	0.453
grafo7759.56	56	64	4	0.011
grafo7760.46	46	57	4	0.006
grafo7761.44	44	55	4	0.005
grafo7762.46	46	55	5	0.009
grafo7763.57	57	83	7	0.133
grafo7764.57	57	83	7	0.132
grafo7765.78	78	99	6	0.622
grafo7766.40	40	50	5	0.007
grafo7767.40	40	54	5	0.005
grafo7768.42	42	53	4	0.004
grafo7769.56	56	75	5	0.021
grafo7770.57	57	69	5	0.046
grafo7771.95	95	132	8	19.95
grafo7772.62	62	79	5	0.025
grafo7773.82	82	114	8	6.371
grafo7774.81	81	104	7	2.549
grafo7775.77	77	109	9	21.86
grafo7776.78	78	109	8	10.04
grafo7777.87	87	111	7	4.555
grafo7778.88	88	110	7	2.426
grafo7779.70	70	90	5	0.043
grafo7781.93	93	119	7	17.43
grafo7782.81	81	102	6	1.278
grafo7783.84	84	105	6	0.269
grafo7784.66	66	85	6	0.143

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7785.100	100	136	8	19.43
grafo7786.69	69	93	6	0.183
grafo7787.71	71	87	5	0.041
grafo7788.84	84	116	8	7.577
grafo7789.62	62	87	8	1.476
grafo7790.67	67	94	8	4.169
grafo7791.62	62	83	7	0.439
grafo7792.96	96	123	8	39.0
grafo7795.70	70	93	7	1.425
grafo7796.93	93	126	9	495.5
grafo7798.74	74	99	7	0.452
grafo7799.69	69	93	7	0.562
grafo7800.61	61	84	7	0.367
grafo7801.70	70	88	6	0.244
grafo7802.71	71	92	6	0.191
grafo7803.75	75	106	9	9.572
grafo7804.77	77	95	7	1.077
grafo7805.59	59	76	7	0.386
grafo7806.63	63	83	5	0.031
grafo7807.76	76	96	6	0.214
grafo7808.69	69	88	6	0.209
grafo7809.71	71	84	5	0.032
grafo7810.71	71	92	7	0.519
grafo7811.70	70	97	8	1.789
grafo7812.72	72	102	7	0.332
grafo7813.62	62	81	6	0.084
grafo7814.61	61	90	7	0.143
grafo7815.80	80	121	9	12.2
grafo7816.67	67	98	7	0.475
grafo7817.66	66	94	8	2.621
grafo7819.87	87	114	8	13.28
grafo7820.71	71	95	7	0.718
grafo7821.76	76	100	7	1.753
grafo7822.85	85	116	9	41.8
grafo7823.80	80	113	8	11.77
grafo7824.85	85	126	8	2.219
grafo7825.74	74	105	8	2.526
grafo7826.87	87	120	6	0.813
grafo7827.77	77	107	8	3.591
grafo7828.68	68	92	6	0.226
grafo7829.77	77	109	8	8.506
grafo7830.67	67	95	8	0.705
grafo7831.71	71	94	7	1.185
grafo7832.69	69	91	7	0.395
grafo7833.72	72	105	8	2.926
grafo7834.78	78	104	8	7.443

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7835.61	61	82	7	0.345
grafo7836.79	79	111	8	5.383
grafo7837.76	76	102	8	2.836
grafo7838.67	67	92	8	1.837
grafo7839.80	80	120	9	18.49
grafo7840.78	78	111	8	4.507
grafo7841.83	83	107	7	5.101
grafo7842.68	68	93	7	1.142
grafo7843.81	81	107	8	9.595
grafo7844.77	77	101	8	4.626
grafo7845.81	81	114	8	2.576
grafo7846.76	76	113	8	1.851
grafo7847.77	77	117	10	24.6
grafo7848.68	68	88	6	0.253
grafo7849.77	77	113	10	17.5
grafo7850.66	66	83	5	0.119
grafo7851.77	77	100	7	1.42
grafo7852.62	62	82	7	0.487
grafo7853.76	76	100	8	3.836
grafo7854.77	77	110	8	5.547
grafo7855.69	69	84	6	0.324
grafo7856.80	80	117	8	6.516
grafo7857.90	90	120	8	24.89
grafo7858.83	83	121	9	13.57
grafo7859.69	69	88	6	0.291
grafo7860.82	82	113	8	6.068
grafo7861.87	87	118	9	79.82
grafo7862.80	80	104	8	5.722
grafo7863.67	67	92	8	3.097
grafo7864.75	75	103	8	6.296
grafo7865.72	72	102	8	3.271
grafo7866.69	69	86	6	0.08
grafo7867.60	60	73	5	0.022
grafo7868.77	77	99	7	0.918
grafo7869.69	69	100	8	2.113
grafo7870.61	61	79	6	0.063
grafo7871.77	77	112	8	3.362
grafo7872.63	63	90	8	0.43
grafo7873.72	72	100	7	0.742
grafo7874.70	70	103	6	0.129
grafo7875.62	62	100	9	0.985
grafo7876.79	79	109	8	6.548
grafo7877.70	70	92	6	0.132
grafo7878.79	79	108	8	9.383
grafo7879.80	80	117	10	19.34
grafo7880.62	62	80	6	0.187

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7881.61	61	74	5	0.03
grafo7882.67	67	81	5	0.028
grafo7883.65	65	88	7	0.279
grafo7884.83	83	119	9	30.57
grafo7885.83	83	120	10	77.1
grafo7886.80	80	101	6	0.893
grafo7887.68	68	96	7	0.696
grafo7888.77	77	106	7	0.959
grafo7889.71	71	102	8	1.719
grafo7890.67	67	76	4	0.017
grafo7891.83	83	113	7	2.49
grafo7892.86	86	107	7	5.129
grafo7893.86	86	113	8	8.06
grafo7894.68	68	94	7	0.603
grafo7895.77	77	106	7	1.664
grafo7896.67	67	95	8	7.058
grafo7897.74	74	94	6	0.269
grafo7898.68	68	88	6	0.149
grafo7899.78	78	100	6	0.3
grafo7900.77	77	95	6	0.617
grafo7901.69	69	93	6	0.093
grafo7902.68	68	96	8	0.932
grafo7903.76	76	105	6	0.323
grafo7904.82	82	107	8	6.313
grafo7905.67	67	101	9	4.566
grafo7906.67	67	86	6	0.168
grafo7907.80	80	127	10	38.49
grafo7908.80	80	113	8	6.725
grafo7909.74	74	100	6	0.12
grafo7910.88	88	125	9	43.88
grafo7911.88	88	115	9	81.03
grafo7912.79	79	112	7	1.821
grafo7913.71	71	94	7	1.034
grafo7914.84	84	116	7	3.033
grafo7915.78	78	109	7	1.389
grafo7916.82	82	104	7	2.247
grafo7917.84	84	118	9	62.17
grafo7918.84	84	135	11	25.16
grafo7919.81	81	116	8	4.458
grafo7920.77	77	95	5	0.105
grafo7921.71	71	101	8	1.106
grafo7922.82	82	115	9	12.15
grafo7923.62	62	88	7	0.22
grafo7924.72	72	96	7	1.216
grafo7925.81	81	116	9	10.08
grafo7926.75	75	93	7	1.114

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7927.70	70	103	8	1.811
grafo7928.82	82	110	8	5.289
grafo7929.76	76	98	7	16.36
grafo7930.84	84	115	9	12.33
grafo7931.77	77	103	9	9.551
grafo7932.71	71	102	9	3.749
grafo7933.62	62	79	6	0.137
grafo7934.76	76	96	7	1.475
grafo7935.71	71	91	5	0.154
grafo7936.89	89	137	9	27.28
grafo7937.75	75	96	6	0.341
grafo7938.69	69	90	7	0.883
grafo7939.79	79	106	7	0.539
grafo7940.83	83	117	10	70.08
grafo7941.80	80	107	8	14.14
grafo7942.83	83	121	10	93.8
grafo7943.76	76	98	7	1.492
grafo7944.85	85	119	9	31.7
grafo7945.81	81	120	10	28.71
grafo7946.78	78	102	9	27.05
grafo7947.78	78	98	7	3.274
grafo7948.90	90	125	9	28.96
grafo7949.84	84	109	7	5.36
grafo7950.62	62	86	6	0.139
grafo7951.81	81	99	7	4.736
grafo7952.77	77	100	7	0.998
grafo7953.79	79	116	10	117.8
grafo7954.69	69	103	9	9.366
grafo7955.81	81	107	7	1.618
grafo7956.80	80	110	9	31.52
grafo7957.62	62	85	7	1.177
grafo7958.61	61	87	6	0.031
grafo7959.73	73	95	7	1.176
grafo7960.62	62	77	5	0.039
grafo7961.63	63	76	5	0.039
grafo7962.78	78	113	10	29.51
grafo7963.84	84	100	6	0.747
grafo7964.75	75	101	7	0.96
grafo7965.62	62	94	7	0.115
grafo7966.77	77	104	8	3.77
grafo7967.76	76	100	7	0.747
grafo7968.71	71	91	6	0.141
grafo7969.78	78	98	6	0.338
grafo7970.74	74	108	9	13.69
grafo7971.73	73	92	7	0.507
grafo7972.63	63	90	8	1.422

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo7973.75	75	118	11	45.42
grafo7974.69	69	102	8	4.682
grafo7975.81	81	98	5	0.177
grafo7976.80	80	112	8	4.536
grafo7977.87	87	105	6	1.894
grafo7978.90	90	116	7	2.574
grafo7979.73	73	94	7	0.852
grafo7980.62	62	92	8	0.643
grafo7981.85	85	116	9	37.2
grafo7982.76	76	97	6	0.158
grafo7983.73	73	95	7	0.393
grafo7984.92	92	123	7	3.449
grafo7985.93	93	126	9	110.2
grafo7986.77	77	102	8	4.161
grafo7987.79	79	106	7	0.947
grafo7988.61	61	87	8	2.411
grafo7989.61	61	87	8	2.416
grafo7990.94	94	131	9	52.67
grafo7992.70	70	94	8	3.818
grafo7993.75	75	110	9	24.05
grafo7994.64	64	83	5	0.045
grafo7995.65	65	94	8	1.01
grafo7996.95	95	128	9	34.89
grafo7997.71	71	96	7	2.632
grafo7998.71	71	91	7	1.881
grafo7999.62	62	82	6	0.204
grafo8000.99	99	134	9	130.9
grafo8001.82	82	107	8	17.72
grafo8002.91	91	121	8	27.14
grafo8003.89	89	115	8	10.55
grafo8004.77	77	115	9	6.764
grafo8005.84	84	115	8	12.98
grafo8009.87	87	111	9	62.46
grafo8010.62	62	88	7	0.823
grafo8011.91	91	114	7	16.27
grafo8012.87	87	120	9	50.03
grafo8013.76	76	98	7	1.316
grafo8014.88	88	123	9	32.8
grafo8015.81	81	112	7	5.372
grafo8016.85	85	112	7	3.303
grafo8017.64	64	89	7	0.43
grafo8018.80	80	105	6	0.325
grafo8019.84	84	102	5	0.157
grafo8020.77	77	107	8	5.223
grafo8021.88	88	114	6	0.683
grafo8022.80	80	112	8	8.108

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8023.99	99	125	8	43.99
grafo8024.85	85	110	9	43.13
grafo8025.82	82	104	8	7.454
grafo8026.69	69	79	4	0.017
grafo8027.60	60	71	4	0.008
grafo8028.68	68	94	7	0.499
grafo8029.75	75	105	7	1.446
grafo8030.93	93	109	6	2.201
grafo8031.68	68	93	7	0.209
grafo8032.68	68	83	5	0.037
grafo8033.91	91	113	6	1.258
grafo8034.91	91	116	6	0.418
grafo8037.62	62	81	6	0.158
grafo8038.94	94	125	8	49.02
grafo8039.65	65	90	7	0.259
grafo8040.73	73	103	9	25.78
grafo8041.68	68	106	8	2.067
grafo8042.62	62	79	6	0.165
grafo8043.72	72	100	7	0.187
grafo8044.76	76	99	8	6.996
grafo8045.68	68	89	6	0.27
grafo8046.68	68	86	6	0.432
grafo8047.70	70	98	7	0.908
grafo8048.68	68	94	8	1.646
grafo8049.74	74	103	8	4.356
grafo8050.67	67	86	6	0.204
grafo8051.61	61	73	5	0.036
grafo8052.70	70	86	6	0.185
grafo8053.62	62	91	7	0.337
grafo8054.85	85	118	9	77.84
grafo8055.79	79	101	6	0.37
grafo8056.75	75	88	5	0.105
grafo8057.80	80	111	8	4.973
grafo8058.80	80	111	8	5.362
grafo8059.61	61	92	8	0.287
grafo8060.88	88	117	8	32.33
grafo8061.66	66	88	6	0.07
grafo8062.83	83	107	8	8.783
grafo8063.70	70	103	7	0.535
grafo8064.77	77	107	8	2.788
grafo8065.82	82	118	9	54.49
grafo8066.79	79	104	8	9.933
grafo8067.80	80	113	9	20.83
grafo8068.77	77	105	8	7.287
grafo8069.73	73	94	6	0.154
grafo8070.68	68	98	7	0.534

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8071.81	81	112	8	4.974
grafo8072.69	69	88	6	0.243
grafo8073.82	82	122	9	16.96
grafo8074.68	68	98	6	0.051
grafo8075.80	80	111	8	8.582
grafo8076.62	62	92	7	0.337
grafo8077.83	83	112	7	1.237
grafo8078.76	76	98	7	3.66
grafo8079.81	81	114	8	4.997
grafo8080.76	76	102	7	0.964
grafo8081.80	80	107	7	1.237
grafo8082.83	83	112	7	2.863
grafo8083.88	88	122	7	1.592
grafo8084.75	75	90	5	0.049
grafo8085.76	76	114	9	17.62
grafo8086.81	81	118	10	117.0
grafo8087.84	84	114	8	19.16
grafo8088.82	82	106	7	2.616
grafo8089.80	80	107	8	7.688
grafo8090.86	86	118	8	15.19
grafo8091.70	70	86	6	0.307
grafo8092.84	84	111	8	11.22
grafo8093.83	83	122	9	12.2
grafo8094.86	86	117	9	27.82
grafo8095.76	76	105	7	1.035
grafo8096.71	71	96	7	1.03
grafo8097.76	76	111	8	1.256
grafo8098.85	85	111	8	15.25
grafo8099.75	75	99	7	1.32
grafo8100.60	60	84	7	0.556
grafo8101.82	82	110	8	6.313
grafo8102.82	82	117	9	18.03
grafo8103.71	71	99	6	0.18
grafo8104.69	69	100	7	0.398
grafo8105.70	70	100	8	4.558
grafo8106.83	83	112	8	34.22
grafo8107.77	77	107	8	4.207
grafo8108.85	85	115	8	12.31
grafo8109.77	77	114	9	8.111
grafo8110.80	80	105	7	1.978
grafo8111.78	78	104	8	10.91
grafo8112.61	61	77	6	0.119
grafo8113.70	70	94	7	0.845
grafo8114.83	83	114	8	28.64
grafo8115.60	60	74	5	0.012
grafo8116.60	60	81	5	0.025

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8117.62	62	94	7	0.271
grafo8118.83	83	112	8	18.61
grafo8119.79	79	104	8	3.958
grafo8120.75	75	104	8	2.637
grafo8121.61	61	81	7	0.451
grafo8122.72	72	95	7	0.789
grafo8123.87	87	127	9	20.9
grafo8124.76	76	98	6	0.512
grafo8125.78	78	98	7	3.475
grafo8126.71	71	99	7	0.927
grafo8127.78	78	126	10	14.03
grafo8128.81	81	123	9	15.65
grafo8129.79	79	109	8	6.844
grafo8130.79	79	123	8	1.789
grafo8131.78	78	114	8	35.83
grafo8132.69	69	95	8	2.763
grafo8133.82	82	110	7	0.951
grafo8134.83	83	116	8	23.09
grafo8135.81	81	119	10	73.92
grafo8136.61	61	87	7	0.331
grafo8137.86	86	122	9	47.35
grafo8138.72	72	101	7	0.551
grafo8139.83	83	110	8	8.786
grafo8140.72	72	97	8	5.244
grafo8141.79	79	108	8	3.126
grafo8142.73	73	110	8	0.769
grafo8143.77	77	99	7	2.132
grafo8144.82	82	101	7	7.889
grafo8145.78	78	98	7	2.78
grafo8146.77	77	99	7	1.533
grafo8147.69	69	85	6	0.661
grafo8149.82	82	108	7	4.712
grafo8150.81	81	117	8	11.73
grafo8151.76	76	93	7	1.818
grafo8152.79	79	103	7	1.682
grafo8153.78	78	107	8	8.182
grafo8154.91	91	109	6	0.923
grafo8155.61	61	89	6	0.075
grafo8156.69	69	86	6	0.211
grafo8157.81	81	113	8	5.384
grafo8158.81	81	113	9	36.94
grafo8159.60	60	85	6	0.094
grafo8160.83	83	119	9	53.33
grafo8161.67	67	90	7	1.193
grafo8162.75	75	96	6	0.246
grafo8163.76	76	106	8	2.489

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8164.76	76	96	7	3.601
grafo8165.77	77	109	9	19.17
grafo8166.75	75	104	7	3.143
grafo8167.81	81	106	6	0.712
grafo8168.76	76	102	7	0.876
grafo8169.61	61	82	6	0.106
grafo8170.81	81	107	7	1.188
grafo8171.62	62	73	4	0.008
grafo8172.66	66	101	7	0.185
grafo8173.74	74	110	9	6.639
grafo8174.75	75	102	8	16.02
grafo8175.78	78	95	5	0.062
grafo8176.86	86	112	8	4.96
grafo8177.88	88	123	9	50.8
grafo8178.85	85	109	7	3.395
grafo8179.91	91	112	8	12.61
grafo8180.74	74	95	7	1.729
grafo8181.72	72	101	8	5.545
grafo8182.61	61	90	8	0.748
grafo8183.63	63	90	8	1.031
grafo8184.94	94	120	7	6.309
grafo8185.61	61	84	7	0.568
grafo8186.90	90	117	9	78.55
grafo8187.70	70	89	6	0.346
grafo8188.62	62	89	8	0.878
grafo8189.85	85	116	8	5.87
grafo8190.73	73	100	8	65.67
grafo8191.86	86	125	9	39.85
grafo8193.88	88	106	6	0.944
grafo8194.76	76	107	9	13.83
grafo8195.74	74	86	5	0.084
grafo8196.76	76	92	6	0.766
grafo8197.75	75	101	7	0.844
grafo8199.61	61	85	6	0.074
grafo8200.76	76	102	8	24.0
grafo8201.85	85	117	8	8.751
grafo8202.78	78	112	9	13.51
grafo8203.81	81	112	7	2.625
grafo8204.82	82	107	7	2.168
grafo8205.74	74	105	7	0.968
grafo8206.90	90	114	7	5.525
grafo8207.88	88	111	7	6.376
grafo8208.89	89	115	8	27.11
grafo8209.91	91	119	8	37.88
grafo8210.71	71	96	7	1.252
grafo8211.77	77	98	5	0.09

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8212.69	69	95	8	2.835
grafo8213.69	69	95	8	2.827
grafo8214.94	94	126	7	14.75
grafo8215.92	92	125	8	11.35
grafo8216.66	66	89	7	0.442
grafo8217.68	68	96	8	3.981
grafo8218.92	92	122	7	2.315
grafo8219.93	93	117	6	0.765
grafo8220.96	96	119	6	3.077
grafo8221.94	94	124	7	0.826
grafo8222.84	84	109	8	16.53
grafo8224.100	100	132	8	17.37
grafo8225.88	88	118	7	2.705
grafo8226.90	90	129	10	127.8
grafo8227.69	69	107	10	18.18
grafo8228.68	68	104	8	0.24
grafo8229.70	70	98	7	0.667
grafo8230.70	70	105	9	15.11
grafo8231.74	74	99	6	0.186
grafo8232.74	74	98	6	0.231
grafo8233.76	76	97	6	0.534
grafo8234.70	70	89	6	0.089
grafo8235.75	75	97	7	1.222
grafo8236.72	72	92	7	0.963
grafo8237.70	70	98	7	0.201
grafo8238.70	70	89	6	0.312
grafo8239.65	65	94	7	0.248
grafo8240.72	72	96	7	1.193
grafo8241.73	73	93	7	1.702
grafo8242.82	82	112	8	6.971
grafo8243.71	71	98	7	1.242
grafo8244.72	72	97	7	1.089
grafo8245.83	83	104	8	54.08
grafo8246.82	82	106	6	0.592
grafo8247.81	81	118	9	14.65
grafo8248.86	86	119	10	146.5
grafo8249.77	77	111	8	2.544
grafo8250.74	74	111	8	3.926
grafo8251.73	73	104	7	0.603
grafo8252.78	78	109	8	3.347
grafo8253.72	72	106	8	1.039
grafo8254.72	72	85	6	0.64
grafo8255.81	81	106	8	9.724
grafo8256.83	83	110	7	1.696
grafo8257.92	92	122	8	13.01
grafo8258.78	78	105	7	1.006

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8259.72	72	102	8	2.793
grafo8261.66	66	82	6	0.158
grafo8262.78	78	107	7	2.666
grafo8263.78	78	109	9	14.74
grafo8264.78	78	114	8	2.161
grafo8265.69	69	80	4	0.017
grafo8266.81	81	115	9	45.37
grafo8267.76	76	98	6	0.331
grafo8268.61	61	90	8	1.466
grafo8269.82	82	120	9	9.631
grafo8270.71	71	91	6	0.224
grafo8271.81	81	113	8	5.061
grafo8272.83	83	120	9	34.51
grafo8273.81	81	107	7	4.62
grafo8274.60	60	72	4	0.009
grafo8275.82	82	124	10	68.66
grafo8276.60	60	74	5	0.04
grafo8277.82	82	119	8	5.828
grafo8278.70	70	113	10	14.2
grafo8279.81	81	112	8	9.269
grafo8280.88	88	119	9	58.79
grafo8281.85	85	117	8	10.9
grafo8282.76	76	108	7	0.358
grafo8283.83	83	119	8	4.364
grafo8284.84	84	121	10	39.91
grafo8285.74	74	98	7	1.508
grafo8286.81	81	117	9	17.68
grafo8287.77	77	90	5	0.231
grafo8288.82	82	104	7	2.568
grafo8289.74	74	101	7	0.526
grafo8290.81	81	118	10	60.24
grafo8291.77	77	112	9	30.49
grafo8292.70	70	95	8	3.463
grafo8293.73	73	96	7	1.358
grafo8294.63	63	96	8	0.239
grafo8295.74	74	102	9	7.904
grafo8296.86	86	116	9	57.68
grafo8298.78	78	116	10	16.95
grafo8299.74	74	98	6	0.305
grafo8300.84	84	115	8	2.253
grafo8301.76	76	115	10	23.44
grafo8302.81	81	101	7	3.357
grafo8303.72	72	103	9	2.85
grafo8304.85	85	123	9	6.005
grafo8305.65	65	89	7	0.373
grafo8306.76	76	95	6	0.471

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8307.72	72	100	7	0.678
grafo8308.83	83	102	6	0.134
grafo8309.78	78	104	8	5.832
grafo8311.86	86	116	9	22.95
grafo8312.78	78	106	8	4.141
grafo8313.82	82	108	8	27.46
grafo8314.81	81	108	7	2.311
grafo8315.77	77	100	8	4.799
grafo8316.82	82	126	10	35.8
grafo8317.60	60	89	7	0.221
grafo8318.84	84	110	8	14.33
grafo8319.61	61	87	6	0.109
grafo8320.83	83	110	9	40.96
grafo8321.78	78	117	10	19.53
grafo8322.70	70	102	8	1.756
grafo8323.84	84	106	7	14.55
grafo8324.76	76	109	8	1.673
grafo8325.61	61	82	6	0.091
grafo8326.76	76	115	10	34.03
grafo8327.62	62	85	7	0.347
grafo8328.67	67	98	7	0.292
grafo8329.78	78	99	6	0.542
grafo8331.95	95	120	8	25.83
grafo8332.87	87	116	8	7.768
grafo8333.91	91	122	8	15.43
grafo8334.95	95	122	8	50.55
grafo8335.93	93	126	9	44.43
grafo8336.71	71	91	7	1.4
grafo8337.73	73	93	6	0.317
grafo8338.70	70	88	5	0.248
grafo8339.66	66	90	7	0.754
grafo8340.69	69	79	4	0.012
grafo8342.97	97	132	9	195.2
grafo8343.75	75	106	8	3.378
grafo8344.73	73	99	7	2.394
grafo8345.85	85	112	8	20.34
grafo8346.83	83	106	7	1.961
grafo8347.69	69	76	4	0.019
grafo8349.91	91	133	10	93.63
grafo8350.79	79	109	8	7.41
grafo8351.89	89	127	9	23.23
grafo8352.89	89	120	7	2.605
grafo8353.89	89	116	8	32.05
grafo8354.89	89	116	8	32.02
grafo8355.87	87	129	10	81.38
grafo8356.70	70	103	8	2.474

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8357.82	82	118	9	20.76
grafo8358.72	72	104	8	5.848
grafo8359.72	72	87	6	0.683
grafo8360.87	87	105	7	6.217
grafo8361.65	65	84	6	0.231
grafo8362.85	85	109	8	8.493
grafo8363.69	69	91	6	0.144
grafo8364.87	87	106	6	0.875
grafo8365.87	87	120	9	38.07
grafo8366.76	76	102	8	5.763
grafo8367.76	76	99	7	1.699
grafo8368.89	89	114	6	0.69
grafo8369.72	72	79	3	0.006
grafo8370.84	84	113	8	4.065
grafo8371.96	96	130	9	97.39
grafo8372.77	77	86	4	0.027
grafo8374.76	76	100	7	3.621
grafo8375.70	70	91	8	9.454
grafo8376.70	70	96	7	0.63
grafo8377.92	92	130	9	97.88
grafo8378.99	99	132	8	25.15
grafo8380.93	93	126	9	71.27
grafo8381.75	75	93	6	0.612
grafo8382.69	69	85	6	0.202
grafo8383.87	87	116	8	12.01
grafo8384.61	61	79	6	0.112
grafo8385.73	73	97	7	2.531
grafo8386.73	73	99	6	0.133
grafo8387.70	70	91	6	0.123
grafo8388.72	72	102	7	0.457
grafo8389.71	71	87	5	0.041
grafo8390.69	69	94	6	0.104
grafo8391.69	69	87	6	0.211
grafo8392.72	72	87	5	0.088
grafo8393.72	72	93	6	0.19
grafo8394.89	89	122	9	40.09
grafo8395.61	61	89	7	0.174
grafo8396.85	85	112	7	2.101
grafo8397.61	61	82	7	0.148
grafo8398.85	85	113	9	40.65
grafo8399.70	70	95	8	5.067
grafo8400.81	81	114	8	3.495
grafo8401.69	69	100	8	1.904
grafo8402.61	61	79	5	0.029
grafo8403.73	73	94	5	0.057
grafo8404.69	69	100	8	3.334

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8405.65	65	92	8	1.913
grafo8406.75	75	108	10	23.15
grafo8407.61	61	76	5	0.047
grafo8408.84	84	107	7	4.949
grafo8409.78	78	103	7	2.987
grafo8410.81	81	115	8	2.541
grafo8411.78	78	104	7	0.696
grafo8412.76	76	114	10	13.54
grafo8413.78	78	98	7	0.793
grafo8414.74	74	101	7	1.338
grafo8415.84	84	107	7	2.899
grafo8416.64	64	79	6	0.412
grafo8417.61	61	89	8	1.091
grafo8418.61	61	80	6	0.211
grafo8419.82	82	108	8	10.83
grafo8420.81	81	105	6	0.329
grafo8421.83	83	109	7	3.356
grafo8422.71	71	100	8	4.44
grafo8423.82	82	109	8	5.841
grafo8424.61	61	83	7	0.358
grafo8425.81	81	110	8	4.494
grafo8426.75	75	99	7	1.678
grafo8427.65	65	91	7	0.192
grafo8428.82	82	124	10	69.2
grafo8429.81	81	112	8	5.985
grafo8430.83	83	118	10	107.1
grafo8431.73	73	100	6	0.24
grafo8432.86	86	121	8	9.223
grafo8433.75	75	98	7	0.775
grafo8434.69	69	99	8	6.051
grafo8435.87	87	106	7	3.636
grafo8436.76	76	108	7	0.502
grafo8437.82	82	116	9	38.77
grafo8438.67	67	99	8	1.097
grafo8439.71	71	90	7	0.433
grafo8440.84	84	118	8	5.76
grafo8441.72	72	92	6	0.123
grafo8442.76	76	104	9	17.85
grafo8443.74	74	101	7	0.648
grafo8444.83	83	115	9	21.36
grafo8445.83	83	103	7	3.075
grafo8446.76	76	106	9	16.51
grafo8447.82	82	123	10	39.3
grafo8448.86	86	124	9	79.84
grafo8449.72	72	97	7	0.466
grafo8450.69	69	96	8	7.483

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8451.69	69	95	7	0.624
grafo8453.83	83	101	6	1.812
grafo8454.78	78	98	6	0.26
grafo8455.61	61	90	7	0.179
grafo8456.76	76	102	8	8.759
grafo8457.83	83	108	8	17.2
grafo8458.75	75	96	7	1.712
grafo8459.75	75	93	6	0.408
grafo8460.76	76	102	8	4.112
grafo8461.64	64	79	5	0.044
grafo8462.76	76	102	8	4.761
grafo8463.72	72	97	7	2.874
grafo8464.73	73	100	7	1.721
grafo8465.85	85	116	9	58.61
grafo8466.75	75	100	8	4.256
grafo8467.71	71	92	7	0.784
grafo8468.85	85	107	7	17.19
grafo8469.85	85	107	7	17.14
grafo8470.93	93	117	7	3.304
grafo8471.89	89	117	8	7.186
grafo8472.81	81	109	9	51.59
grafo8473.93	93	122	8	28.63
grafo8474.90	90	127	10	37.71
grafo8475.61	61	79	6	0.149
grafo8477.89	89	123	9	44.87
grafo8478.98	98	140	9	49.47
grafo8479.74	74	87	6	0.544
grafo8480.91	91	116	7	3.359
grafo8481.96	96	128	8	38.27
grafo8482.73	73	96	6	0.473
grafo8483.76	76	100	8	4.988
grafo8484.87	87	111	6	0.98
grafo8485.85	85	117	9	25.43
grafo8486.85	85	115	8	4.832
grafo8487.87	87	112	7	23.09
grafo8488.85	85	99	6	2.339
grafo8489.87	87	106	6	1.027
grafo8491.92	92	133	9	55.44
grafo8492.86	86	117	9	106.2
grafo8493.75	75	94	6	0.372
grafo8494.90	90	119	9	64.56
grafo8495.86	86	126	9	48.02
grafo8496.61	61	91	9	2.349
grafo8497.71	71	104	9	8.184
grafo8498.74	74	102	8	5.733
grafo8499.99	99	130	9	135.4

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8500.89	89	121	9	105.6
grafo8501.94	94	110	6	2.848
grafo8502.89	89	107	7	4.123
grafo8503.89	89	107	7	4.167
grafo8504.71	71	89	5	0.117
grafo8505.79	79	100	8	4.234
grafo8506.88	88	124	9	49.31
grafo8507.75	75	88	4	0.013
grafo8508.73	73	92	6	0.209
grafo8509.74	74	92	6	0.386
grafo8511.94	94	134	9	58.23
grafo8512.94	94	132	9	29.74
grafo8513.100	100	138	9	135.4
grafo8515.61	61	73	4	0.008
grafo8516.79	79	98	6	0.217
grafo8517.75	75	95	6	0.615
grafo8518.73	73	94	6	0.294
grafo8519.70	70	92	7	0.35
grafo8520.70	70	92	7	1.605
grafo8521.73	73	90	5	0.059
grafo8522.76	76	99	7	1.945
grafo8523.71	71	102	8	3.97
grafo8524.75	75	91	6	0.423
grafo8525.60	60	87	7	0.134
grafo8526.76	76	101	7	1.762
grafo8527.67	67	85	6	0.192
grafo8528.84	84	109	7	4.969
grafo8529.74	74	96	7	1.113
grafo8530.76	76	107	8	2.327
grafo8531.88	88	113	7	2.86
grafo8532.83	83	110	8	7.425
grafo8533.60	60	73	5	0.037
grafo8534.84	84	119	8	8.323
grafo8535.71	71	93	7	1.848
grafo8536.61	61	94	9	1.217
grafo8537.84	84	121	10	84.7
grafo8538.80	80	114	10	103.9
grafo8539.87	87	127	10	78.97
grafo8540.74	74	98	7	1.643
grafo8541.86	86	129	10	134.4
grafo8542.61	61	84	6	0.113
grafo8543.87	87	111	8	11.14
grafo8544.61	61	84	6	0.087
grafo8545.74	74	106	8	3.764
grafo8546.75	75	98	7	1.128
grafo8547.85	85	104	7	3.68

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8548.75	75	98	6	0.3
grafo8549.100	100	138	8	29.41
grafo8550.79	79	100	7	2.764
grafo8552.71	71	93	7	1.244
grafo8553.84	84	118	9	81.27
grafo8554.84	84	113	9	52.26
grafo8555.87	87	114	8	9.52
grafo8556.84	84	119	8	3.295
grafo8557.90	90	112	7	2.873
grafo8559.87	87	112	8	4.721
grafo8560.71	71	93	7	1.104
grafo8561.77	77	97	6	0.642
grafo8562.61	61	80	6	0.147
grafo8563.92	92	130	8	27.81
grafo8564.100	100	134	9	70.27
grafo8565.71	71	96	7	0.768
grafo8566.98	98	139	8	17.96
grafo8567.85	85	122	9	16.95
grafo8568.83	83	107	7	2.992
grafo8570.71	71	90	6	0.522
grafo8572.62	62	87	7	0.568
grafo8573.92	92	113	7	3.321
grafo8574.83	83	115	9	54.34
grafo8575.86	86	117	9	19.51
grafo8576.86	86	122	7	4.218
grafo8577.74	74	95	6	0.227
grafo8579.88	88	121	9	21.63
grafo8580.91	91	107	7	5.869
grafo8581.94	94	121	6	0.628
grafo8582.96	96	126	9	144.7
grafo8583.85	85	103	7	5.169
grafo8584.61	61	74	5	0.057
grafo8586.60	60	79	6	0.134
grafo8587.71	71	87	5	0.031
grafo8588.71	71	93	6	0.136
grafo8589.73	73	92	6	0.487
grafo8590.73	73	102	8	3.197
grafo8591.74	74	93	6	0.675
grafo8592.74	74	102	7	0.512
grafo8593.87	87	120	9	46.95
grafo8594.84	84	115	10	115.9
grafo8595.89	89	112	6	1.184
grafo8596.84	84	111	9	39.96
grafo8597.83	83	113	9	37.49
grafo8598.83	83	109	7	5.372
grafo8599.83	83	113	8	10.71

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8600.84	84	118	8	13.07
grafo8602.87	87	118	8	7.976
grafo8603.87	87	111	7	6.686
grafo8604.84	84	120	9	18.29
grafo8605.68	68	104	7	0.215
grafo8606.60	60	83	6	0.043
grafo8607.60	60	82	6	0.116
grafo8608.74	74	98	6	0.409
grafo8609.73	73	101	7	1.154
grafo8610.60	60	77	5	0.02
grafo8611.88	88	114	8	17.02
grafo8612.84	84	119	9	55.09
grafo8613.73	73	91	6	0.232
grafo8614.85	85	118	8	10.9
grafo8615.85	85	110	8	6.086
grafo8616.76	76	98	8	5.265
grafo8617.85	85	116	8	14.89
grafo8618.89	89	117	8	23.1
grafo8620.86	86	120	8	5.412
grafo8621.73	73	103	8	2.771
grafo8622.75	75	95	8	5.844
grafo8623.74	74	98	7	1.087
grafo8624.85	85	120	9	6.898
grafo8625.85	85	105	7	3.133
grafo8626.74	74	99	8	13.28
grafo8627.82	82	105	8	20.23
grafo8628.85	85	121	9	20.15
grafo8629.84	84	114	9	23.57
grafo8630.74	74	101	7	1.651
grafo8631.87	87	124	10	62.34
grafo8632.84	84	111	9	43.04
grafo8633.75	75	102	8	4.747
grafo8634.75	75	107	9	19.99
grafo8635.73	73	101	7	0.342
grafo8636.74	74	95	7	0.803
grafo8637.84	84	122	8	4.4
grafo8638.75	75	94	7	1.764
grafo8639.75	75	108	9	44.03
grafo8640.84	84	118	8	3.77
grafo8642.91	91	112	7	6.807
grafo8643.89	89	124	8	7.44
grafo8644.92	92	122	7	12.21
grafo8646.92	92	135	9	58.65
grafo8648.73	73	102	8	7.28
grafo8649.86	86	109	6	0.555
grafo8650.91	91	130	10	135.6

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8653.74	74	98	7	1.493
grafo8654.73	73	101	7	0.751
grafo8656.73	73	96	6	0.399
grafo8657.88	88	110	8	18.46
grafo8658.89	89	127	9	26.38
grafo8660.64	64	84	8	1.04
grafo8661.64	64	80	5	0.061
grafo8662.91	91	133	10	144.9
grafo8663.75	75	96	7	1.326
grafo8665.74	74	94	7	1.369
grafo8666.85	85	110	8	12.41
grafo8667.96	96	130	8	8.654
grafo8668.91	91	115	7	9.934
grafo8669.91	91	116	7	410.7
grafo8670.89	89	109	5	0.286
grafo8671.93	93	114	6	10.72
grafo8672.71	71	98	8	1.896
grafo8676.94	94	127	9	144.6
grafo8677.74	74	96	7	3.515
grafo8678.73	73	108	7	0.404
grafo8679.73	73	93	6	0.493
grafo8680.73	73	95	7	1.454
grafo8681.86	86	126	9	43.18
grafo8682.87	87	108	7	2.619
grafo8683.79	79	102	7	1.378
grafo8685.74	74	94	6	0.212
grafo8686.89	89	113	6	0.93
grafo8687.86	86	129	10	100.7
grafo8688.89	89	123	9	37.67
grafo8689.87	87	127	10	39.66
grafo8690.85	85	107	6	0.645
grafo8691.89	89	117	8	6.999
grafo8692.87	87	127	10	65.66
grafo8693.86	86	109	7	8.789
grafo8694.81	81	122	10	43.44
grafo8695.85	85	112	8	8.845
grafo8696.73	73	104	7	0.546
grafo8697.74	74	94	6	0.322
grafo8698.73	73	93	6	0.077
grafo8699.97	97	126	8	25.09
grafo8700.74	74	95	8	3.152
grafo8702.91	91	129	8	8.775
grafo8703.74	74	99	7	1.667
grafo8704.97	97	127	7	4.943
grafo8705.82	82	108	7	6.693
grafo8706.86	86	113	9	66.78

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8707.92	92	116	7	2.902
grafo8708.96	96	123	7	6.299
grafo8709.87	87	111	8	21.14
grafo8710.98	98	126	7	4.818
grafo8711.90	90	121	7	3.205
grafo8712.90	90	119	7	3.11
grafo8713.93	93	114	5	0.116
grafo8714.73	73	82	4	0.01
grafo8715.93	93	120	7	1.946
grafo8716.80	80	101	7	2.903
grafo8717.90	90	118	8	11.5
grafo8718.97	97	122	8	61.6
grafo8720.100	100	132	9	114.4
grafo8721.74	74	97	7	1.239
grafo8722.73	73	97	8	8.112
grafo8723.73	73	94	7	1.266
grafo8724.89	89	116	8	21.56
grafo8725.86	86	121	8	26.16
grafo8726.87	87	128	10	121.4
grafo8727.79	79	96	6	0.607
grafo8728.87	87	118	8	14.22
grafo8729.87	87	121	9	39.19
grafo8730.86	86	119	8	8.633
grafo8731.88	88	115	8	13.18
grafo8732.88	88	110	7	5.941
grafo8733.88	88	121	9	69.19
grafo8734.89	89	109	6	0.867
grafo8735.60	60	86	8	2.564
grafo8736.91	91	114	8	27.78
grafo8737.90	90	124	8	14.37
grafo8738.66	66	98	9	3.365
grafo8740.87	87	115	9	34.09
grafo8741.87	87	109	7	7.631
grafo8742.88	88	115	8	5.53
grafo8743.87	87	116	9	14.82
grafo8744.90	90	127	10	119.7
grafo8745.90	90	127	9	30.73
grafo8746.93	93	130	8	14.93
grafo8747.89	89	130	10	584.2
grafo8748.88	88	107	5	0.16
grafo8749.65	65	91	7	1.096
grafo8750.86	86	115	8	22.47
grafo8751.87	87	113	7	3.106
grafo8752.88	88	110	7	2.575
grafo8754.91	91	111	5	0.192
grafo8755.93	93	125	9	73.19

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8756.90	90	117	6	0.497
grafo8757.96	96	119	6	1.739
grafo8758.100	100	126	7	3.216
grafo8759.94	94	124	8	33.77
grafo8760.71	71	103	9	5.119
grafo8761.89	89	117	9	17.87
grafo8762.86	86	116	9	76.41
grafo8763.87	87	119	9	48.34
grafo8764.87	87	125	10	49.35
grafo8765.86	86	117	8	14.45
grafo8766.87	87	116	8	10.12
grafo8767.86	86	118	9	62.76
grafo8768.86	86	124	9	23.56
grafo8769.86	86	105	7	4.959
grafo8770.86	86	107	6	1.321
grafo8771.66	66	88	6	0.089
grafo8772.79	79	115	9	4.603
grafo8773.88	88	117	8	7.735
grafo8774.88	88	129	9	35.79
grafo8775.96	96	122	7	4.418
grafo8776.96	96	119	7	6.488
grafo8778.90	90	126	8	15.01
grafo8779.88	88	123	9	46.09
grafo8780.96	96	141	9	68.38
grafo8781.88	88	122	8	10.46
grafo8782.88	88	106	6	1.25
grafo8783.85	85	112	8	12.57
grafo8784.94	94	130	9	22.1
grafo8785.89	89	116	8	13.53
grafo8786.91	91	126	9	56.92
grafo8787.91	91	119	7	5.567
grafo8788.91	91	110	7	57.07
grafo8789.95	95	123	8	11.69
grafo8792.98	98	132	9	110.7
grafo8794.79	79	109	7	2.028
grafo8795.86	86	112	8	8.653
grafo8796.88	88	122	9	23.63
grafo8797.100	100	129	7	13.07
grafo8798.93	93	116	7	4.637
grafo8799.90	90	113	7	6.219
grafo8801.91	91	127	9	48.32
grafo8802.91	91	131	9	71.74
grafo8803.96	96	135	9	80.29
grafo8804.87	87	130	8	3.231
grafo8805.80	80	124	9	12.77
grafo8806.98	98	121	7	28.03

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8807.87	87	131	11	133.6
grafo8808.91	91	116	6	0.302
grafo8809.94	94	116	6	0.97
grafo8810.88	88	119	7	0.823
grafo8811.96	96	127	9	153.2
grafo8813.88	88	125	9	63.95
grafo8814.88	88	125	9	46.12
grafo8815.87	87	110	6	1.744
grafo8816.67	67	100	9	7.155
grafo8818.89	89	121	9	90.84
grafo8819.87	87	118	8	7.777
grafo8820.92	92	121	8	23.29
grafo8822.88	88	120	9	132.8
grafo8824.91	91	120	8	25.05
grafo8825.92	92	124	9	129.9
grafo8827.64	64	90	7	0.748
grafo8828.89	89	114	8	20.19
grafo8829.87	87	120	9	21.12
grafo8830.88	88	123	8	6.826
grafo8832.91	91	115	7	3.645
grafo8833.94	94	127	8	22.01
grafo8834.87	87	112	7	3.643
grafo8835.87	87	117	9	62.37
grafo8838.83	83	114	8	6.009
grafo8839.89	89	113	7	5.636
grafo8840.90	90	117	9	58.57
grafo8841.88	88	118	8	8.155
grafo8842.89	89	122	9	52.02
grafo8843.96	96	121	7	6.84
grafo8844.88	88	114	8	7.727
grafo8845.92	92	115	7	11.41
grafo8846.94	94	121	9	32.56
grafo8847.60	60	83	7	1.075
grafo8848.90	90	116	8	41.61
grafo8849.65	65	78	5	0.069
grafo8850.90	90	119	8	4.303
grafo8851.90	90	116	8	52.55
grafo8852.90	90	117	7	5.177
grafo8853.89	89	118	8	41.85
grafo8854.89	89	123	9	30.5
grafo8855.100	100	134	9	120.2
grafo8856.97	97	126	9	175.1
grafo8858.92	92	127	9	50.32
grafo8859.89	89	102	5	0.268
grafo8860.73	73	101	7	0.837
grafo8861.94	94	107	5	0.243

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8862.89	89	108	5	0.167
grafo8863.94	94	121	7	3.883
grafo8868.60	60	75	5	0.032
grafo8869.60	60	79	5	0.032
grafo8870.60	60	75	4	0.009
grafo8871.64	64	85	6	0.072
grafo8872.88	88	117	9	41.95
grafo8873.88	88	105	5	0.11
grafo8874.60	60	89	7	0.215
grafo8875.98	98	131	8	18.58
grafo8876.88	88	127	9	46.01
grafo8877.88	88	132	10	55.4
grafo8878.93	93	130	9	112.4
grafo8879.92	92	119	7	3.159
grafo8881.91	91	130	9	60.38
grafo8883.71	71	86	5	0.051
grafo8884.64	64	88	7	0.801
grafo8885.88	88	116	8	10.09
grafo8886.91	91	122	8	22.82
grafo8887.89	89	124	8	12.36
grafo8888.99	99	125	8	20.37
grafo8889.89	89	119	7	2.649
grafo8890.95	95	123	7	9.297
grafo8891.90	90	114	7	4.106
grafo8893.96	96	144	10	128.8
grafo8894.60	60	72	5	0.013
grafo8895.78	78	104	6	0.483
grafo8896.60	60	79	5	0.027
grafo8897.88	88	131	9	47.98
grafo8898.60	60	78	5	0.022
grafo8899.89	89	116	7	6.651
grafo8902.89	89	119	8	20.0
grafo8903.97	97	118	7	5.287
grafo8905.100	100	127	8	105.5
grafo8906.75	75	97	8	3.174
grafo8907.97	97	125	7	6.194
grafo8909.89	89	124	9	99.69
grafo8910.91	91	124	9	50.57
grafo8911.100	100	128	8	29.45
grafo8912.90	90	117	8	25.12
grafo8913.88	88	107	7	4.889
grafo8914.88	88	107	7	4.895
grafo8915.91	91	118	8	12.3
grafo8916.91	91	101	5	2.024
grafo8917.66	66	100	9	6.226
grafo8918.96	96	121	7	7.953

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8919.92	92	117	6	3.625
grafo8920.94	94	121	6	0.588
grafo8922.92	92	130	9	40.0
grafo8924.89	89	125	9	25.1
grafo8925.89	89	121	9	50.49
grafo8926.89	89	122	8	16.28
grafo8927.88	88	127	10	49.12
grafo8928.74	74	99	7	1.124
grafo8929.91	91	126	9	32.43
grafo8930.97	97	127	8	16.15
grafo8931.60	60	77	6	0.184
grafo8932.89	89	118	8	16.88
grafo8933.60	60	88	8	0.466
grafo8934.88	88	124	9	39.65
grafo8935.88	88	122	8	43.54
grafo8936.94	94	127	8	5.255
grafo8937.90	90	120	8	6.626
grafo8938.90	90	121	9	429.6
grafo8939.75	75	93	6	0.142
grafo8940.88	88	109	6	1.186
grafo8941.90	90	113	6	0.686
grafo8942.96	96	127	9	175.8
grafo8944.97	97	126	9	59.25
grafo8946.90	90	125	9	26.26
grafo8947.89	89	116	6	0.414
grafo8948.88	88	129	9	25.63
grafo8949.94	94	122	8	25.7
grafo8950.67	67	76	4	0.01
grafo8951.93	93	125	9	53.07
grafo8952.90	90	128	9	33.01
grafo8955.96	96	121	8	7.521
grafo8956.92	92	120	9	98.84
grafo8958.89	89	122	8	9.544
grafo8959.90	90	121	9	51.96
grafo8960.95	95	129	9	101.2
grafo8961.75	75	122	10	16.05
grafo8962.93	93	109	6	2.461
grafo8964.89	89	110	6	1.093
grafo8965.92	92	109	7	13.57
grafo8966.89	89	107	6	1.661
grafo8967.95	95	122	6	0.58
grafo8968.90	90	116	6	0.205
grafo8969.94	94	134	9	88.39
grafo8971.63	63	75	6	0.124
grafo8972.77	77	111	9	4.579
grafo8973.70	70	95	8	2.761

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo8974.79	79	100	6	0.54
grafo8975.72	72	87	6	0.875
grafo8976.85	85	118	9	35.37
grafo8977.66	66	81	6	0.131
grafo8978.63	63	98	8	0.524
grafo8979.80	80	97	6	0.302
grafo8980.95	95	122	8	14.7
grafo8981.93	93	121	8	27.15
grafo8982.80	80	106	8	11.76
grafo8983.63	63	95	8	1.454
grafo8984.66	66	92	7	0.276
grafo8985.73	73	102	7	1.812
grafo8986.65	65	101	8	1.541
grafo8987.65	65	101	8	1.547
grafo8988.69	69	82	5	0.068
grafo8989.62	62	80	6	0.084
grafo8990.61	61	79	7	0.634
grafo8991.99	99	133	9	101.8
grafo8992.66	66	95	8	1.507
grafo8993.87	87	123	8	8.535
grafo8994.73	73	98	8	14.8
grafo8995.69	69	90	6	0.087
grafo8996.67	67	87	7	0.787
grafo8998.66	66	99	9	5.208
grafo8999.86	86	112	8	8.531
grafo9000.64	64	84	6	0.084
grafo9001.66	66	96	9	9.89
grafo9002.63	63	87	6	0.21
grafo9003.84	84	115	8	6.598
grafo9004.85	85	120	9	39.66
grafo9006.61	61	80	6	0.253
grafo9007.64	64	101	9	1.817
grafo9009.71	71	83	5	0.139
grafo9010.78	78	99	6	0.654
grafo9011.66	66	86	7	0.534
grafo9012.91	91	129	9	18.39
grafo9013.84	84	108	8	6.031
grafo9014.63	63	88	7	0.511
grafo9015.63	63	84	6	0.098
grafo9016.74	74	89	5	0.043
grafo9017.61	61	80	5	0.018
grafo9018.85	85	116	8	10.59
grafo9019.82	82	101	6	1.017
grafo9020.65	65	97	8	0.645
grafo9021.69	69	103	7	0.558
grafo9022.63	63	82	6	0.105

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9023.78	78	109	8	2.939
grafo9024.75	75	96	5	0.055
grafo9025.85	85	118	8	10.04
grafo9026.87	87	107	7	12.12
grafo9028.69	69	98	8	2.859
grafo9029.66	66	77	4	0.009
grafo9030.92	92	106	6	8.853
grafo9031.62	62	77	5	0.064
grafo9032.68	68	91	7	0.715
grafo9033.80	80	106	7	2.004
grafo9034.68	68	85	6	0.32
grafo9035.70	70	99	9	8.219
grafo9036.68	68	95	8	4.763
grafo9037.70	70	95	8	1.697
grafo9038.73	73	94	6	0.186
grafo9039.66	66	86	7	1.763
grafo9040.63	63	74	3	0.011
grafo9041.92	92	110	6	1.701
grafo9042.98	98	131	8	11.23
grafo9043.73	73	95	6	0.066
grafo9044.76	76	95	6	0.299
grafo9045.72	72	92	6	0.148
grafo9046.84	84	113	8	12.15
grafo9047.80	80	105	6	0.646
grafo9048.63	63	74	4	0.01
grafo9049.61	61	83	7	0.45
grafo9050.75	75	94	6	0.317
grafo9051.63	63	95	8	1.806
grafo9052.66	66	85	7	1.353
grafo9053.100	100	127	8	44.16
grafo9054.99	99	131	8	26.68
grafo9057.64	64	85	7	0.467
grafo9058.63	63	82	7	0.233
grafo9059.65	65	84	7	0.743
grafo9060.64	64	81	6	0.167
grafo9061.69	69	89	5	0.051
grafo9062.70	70	92	7	1.24
grafo9063.73	73	98	7	0.638
grafo9064.68	68	88	5	0.028
grafo9065.70	70	92	7	0.976
grafo9066.71	71	94	7	0.673
grafo9067.61	61	75	5	0.029
grafo9068.70	70	90	6	0.191
grafo9069.69	69	91	6	0.164
grafo9070.67	67	88	5	0.048
grafo9071.67	67	78	4	0.01

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9072.74	74	109	9	20.78
grafo9073.68	68	85	6	0.318
grafo9074.70	70	90	5	0.022
grafo9075.72	72	91	7	1.038
grafo9076.77	77	103	7	0.875
grafo9077.70	70	78	4	0.01
grafo9078.70	70	88	7	1.378
grafo9079.72	72	91	6	0.213
grafo9080.61	61	89	6	0.038
grafo9081.64	64	98	7	0.144
grafo9082.68	68	93	7	0.181
grafo9083.67	67	82	6	0.312
grafo9084.72	72	92	6	0.183
grafo9085.63	63	82	6	0.123
grafo9086.67	67	96	8	1.676
grafo9087.73	73	94	6	0.162
grafo9088.68	68	97	8	2.397
grafo9089.73	73	102	8	3.913
grafo9090.64	64	88	7	0.278
grafo9091.86	86	111	8	24.77
grafo9092.61	61	99	8	1.028
grafo9093.61	61	80	6	0.062
grafo9094.83	83	111	8	12.55
grafo9095.69	69	91	6	0.131
grafo9096.80	80	108	7	2.133
grafo9097.65	65	97	8	0.561
grafo9098.64	64	80	5	0.051
grafo9099.83	83	106	8	10.08
grafo9100.80	80	105	8	7.78
grafo9101.72	72	102	8	4.677
grafo9102.66	66	80	6	0.239
grafo9103.80	80	108	8	12.57
grafo9104.82	82	117	7	1.36
grafo9105.75	75	106	8	1.578
grafo9106.67	67	84	6	0.115
grafo9107.63	63	80	6	0.075
grafo9108.67	67	101	8	1.856
grafo9109.63	63	88	7	0.258
grafo9110.63	63	89	6	0.102
grafo9111.85	85	118	9	34.13
grafo9112.82	82	120	9	18.59
grafo9113.74	74	94	6	0.478
grafo9114.79	79	111	8	4.542
grafo9115.82	82	112	8	7.335
grafo9116.80	80	118	9	6.72
grafo9117.71	71	100	7	0.34

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9118.65	65	84	5	0.033
grafo9119.80	80	120	9	21.44
grafo9120.64	64	87	7	0.453
grafo9121.65	65	83	5	0.027
grafo9122.79	79	111	10	88.11
grafo9123.68	68	103	9	5.253
grafo9124.64	64	89	6	0.127
grafo9125.71	71	86	5	0.082
grafo9126.82	82	113	7	1.118
grafo9127.84	84	120	9	44.4
grafo9128.64	64	94	8	1.16
grafo9129.77	77	97	6	0.315
grafo9130.71	71	101	9	5.719
grafo9131.74	74	105	7	0.697
grafo9132.62	62	76	5	0.047
grafo9133.82	82	107	7	1.998
grafo9134.64	64	88	7	0.261
grafo9136.67	67	86	6	0.1
grafo9137.82	82	106	8	7.406
grafo9138.65	65	105	10	4.647
grafo9139.85	85	122	9	27.69
grafo9140.85	85	123	9	27.04
grafo9141.60	60	82	7	0.485
grafo9142.60	60	73	5	0.037
grafo9143.66	66	84	6	0.123
grafo9144.81	81	108	6	0.238
grafo9145.68	68	86	6	0.259
grafo9146.79	79	106	7	1.827
grafo9147.75	75	106	8	7.651
grafo9148.66	66	88	6	0.09
grafo9149.67	67	92	8	3.21
grafo9150.82	82	114	9	38.37
grafo9151.63	63	82	7	0.43
grafo9152.66	66	84	5	0.034
grafo9153.74	74	106	8	1.979
grafo9154.66	66	97	8	0.723
grafo9155.63	63	83	6	0.231
grafo9156.63	63	82	7	0.418
grafo9157.68	68	92	7	0.533
grafo9158.65	65	87	6	0.154
grafo9159.64	64	92	8	1.104
grafo9160.72	72	100	7	0.864
grafo9161.75	75	112	9	4.15
grafo9162.67	67	90	6	0.138
grafo9163.72	72	112	10	22.77
grafo9164.66	66	96	7	0.281

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9165.68	68	91	7	1.065
grafo9166.81	81	119	9	8.896
grafo9167.67	67	96	6	0.08
grafo9168.63	63	81	5	0.021
grafo9169.67	67	106	9	2.235
grafo9170.65	65	94	8	0.552
grafo9171.84	84	124	9	35.84
grafo9172.86	86	122	8	9.723
grafo9173.71	71	105	8	2.251
grafo9174.81	81	103	6	0.822
grafo9175.70	70	94	7	0.699
grafo9176.67	67	90	7	0.359
grafo9177.83	83	106	6	1.079
grafo9178.64	64	87	7	0.478
grafo9179.63	63	74	5	0.047
grafo9180.64	64	80	6	0.126
grafo9181.67	67	95	9	3.995
grafo9183.69	69	85	6	0.167
grafo9184.61	61	85	7	0.369
grafo9185.64	64	89	7	0.266
grafo9186.62	62	82	7	0.567
grafo9187.67	67	93	9	14.97
grafo9188.75	75	92	6	0.233
grafo9189.77	77	102	8	7.213
grafo9190.80	80	104	6	0.275
grafo9191.69	69	90	6	0.273
grafo9192.67	67	95	8	0.849
grafo9193.73	73	101	6	0.111
grafo9194.62	62	78	6	0.067
grafo9195.66	66	86	6	0.191
grafo9196.81	81	121	9	10.31
grafo9197.70	70	101	8	2.827
grafo9198.81	81	131	10	22.05
grafo9199.77	77	113	9	18.21
grafo9200.68	68	94	8	1.777
grafo9201.83	83	110	8	10.89
grafo9202.71	71	107	8	1.211
grafo9203.68	68	79	4	0.028
grafo9204.71	71	106	10	16.83
grafo9205.80	80	112	7	2.341
grafo9206.66	66	84	6	0.165
grafo9207.64	64	99	9	1.373
grafo9208.76	76	109	7	1.392
grafo9209.66	66	80	5	0.038
grafo9210.78	78	108	7	0.716
grafo9211.63	63	91	7	0.247

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9212.82	82	124	9	7.626
grafo9213.77	77	115	8	2.459
grafo9214.66	66	95	7	0.293
grafo9215.69	69	90	6	0.121
grafo9216.65	65	81	6	0.466
grafo9217.88	88	122	9	40.26
grafo9218.80	80	108	8	4.517
grafo9219.65	65	87	7	0.499
grafo9220.67	67	101	8	1.963
grafo9221.63	63	100	9	1.557
grafo9222.82	82	113	8	6.14
grafo9223.65	65	85	6	0.288
grafo9224.65	65	100	9	2.048
grafo9225.62	62	77	6	0.176
grafo9226.75	75	96	7	1.644
grafo9227.88	88	125	10	139.1
grafo9228.81	81	117	9	13.32
grafo9229.77	77	99	6	0.469
grafo9230.83	83	120	10	92.07
grafo9231.81	81	116	9	12.15
grafo9232.69	69	94	7	0.796
grafo9233.64	64	84	5	0.017
grafo9234.63	63	87	6	0.127
grafo9235.72	72	93	7	1.136
grafo9236.80	80	120	10	70.28
grafo9237.82	82	112	8	3.053
grafo9238.85	85	103	6	0.858
grafo9239.62	62	85	6	0.096
grafo9240.77	77	92	5	0.073
grafo9241.89	89	108	6	0.918
grafo9242.72	72	96	7	0.799
grafo9243.78	78	102	7	1.604
grafo9244.79	79	98	6	11.82
grafo9245.82	82	110	8	9.432
grafo9246.63	63	89	7	0.285
grafo9247.79	79	99	7	4.054
grafo9248.64	64	93	8	2.518
grafo9249.66	66	96	8	0.935
grafo9250.73	73	100	6	0.126
grafo9251.65	65	96	8	0.874
grafo9252.84	84	119	10	78.62
grafo9253.76	76	105	7	1.144
grafo9254.81	81	105	7	1.55
grafo9255.67	67	86	6	0.164
grafo9256.79	79	98	7	2.949
grafo9257.62	62	85	6	0.105

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9258.62	62	86	6	0.24
grafo9259.64	64	92	8	1.297
grafo9260.68	68	94	6	0.128
grafo9261.82	82	120	9	24.24
grafo9262.72	72	96	6	0.17
grafo9263.76	76	106	8	3.535
grafo9264.70	70	89	6	0.127
grafo9265.62	62	83	6	0.091
grafo9266.66	66	93	7	0.216
grafo9267.79	79	107	8	5.153
grafo9268.78	78	117	9	8.03
grafo9269.64	64	94	8	0.868
grafo9270.63	63	79	6	0.315
grafo9271.66	66	92	8	2.421
grafo9272.65	65	81	5	0.039
grafo9273.78	78	112	9	9.447
grafo9274.65	65	91	7	0.573
grafo9275.79	79	110	8	6.859
grafo9276.72	72	101	8	1.917
grafo9277.76	76	102	7	1.191
grafo9278.61	61	85	6	0.082
grafo9279.72	72	109	9	18.02
grafo9280.62	62	75	5	0.028
grafo9281.75	75	96	6	0.074
grafo9282.68	68	81	5	0.032
grafo9283.66	66	90	6	0.166
grafo9284.68	68	94	8	2.67
grafo9285.86	86	115	8	14.29
grafo9286.77	77	99	6	0.424
grafo9287.69	69	88	6	0.14
grafo9288.67	67	93	7	0.292
grafo9289.89	89	126	8	16.35
grafo9290.75	75	103	7	0.453
grafo9291.63	63	88	7	0.506
grafo9292.63	63	88	7	0.506
grafo9293.74	74	99	7	3.396
grafo9294.84	84	100	6	0.938
grafo9295.66	66	96	8	1.078
grafo9296.71	71	94	6	0.345
grafo9297.70	70	96	6	0.18
grafo9298.63	63	85	6	0.234
grafo9299.92	92	126	9	31.18
grafo9300.70	70	96	7	1.401
grafo9301.61	61	77	6	0.192
grafo9302.66	66	80	5	0.165
grafo9303.90	90	114	7	6.811

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9304.65	65	91	8	1.273
grafo9305.62	62	74	5	0.059
grafo9306.83	83	112	8	19.26
grafo9307.82	82	117	9	32.24
grafo9308.63	63	93	8	0.875
grafo9309.78	78	98	7	1.84
grafo9310.74	74	101	8	39.58
grafo9311.68	68	88	7	0.443
grafo9312.83	83	111	7	1.658
grafo9314.88	88	123	9	40.47
grafo9315.87	87	117	9	49.47
grafo9316.86	86	109	8	16.61
grafo9317.65	65	80	5	0.066
grafo9318.81	81	108	8	9.901
grafo9319.82	82	108	8	2.656
grafo9320.66	66	87	7	0.936
grafo9321.64	64	103	9	2.357
grafo9322.67	67	92	6	0.188
grafo9323.79	79	95	5	0.178
grafo9324.66	66	106	10	12.84
grafo9325.63	63	86	7	0.398
grafo9326.77	77	98	7	4.163
grafo9327.89	89	128	9	30.39
grafo9328.68	68	99	7	0.323
grafo9329.65	65	91	7	0.573
grafo9330.69	69	92	7	1.488
grafo9331.85	85	111	8	15.55
grafo9332.89	89	116	7	1.71
grafo9333.80	80	112	9	23.18
grafo9334.68	68	101	9	5.624
grafo9335.78	78	104	7	1.104
grafo9336.63	63	89	7	0.346
grafo9337.86	86	124	10	78.98
grafo9338.86	86	111	8	15.48
grafo9339.83	83	108	7	2.141
grafo9340.88	88	117	7	1.954
grafo9341.73	73	100	7	2.968
grafo9342.72	72	92	7	0.769
grafo9343.80	80	103	7	0.879
grafo9344.98	98	130	7	4.619
grafo9345.67	67	90	6	0.101
grafo9346.91	91	114	7	5.722
grafo9347.96	96	119	6	1.083
grafo9348.77	77	95	6	0.281
grafo9349.64	64	74	4	0.008
grafo9350.63	63	85	6	0.079

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9351.73	73	89	5	0.041
grafo9352.80	80	99	7	4.503
grafo9353.75	75	113	9	8.731
grafo9354.68	68	87	6	0.255
grafo9355.84	84	117	8	3.369
grafo9356.66	66	101	9	4.995
grafo9358.62	62	82	6	0.088
grafo9359.62	62	84	6	0.314
grafo9360.63	63	80	5	0.075
grafo9361.65	65	81	7	0.548
grafo9363.70	70	95	7	1.022
grafo9364.64	64	91	6	0.062
grafo9365.63	63	83	6	0.089
grafo9366.66	66	85	6	0.194
grafo9367.61	61	77	6	0.193
grafo9368.72	72	93	7	1.226
grafo9369.69	69	89	6	0.538
grafo9370.66	66	88	7	0.166
grafo9371.77	77	103	8	6.698
grafo9372.78	78	105	7	1.558
grafo9373.70	70	87	6	0.353
grafo9374.65	65	85	6	0.088
grafo9375.65	65	76	4	0.009
grafo9376.71	71	84	6	0.428
grafo9377.72	72	101	8	0.989
grafo9378.68	68	81	5	0.025
grafo9379.61	61	76	5	0.022
grafo9380.62	62	96	9	1.945
grafo9381.79	79	104	8	4.096
grafo9382.67	67	83	6	0.141
grafo9383.63	63	87	6	0.076
grafo9384.64	64	88	7	1.042
grafo9385.63	63	83	6	0.064
grafo9386.66	66	86	6	0.177
grafo9387.66	66	84	7	0.899
grafo9388.66	66	80	6	0.216
grafo9389.77	77	99	7	1.778
grafo9390.63	63	94	8	0.824
grafo9391.61	61	78	5	0.046
grafo9392.71	71	94	7	1.378
grafo9393.66	66	88	7	1.312
grafo9394.64	64	87	7	0.258
grafo9395.79	79	99	6	1.124
grafo9396.88	88	123	9	38.23
grafo9397.78	78	96	6	1.31
grafo9398.66	66	90	7	0.271

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9399.69	69	96	8	1.365
grafo9400.63	63	85	6	0.109
grafo9401.80	80	102	7	2.324
grafo9402.64	64	90	6	0.046
grafo9403.66	66	91	7	0.681
grafo9404.65	65	93	7	0.105
grafo9405.62	62	82	6	0.181
grafo9406.84	84	120	10	110.8
grafo9407.78	78	102	8	5.639
grafo9408.61	61	89	6	0.058
grafo9409.86	86	113	8	19.75
grafo9410.67	67	93	8	2.894
grafo9411.65	65	95	8	1.132
grafo9412.82	82	117	9	18.6
grafo9413.80	80	111	9	13.25
grafo9414.75	75	114	11	77.1
grafo9415.65	65	85	7	0.282
grafo9416.67	67	90	7	0.978
grafo9417.65	65	88	6	0.085
grafo9418.74	74	94	6	0.143
grafo9419.60	60	83	6	0.1
grafo9420.64	64	85	6	0.115
grafo9421.82	82	114	8	4.351
grafo9422.86	86	124	9	23.96
grafo9423.72	72	100	7	1.423
grafo9424.63	63	85	6	0.126
grafo9425.78	78	100	7	1.736
grafo9426.65	65	106	9	2.806
grafo9427.72	72	99	7	0.635
grafo9428.85	85	115	8	12.0
grafo9430.65	65	76	5	0.018
grafo9431.79	79	103	7	2.139
grafo9432.89	89	122	9	76.67
grafo9433.65	65	101	9	2.237
grafo9434.83	83	117	9	15.46
grafo9435.72	72	99	6	0.193
grafo9436.82	82	126	10	77.49
grafo9437.64	64	82	5	0.022
grafo9438.76	76	103	7	0.637
grafo9439.78	78	105	7	1.827
grafo9440.83	83	108	7	6.209
grafo9441.73	73	98	8	6.321
grafo9442.63	63	81	6	0.137
grafo9443.82	82	110	8	6.982
grafo9444.65	65	96	8	0.36
grafo9445.89	89	118	8	7.363

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9446.62	62	86	6	0.047
grafo9447.64	64	83	5	0.019
grafo9448.78	78	106	7	0.718
grafo9449.72	72	100	8	8.456
grafo9450.84	84	125	10	55.42
grafo9451.61	61	97	9	0.441
grafo9452.66	66	92	7	0.62
grafo9453.80	80	114	9	169.8
grafo9454.70	70	109	10	12.5
grafo9455.63	63	80	6	0.107
grafo9456.65	65	82	6	0.152
grafo9457.79	79	110	9	18.0
grafo9458.71	71	94	5	0.048
grafo9459.79	79	119	10	24.4
grafo9460.64	64	78	5	0.171
grafo9461.78	78	114	8	1.725
grafo9462.68	68	99	9	15.51
grafo9463.77	77	103	7	1.211
grafo9464.85	85	126	10	146.0
grafo9465.82	82	112	8	24.7
grafo9466.69	69	86	6	0.217
grafo9467.64	64	75	4	0.008
grafo9468.79	79	109	8	8.253
grafo9469.85	85	109	6	0.388
grafo9470.65	65	87	7	0.985
grafo9471.92	92	122	9	31.77
grafo9472.68	68	92	7	0.405
grafo9473.64	64	79	5	0.028
grafo9474.70	70	90	6	0.152
grafo9475.65	65	84	6	0.211
grafo9476.79	79	109	8	6.679
grafo9477.63	63	87	7	0.49
grafo9478.78	78	100	6	0.565
grafo9479.68	68	105	10	12.08
grafo9481.67	67	90	7	0.943
grafo9482.79	79	104	7	1.861
grafo9483.83	83	109	8	14.25
grafo9484.60	60	78	6	0.083
grafo9485.73	73	98	7	1.035
grafo9486.81	81	116	8	7.222
grafo9487.73	73	96	7	0.895
grafo9488.65	65	80	5	0.029
grafo9489.83	83	110	8	13.89
grafo9490.80	80	120	9	26.22
grafo9491.79	79	97	6	0.391
grafo9492.80	80	106	7	4.499

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9493.87	87	122	9	42.82
grafo9494.61	61	80	5	0.036
grafo9495.67	67	96	9	10.25
grafo9496.64	64	89	7	0.441
grafo9497.85	85	114	8	30.7
grafo9498.71	71	95	8	3.247
grafo9499.66	66	88	7	0.501
grafo9500.83	83	117	7	0.75
grafo9501.66	66	105	9	4.826
grafo9502.75	75	111	8	2.65
grafo9503.77	77	109	8	5.198
grafo9504.64	64	88	6	0.107
grafo9505.75	75	97	6	0.144
grafo9506.70	70	91	7	2.578
grafo9507.66	66	96	8	2.532
grafo9508.69	69	86	6	0.226
grafo9509.64	64	91	7	0.379
grafo9510.65	65	89	7	0.735
grafo9511.84	84	119	7	2.104
grafo9512.65	65	93	8	2.149
grafo9513.74	74	100	7	0.936
grafo9514.68	68	89	7	0.601
grafo9515.67	67	89	7	0.949
grafo9516.64	64	92	8	2.133
grafo9517.63	63	76	6	0.154
grafo9518.68	68	90	7	1.363
grafo9519.65	65	85	5	0.022
grafo9520.79	79	109	8	5.637
grafo9521.79	79	104	8	11.44
grafo9522.79	79	105	8	4.543
grafo9523.64	64	85	7	0.691
grafo9524.84	84	116	8	8.004
grafo9525.78	78	102	7	1.157
grafo9526.72	72	98	8	2.408
grafo9527.88	88	118	8	5.38
grafo9528.63	63	92	8	0.399
grafo9529.87	87	105	7	63.77
grafo9530.68	68	103	9	4.986
grafo9531.84	84	111	7	1.243
grafo9532.80	80	94	6	1.009
grafo9533.82	82	112	8	5.169
grafo9534.71	71	98	8	1.537
grafo9535.61	61	78	6	0.283
grafo9536.66	66	93	8	8.092
grafo9537.69	69	89	7	0.803
grafo9538.81	81	120	9	36.01

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9539.71	71	114	9	5.221
grafo9540.68	68	95	7	4.467
grafo9541.80	80	105	8	6.048
grafo9543.65	65	92	7	0.455
grafo9544.62	62	91	8	2.404
grafo9545.75	75	92	6	0.667
grafo9546.66	66	92	8	1.673
grafo9547.63	63	89	7	0.503
grafo9548.65	65	79	6	5.675
grafo9549.78	78	97	7	1.243
grafo9550.85	85	125	10	115.9
grafo9551.78	78	92	5	0.219
grafo9552.72	72	98	8	2.001
grafo9553.79	79	123	11	83.31
grafo9554.74	74	91	6	0.137
grafo9555.70	70	92	7	0.466
grafo9556.62	62	87	7	0.311
grafo9557.79	79	116	9	22.44
grafo9558.65	65	93	7	0.436
grafo9559.64	64	84	6	0.078
grafo9560.80	80	100	7	1.538
grafo9561.83	83	105	6	1.14
grafo9562.66	66	91	7	0.327
grafo9563.63	63	85	6	0.076
grafo9564.74	74	99	6	0.6
grafo9565.86	86	111	8	46.69
grafo9566.70	70	100	8	4.281
grafo9567.67	67	96	8	2.25
grafo9568.65	65	92	7	0.55
grafo9569.70	70	91	6	0.13
grafo9570.64	64	82	6	0.125
grafo9571.67	67	77	5	0.038
grafo9572.71	71	96	8	2.992
grafo9573.65	65	73	4	0.012
grafo9574.74	74	107	8	1.352
grafo9575.65	65	82	6	0.264
grafo9576.92	92	123	9	74.34
grafo9577.97	97	124	8	25.64
grafo9578.66	66	82	6	0.147
grafo9579.63	63	92	8	0.732
grafo9580.97	97	120	8	28.97
grafo9581.91	91	129	9	37.79
grafo9582.80	80	101	6	0.5
grafo9583.62	62	77	6	0.261
grafo9584.86	86	122	8	12.45
grafo9585.86	86	122	8	12.49

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9586.78	78	100	7	1.98
grafo9587.62	62	93	7	0.188
grafo9588.62	62	100	9	1.98
grafo9589.62	62	100	9	1.975
grafo9590.74	74	99	8	4.957
grafo9591.73	73	107	8	3.122
grafo9592.72	72	86	5	0.057
grafo9594.64	64	86	7	0.337
grafo9595.86	86	120	8	28.53
grafo9596.88	88	123	10	102.3
grafo9597.96	96	120	7	5.388
grafo9598.62	62	80	6	0.194
grafo9599.81	81	106	8	8.849
grafo9600.65	65	82	6	0.327
grafo9601.64	64	99	7	0.234
grafo9602.82	82	107	7	2.196
grafo9603.85	85	110	8	9.08
grafo9604.82	82	100	5	0.29
grafo9605.85	85	117	8	9.434
grafo9606.87	87	116	8	13.91
grafo9607.87	87	116	8	14.05
grafo9608.83	83	98	5	0.11
grafo9609.63	63	92	8	0.485
grafo9610.67	67	94	7	0.702
grafo9612.79	79	99	6	0.831
grafo9613.67	67	91	7	0.656
grafo9614.86	86	112	9	37.15
grafo9615.81	81	106	8	5.887
grafo9616.63	63	94	9	2.124
grafo9617.86	86	107	8	15.33
grafo9618.72	72	94	6	0.161
grafo9619.79	79	111	10	82.19
grafo9620.71	71	90	6	0.349
grafo9621.90	90	112	6	0.791
grafo9622.93	93	124	8	5.999
grafo9623.82	82	109	8	5.192
grafo9624.65	65	80	5	0.013
grafo9625.74	74	92	6	0.257
grafo9626.83	83	115	7	2.109
grafo9627.80	80	98	7	6.353
grafo9628.81	81	107	7	3.73
grafo9629.83	83	112	9	26.43
grafo9631.76	76	107	8	6.552
grafo9632.68	68	91	7	0.654
grafo9633.64	64	88	7	0.486
grafo9634.92	92	124	7	5.824

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9636.76	76	100	7	2.689
grafo9637.62	62	81	6	0.179
grafo9638.65	65	90	7	0.704
grafo9639.72	72	80	5	0.061
grafo9640.68	68	90	6	0.07
grafo9641.66	66	79	5	0.038
grafo9642.69	69	91	6	0.163
grafo9643.62	62	73	5	0.061
grafo9644.73	73	92	5	0.047
grafo9645.75	75	94	5	0.049
grafo9646.71	71	86	6	0.471
grafo9647.72	72	92	6	0.157
grafo9648.64	64	75	5	0.061
grafo9649.70	70	86	5	0.037
grafo9650.78	78	107	8	4.134
grafo9651.68	68	90	6	0.153
grafo9652.63	63	75	5	0.039
grafo9653.71	71	80	3	0.005
grafo9654.74	74	94	7	1.364
grafo9655.71	71	88	6	0.13
grafo9656.68	68	93	8	2.922
grafo9657.68	68	90	7	0.568
grafo9658.67	67	79	4	0.014
grafo9659.64	64	82	6	0.109
grafo9660.71	71	97	8	2.949
grafo9661.86	86	132	10	22.13
grafo9662.84	84	119	9	29.14
grafo9663.87	87	119	8	10.03
grafo9664.80	80	103	8	11.65
grafo9665.65	65	86	4	0.006
grafo9666.72	72	112	9	5.474
grafo9667.69	69	89	6	0.162
grafo9668.67	67	83	7	0.79
grafo9669.63	63	84	5	0.017
grafo9670.78	78	100	7	2.608
grafo9671.63	63	80	6	0.19
grafo9672.70	70	104	8	1.823
grafo9673.64	64	89	8	0.797
grafo9674.81	81	116	9	18.7
grafo9675.63	63	89	8	1.033
grafo9677.68	68	97	8	1.478
grafo9678.79	79	106	8	5.806
grafo9679.66	66	95	8	0.845
grafo9680.83	83	111	7	1.883
grafo9681.67	67	87	6	0.157
grafo9682.65	65	101	8	0.442

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9683.67	67	88	6	0.174
grafo9684.69	69	95	7	0.299
grafo9685.83	83	117	10	92.89
grafo9686.73	73	103	8	1.511
grafo9687.79	79	116	9	17.55
grafo9688.67	67	82	6	0.186
grafo9689.77	77	103	7	0.868
grafo9690.63	63	88	8	1.066
grafo9691.79	79	125	11	143.9
grafo9692.80	80	117	8	5.002
grafo9693.78	78	103	6	0.326
grafo9694.79	79	109	8	10.83
grafo9695.77	77	102	8	6.408
grafo9696.62	62	81	7	0.62
grafo9697.62	62	87	7	0.381
grafo9698.79	79	104	6	0.223
grafo9700.68	68	93	7	1.192
grafo9701.84	84	104	6	2.549
grafo9702.81	81	109	9	12.81
grafo9703.65	65	88	6	0.113
grafo9704.80	80	110	8	11.34
grafo9705.73	73	94	7	1.409
grafo9706.88	88	122	9	31.0
grafo9707.62	62	82	6	0.164
grafo9708.70	70	91	6	0.253
grafo9709.86	86	121	9	37.94
grafo9710.78	78	111	9	9.093
grafo9711.66	66	88	7	0.582
grafo9712.67	67	85	6	0.097
grafo9713.73	73	101	9	4.9
grafo9714.66	66	90	7	0.51
grafo9715.81	81	107	7	1.665
grafo9716.64	64	82	6	0.107
grafo9717.64	64	85	5	0.022
grafo9718.76	76	93	6	0.671
grafo9719.74	74	107	8	5.147
grafo9720.68	68	91	7	1.357
grafo9721.79	79	121	10	34.69
grafo9722.79	79	110	9	16.61
grafo9723.72	72	107	8	8.418
grafo9724.64	64	85	7	0.349
grafo9725.66	66	94	8	1.745
grafo9726.84	84	124	8	7.506
grafo9727.66	66	89	7	0.231
grafo9728.70	70	86	5	0.028
grafo9729.69	69	103	8	1.867

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9730.84	84	118	8	8.758
grafo9731.81	81	109	7	1.409
grafo9732.64	64	89	6	0.178
grafo9733.62	62	81	6	0.073
grafo9734.64	64	84	7	0.477
grafo9735.75	75	100	6	0.214
grafo9736.75	75	91	5	0.074
grafo9737.74	74	97	6	0.304
grafo9739.70	70	85	5	0.058
grafo9740.73	73	95	7	0.746
grafo9741.69	69	93	7	0.524
grafo9742.92	92	125	9	102.0
grafo9743.80	80	98	6	0.348
grafo9744.80	80	109	9	12.45
grafo9745.84	84	114	9	27.63
grafo9746.68	68	82	6	0.176
grafo9747.80	80	121	10	48.86
grafo9748.67	67	103	8	0.673
grafo9749.68	68	82	6	0.278
grafo9750.77	77	103	7	0.998
grafo9751.64	64	93	8	1.182
grafo9752.78	78	97	6	0.587
grafo9754.67	67	96	6	0.125
grafo9755.77	77	109	8	1.289
grafo9756.68	68	86	7	2.637
grafo9757.68	68	85	7	1.139
grafo9758.72	72	101	8	2.022
grafo9759.81	81	113	10	66.39
grafo9760.64	64	80	6	0.128
grafo9761.68	68	94	7	0.701
grafo9762.78	78	106	8	7.569
grafo9763.69	69	95	8	2.923
grafo9764.74	74	86	5	0.04
grafo9765.69	69	91	6	0.241
grafo9766.77	77	106	9	5.934
grafo9767.76	76	103	7	1.21
grafo9768.75	75	101	8	2.497
grafo9769.77	77	96	7	2.786
grafo9770.79	79	106	7	2.241
grafo9771.84	84	102	6	1.314
grafo9772.83	83	109	8	8.011
grafo9773.79	79	97	6	0.715
grafo9774.76	76	97	6	0.709
grafo9775.61	61	79	5	0.017
grafo9776.86	86	113	7	4.222
grafo9777.84	84	105	8	27.82

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9778.82	82	108	8	10.34
grafo9779.61	61	90	8	0.746
grafo9780.77	77	96	6	0.32
grafo9781.79	79	115	8	4.266
grafo9782.75	75	96	6	0.358
grafo9783.63	63	82	6	0.295
grafo9784.85	85	120	9	56.33
grafo9785.84	84	108	8	15.1
grafo9786.77	77	106	9	8.27
grafo9787.82	82	114	10	96.52
grafo9788.80	80	124	10	50.06
grafo9789.78	78	103	7	1.075
grafo9790.79	79	103	8	8.167
grafo9791.78	78	112	9	17.8
grafo9792.80	80	112	9	33.84
grafo9793.77	77	96	5	0.072
grafo9794.61	61	91	7	0.286
grafo9795.80	80	117	9	16.25
grafo9796.73	73	98	8	3.275
grafo9797.80	80	107	7	0.927
grafo9798.76	76	91	6	0.376
grafo9799.70	70	105	10	16.16
grafo9800.72	72	95	7	0.726
grafo9801.69	69	87	5	0.07
grafo9802.75	75	114	9	8.787
grafo9803.86	86	109	7	5.38
grafo9804.84	84	121	9	20.5
grafo9805.71	71	93	6	0.121
grafo9806.86	86	109	7	3.704
grafo9807.86	86	109	7	3.725
grafo9808.72	72	91	6	0.246
grafo9809.67	67	88	6	0.122
grafo9810.79	79	101	7	1.103
grafo9811.91	91	126	9	35.9
grafo9812.88	88	113	8	7.234
grafo9813.74	74	95	7	2.141
grafo9814.80	80	104	7	2.577
grafo9815.62	62	102	8	0.59
grafo9816.69	69	96	7	1.178
grafo9817.62	62	85	6	0.121
grafo9818.61	61	88	7	0.466
grafo9819.72	72	102	8	2.589
grafo9820.62	62	82	6	0.153
grafo9821.77	77	95	6	0.275
grafo9822.62	62	89	7	0.464
grafo9823.90	90	126	9	48.16

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9824.85	85	116	8	3.94
grafo9825.67	67	79	5	0.049
grafo9826.67	67	100	8	0.764
grafo9827.62	62	95	9	0.856
grafo9828.72	72	95	6	0.35
grafo9829.86	86	109	8	39.21
grafo9830.71	71	83	6	0.326
grafo9831.67	67	91	6	0.331
grafo9832.92	92	130	9	73.58
grafo9833.81	81	103	8	10.12
grafo9834.81	81	103	8	10.09
grafo9835.77	77	100	7	89.8
grafo9836.62	62	81	5	0.046
grafo9837.78	78	116	9	19.15
grafo9838.70	70	101	9	9.326
grafo9839.79	79	99	6	0.637
grafo9840.82	82	108	7	2.455
grafo9841.70	70	97	8	2.249
grafo9843.83	83	103	6	1.894
grafo9844.82	82	103	6	0.984
grafo9845.75	75	106	8	3.664
grafo9846.81	81	111	10	136.8
grafo9847.61	61	80	6	0.081
grafo9848.76	76	107	8	3.225
grafo9849.35	35	37	3	0.003
grafo9851.32	32	36	3	0.003
grafo9852.38	38	48	5	0.014
grafo9853.36	36	48	4	0.003
grafo9855.35	35	40	3	0.003
grafo9856.37	37	50	5	0.008
grafo9857.31	31	36	3	0.002
grafo9858.34	34	45	4	0.004
grafo9859.35	35	42	4	0.003
grafo9860.40	40	52	5	0.009
grafo9861.39	39	54	4	0.004
grafo9862.36	36	51	5	0.004
grafo9863.91	91	117	9	41.36
grafo9865.31	31	36	3	0.002
grafo9866.34	34	34	2	0.002
grafo9867.32	32	33	2	0.003
grafo9868.37	37	50	4	0.003
grafo9869.33	33	38	4	0.002
grafo9870.35	35	43	4	0.004
grafo9871.38	38	57	5	0.004
grafo9872.32	32	43	4	0.003
grafo9873.35	35	47	5	0.004

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9874.37	37	46	4	0.004
grafo9875.38	38	49	5	0.013
grafo9876.33	33	39	3	0.003
grafo9877.39	39	58	6	0.007
grafo9878.34	34	39	3	0.003
grafo9879.37	37	47	4	0.003
grafo9880.32	32	40	4	0.003
grafo9881.32	32	37	3	0.003
grafo9882.34	34	39	3	0.003
grafo9883.34	34	42	3	0.003
grafo9884.33	33	42	3	0.003
grafo9885.41	41	54	5	0.007
grafo9886.38	38	43	3	0.003
grafo9887.91	91	127	10	68.47
grafo9888.33	33	38	3	0.003
grafo9889.32	32	33	3	0.002
grafo9890.37	37	44	4	0.003
grafo9891.32	32	37	3	0.003
grafo9892.34	34	38	3	0.003
grafo9893.38	38	49	4	0.004
grafo9894.91	91	128	10	116.1
grafo9895.33	33	37	3	0.003
grafo9896.38	38	47	4	0.004
grafo9897.39	39	55	5	0.006
grafo9898.40	40	50	4	0.004
grafo9899.33	33	34	3	0.003
grafo9900.39	39	44	3	0.004
grafo9901.34	34	35	2	0.003
grafo9902.32	32	36	3	0.003
grafo9903.33	33	42	3	0.003
grafo9904.33	33	37	3	0.002
grafo9905.33	33	41	4	0.003
grafo9906.38	38	51	5	0.005
grafo9907.32	32	35	3	0.003
grafo9908.91	91	118	7	3.027
grafo9909.38	38	48	5	0.01
grafo9910.32	32	37	4	0.003
grafo9912.31	31	38	4	0.003
grafo9913.31	31	36	3	0.002
grafo9914.91	91	120	9	85.45
grafo9915.91	91	119	6	0.294
grafo9916.31	31	36	3	0.002
grafo9917.38	38	48	5	0.008
grafo9918.34	34	34	2	0.003
grafo9919.32	32	32	2	0.003
grafo9920.38	38	46	3	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9921.33	33	36	3	0.003
grafo9922.39	39	50	5	0.009
grafo9923.31	31	41	3	0.003
grafo9924.39	39	52	6	0.021
grafo9925.91	91	125	9	91.97
grafo9926.33	33	34	2	0.002
grafo9927.40	40	50	5	0.007
grafo9928.95	95	120	7	5.214
grafo9929.40	40	56	6	0.016
grafo9930.38	38	49	5	0.006
grafo9931.39	39	48	5	0.006
grafo9933.39	39	48	4	0.004
grafo9934.34	34	40	3	0.002
grafo9935.40	40	50	4	0.004
grafo9936.90	90	126	8	15.24
grafo9937.91	91	121	9	18.72
grafo9938.38	38	48	4	0.004
grafo9939.96	96	119	7	6.924
grafo9940.39	39	50	5	0.008
grafo9941.38	38	48	5	0.006
grafo9942.32	32	37	3	0.003
grafo9943.38	38	51	5	0.004
grafo9944.41	41	49	4	0.005
grafo9945.91	91	123	9	74.86
grafo9946.41	41	48	4	0.004
grafo9947.32	32	40	3	0.003
grafo9949.91	91	119	8	29.41
grafo9950.100	100	128	8	95.94
grafo9951.33	33	37	3	0.003
grafo9952.34	34	39	3	0.003
grafo9953.33	33	42	3	0.003
grafo9954.32	32	34	3	0.003
grafo9955.38	38	46	3	0.003
grafo9956.32	32	39	4	0.003
grafo9957.39	39	51	5	0.006
grafo9958.90	90	118	7	5.033
grafo9959.91	91	113	8	27.99
grafo9960.32	32	37	3	0.003
grafo9961.92	92	123	8	16.02
grafo9962.97	97	124	8	37.77
grafo9963.39	39	46	4	0.005
grafo9964.34	34	38	3	0.002
grafo9965.34	34	49	4	0.003
grafo9966.39	39	47	3	0.003
grafo9967.39	39	46	4	0.004
grafo9968.38	38	44	4	0.004

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo9969.33	33	39	4	0.004
grafo9970.39	39	46	3	0.003
grafo9971.33	33	36	3	0.002
grafo9972.41	41	57	6	0.02
grafo9973.96	96	144	10	62.47
grafo9974.39	39	55	4	0.003
grafo9975.32	32	39	4	0.003
grafo9976.34	34	43	4	0.003
grafo9977.38	38	46	4	0.005
grafo9978.41	41	53	5	0.009
grafo9979.38	38	50	5	0.005
grafo9980.32	32	37	4	0.004
grafo9981.38	38	45	3	0.003
grafo9982.38	38	49	5	0.006
grafo9983.91	91	125	9	15.83
grafo9984.96	96	140	9	40.54
grafo9985.91	91	119	8	46.81
grafo9986.91	91	122	8	4.908
grafo9987.91	91	118	8	56.25
grafo9988.38	38	48	4	0.004
grafo9989.32	32	38	4	0.003
grafo9990.31	31	35	3	0.002
grafo9991.39	39	54	5	0.006
grafo9992.40	40	51	4	0.004
grafo9993.91	91	128	9	31.67
grafo9994.91	91	121	9	54.67
grafo9995.94	94	137	10	72.43
grafo9996.32	32	37	3	0.003
grafo9997.40	40	50	5	0.006
grafo9998.38	38	47	4	0.005
grafo9999.39	39	49	5	0.013
grafo10000.38	38	52	5	0.004
grafo10001.32	32	32	2	0.002
grafo10002.40	40	45	3	0.004
grafo10003.40	40	50	4	0.005
grafo10004.32	32	37	3	0.003
grafo10005.39	39	49	4	0.004
grafo10006.98	98	136	9	101.4
grafo10007.31	31	34	3	0.002
grafo10008.42	42	61	6	0.023
grafo10009.31	31	37	3	0.002
grafo10010.39	39	50	5	0.006
grafo10011.31	31	36	3	0.003
grafo10012.40	40	53	4	0.004
grafo10013.31	31	36	3	0.002
grafo10014.39	39	52	5	0.005

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10015.39	39	45	4	0.004
grafo10016.39	39	52	5	0.006
grafo10018.31	31	36	3	0.002
grafo10019.38	38	47	4	0.003
grafo10020.38	38	50	5	0.005
grafo10021.39	39	48	4	0.006
grafo10022.31	31	36	3	0.003
grafo10023.39	39	51	5	0.005
grafo10024.32	32	38	4	0.003
grafo10025.31	31	37	3	0.003
grafo10026.32	32	38	4	0.002
grafo10027.38	38	50	5	0.006
grafo10028.96	96	135	10	130.2
grafo10029.40	40	55	5	0.005
grafo10030.38	38	52	5	0.005
grafo10031.38	38	49	5	0.013
grafo10032.38	38	47	4	0.003
grafo10033.31	31	36	3	0.002
grafo10034.40	40	54	5	0.005
grafo10035.38	38	47	4	0.004
grafo10036.31	31	36	3	0.002
grafo10037.39	39	50	4	0.003
grafo10038.38	38	46	4	0.003
grafo10039.98	98	128	8	39.94
grafo10040.32	32	36	3	0.003
grafo10041.41	41	56	5	0.009
grafo10042.39	39	53	5	0.004
grafo10043.32	32	38	4	0.003
grafo10044.38	38	46	4	0.004
grafo10045.38	38	50	4	0.004
grafo10046.40	40	50	5	0.011
grafo10047.32	32	38	4	0.003
grafo10048.32	32	39	4	0.003
grafo10049.39	39	50	5	0.005
grafo10050.97	97	133	9	68.1
grafo10051.30	30	35	3	0.002
grafo10052.32	32	33	2	0.003
grafo10053.32	32	37	3	0.003
grafo10054.40	40	51	5	0.01
grafo10055.40	40	56	5	0.008
grafo10056.31	31	36	3	0.002
grafo10057.40	40	59	6	0.017
grafo10058.32	32	40	4	0.003
grafo10059.32	32	39	4	0.003
grafo10060.90	90	121	8	27.49
grafo10062.39	39	44	4	0.005

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10063.31	31	36	3	0.003
grafo10064.39	39	59	6	0.01
grafo10065.32	32	40	4	0.003
grafo10066.40	40	53	5	0.007
grafo10067.41	41	47	3	0.004
grafo10068.31	31	37	3	0.002
grafo10069.40	40	52	5	0.006
grafo10070.32	32	37	3	0.002
grafo10071.40	40	50	4	0.004
grafo10074.90	90	130	10	105.7
grafo10075.31	31	37	3	0.003
grafo10077.31	31	36	3	0.003
grafo10078.40	40	51	5	0.008
grafo10079.41	41	57	5	0.005
grafo10080.38	38	47	4	0.003
grafo10081.34	34	42	4	0.004
grafo10082.98	98	125	8	19.2
grafo10083.38	38	51	5	0.005
grafo10085.35	35	41	4	0.003
grafo10086.34	34	42	3	0.003
grafo10087.39	39	52	5	0.006
grafo10088.39	39	55	5	0.004
grafo10089.37	37	49	5	0.004
grafo10090.97	97	118	6	1.83
grafo10091.96	96	130	8	29.87
grafo10095.93	93	120	8	63.57
grafo10096.95	95	130	8	30.23
grafo10101.92	92	132	9	47.58
grafo10102.97	97	132	8	15.24
grafo10103.98	98	131	9	56.8
grafo10106.100	100	119	6	2.081
grafo10107.93	93	133	8	21.61
grafo10108.99	99	129	7	6.213
grafo10109.95	95	126	7	2.474
grafo10110.97	97	117	6	2.974
grafo10111.96	96	122	8	33.74
grafo10114.95	95	119	7	7.74
grafo10115.92	92	117	7	3.701
grafo10117.98	98	125	9	126.2
grafo10120.96	96	125	9	133.2
grafo10121.95	95	122	8	35.8
grafo10122.96	96	124	8	31.81
grafo10123.96	96	130	9	83.12
grafo10125.99	99	114	6	1.646
grafo10127.94	94	130	9	12.55
grafo10128.98	98	130	8	5.799

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10129.99	99	135	10	113.7
grafo10131.98	98	126	9	101.1
grafo10133.32	32	37	4	0.011
grafo10134.33	33	34	2	0.002
grafo10135.35	35	43	3	0.003
grafo10136.39	39	48	4	0.004
grafo10137.36	36	45	4	0.003
grafo10138.33	33	42	3	0.003
grafo10139.95	95	127	7	9.901
grafo10140.40	40	48	4	0.003
grafo10141.38	38	45	4	0.004
grafo10142.37	37	47	5	0.006
grafo10143.93	93	118	7	3.202
grafo10144.98	98	134	7	3.888
grafo10145.94	94	125	8	13.92
grafo10146.97	97	142	9	44.65
grafo10148.97	97	134	8	28.95
grafo10150.95	95	129	9	47.7
grafo10152.96	96	125	7	3.988
grafo10153.100	100	136	9	160.1
grafo10157.94	94	120	8	9.342
grafo10158.91	91	121	7	2.147
grafo10159.95	95	125	8	58.21
grafo10162.93	93	137	9	56.04
grafo10163.93	93	121	8	27.69
grafo10165.96	96	125	8	30.43
grafo10166.98	98	133	9	120.1
grafo10167.96	96	133	8	12.35
grafo10168.95	95	122	9	60.33
grafo10169.93	93	116	7	21.46
grafo10172.99	99	132	8	25.88
grafo10174.95	95	131	8	22.79
grafo10177.96	96	122	8	9.882
grafo10178.99	99	128	8	29.68
grafo10180.98	98	132	9	85.66
grafo10181.93	93	133	9	50.08
grafo10182.33	33	33	2	0.002
grafo10185.32	32	38	3	0.003
grafo10186.39	39	48	4	0.004
grafo10187.33	33	37	3	0.003
grafo10188.38	38	48	5	0.005
grafo10189.38	38	46	4	0.003
grafo10190.34	34	45	4	0.003
grafo10191.34	34	38	3	0.002
grafo10192.39	39	48	3	0.003
grafo10193.38	38	46	4	0.004

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10194.97	97	134	8	19.13
grafo10196.94	94	121	7	4.105
grafo10198.94	94	121	7	7.356
grafo10199.98	98	123	6	0.619
grafo10200.96	96	128	7	1.231
grafo10201.93	93	123	8	26.73
grafo10202.92	92	131	10	53.93
grafo10206.97	97	128	8	25.07
grafo10208.98	98	131	8	19.97
grafo10210.92	92	118	8	16.94
grafo10211.92	92	119	7	4.087
grafo10212.97	97	126	9	35.67
grafo10214.94	94	125	8	14.01
grafo10217.99	99	133	9	39.72
grafo10219.99	99	128	9	41.38
grafo10221.95	95	128	8	20.84
grafo10224.95	95	133	9	85.02
grafo10225.99	99	133	9	83.19
grafo10226.97	97	123	7	11.71
grafo10227.96	96	128	8	57.1
grafo10228.95	95	132	9	89.16
grafo10229.36	36	46	4	0.003
grafo10230.37	37	48	3	0.004
grafo10231.32	32	35	2	0.003
grafo10232.37	37	49	5	0.004
grafo10233.34	34	39	3	0.003
grafo10234.39	39	51	5	0.006
grafo10235.39	39	53	4	0.003
grafo10236.95	95	119	6	1.351
grafo10239.91	91	123	9	57.13
grafo10241.95	95	128	8	4.712
grafo10242.93	93	121	9	46.27
grafo10243.95	95	133	9	31.78
grafo10247.95	95	126	9	124.7
grafo10248.100	100	126	7	4.275
grafo10250.100	100	138	9	165.4
grafo10252.96	96	134	9	100.1
grafo10253.97	97	125	8	6.975
grafo10254.94	94	127	8	20.02
grafo10256.96	96	127	7	1.935
grafo10257.100	100	124	6	1.662
grafo10258.96	96	131	7	2.957
grafo10261.96	96	123	8	84.86
grafo10263.97	97	123	7	19.1
grafo10264.99	99	127	7	5.445
grafo10265.100	100	137	9	78.51

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10267.95	95	125	8	24.36
grafo10268.97	97	134	9	25.03
grafo10269.99	99	138	9	127.8
grafo10276.41	41	55	5	0.01
grafo10277.35	35	45	4	0.003
grafo10278.40	40	55	4	0.004
grafo10279.32	32	37	3	0.002
grafo10280.37	37	48	5	0.006
grafo10281.34	34	42	3	0.003
grafo10282.40	40	59	6	0.012
grafo10283.92	92	131	9	78.42
grafo10284.36	36	48	4	0.003
grafo10285.39	39	59	6	0.01
grafo10286.97	97	130	8	38.68
grafo10287.92	92	111	7	32.39
grafo10289.99	99	125	8	20.8
grafo10290.95	95	125	8	28.26
grafo10291.93	93	137	10	129.1
grafo10293.99	99	135	8	21.09
grafo10294.100	100	134	8	12.68
grafo10300.94	94	119	6	4.241
grafo10302.96	96	130	9	67.54
grafo10304.94	94	112	5	0.296
grafo10305.100	100	140	9	96.96
grafo10306.95	95	129	9	33.06
grafo10307.99	99	125	8	26.41
grafo10308.96	96	125	9	222.2
grafo10310.93	93	117	8	38.6
grafo10312.91	91	116	7	3.51
grafo10313.94	94	118	7	3.877
grafo10314.96	96	124	8	177.5
grafo10315.98	98	127	8	20.13
grafo10316.100	100	134	9	131.1
grafo10317.91	91	123	8	6.044
grafo10318.98	98	137	10	133.0
grafo10319.92	92	124	8	534.1
grafo10320.95	95	130	9	33.24
grafo10323.97	97	128	9	54.68
grafo10324.99	99	118	6	2.132
grafo10326.93	93	127	7	1.381
grafo10328.92	92	111	5	0.661
grafo10329.97	97	135	9	86.57
grafo10330.96	96	124	8	22.46
grafo10332.94	94	128	10	80.82
grafo10333.33	33	36	3	0.003
grafo10334.94	94	123	6	0.591

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10335.40	40	51	4	0.004
grafo10336.37	37	46	4	0.003
grafo10337.36	36	40	3	0.002
grafo10338.33	33	42	3	0.003
grafo10340.33	33	37	3	0.003
grafo10341.41	41	50	3	0.003
grafo10342.37	37	47	5	0.005
grafo10343.94	94	118	4	0.045
grafo10344.100	100	130	8	38.38
grafo10345.95	95	130	9	71.09
grafo10348.99	99	131	9	56.06
grafo10349.94	94	128	8	57.03
grafo10352.95	95	123	8	16.97
grafo10355.94	94	119	8	36.54
grafo10356.97	97	127	7	3.491
grafo10357.94	94	126	8	48.7
grafo10360.93	93	118	8	22.44
grafo10361.97	97	132	10	145.8
grafo10362.94	94	136	9	96.93
grafo10363.98	98	125	8	68.16
grafo10364.100	100	121	7	7.863
grafo10365.97	97	137	9	57.28
grafo10366.99	99	134	9	42.64
grafo10368.96	96	124	7	4.032
grafo10370.98	98	127	9	57.13
grafo10371.95	95	125	8	20.66
grafo10372.100	100	127	8	49.92
grafo10373.94	94	122	7	9.239
grafo10374.97	97	126	8	17.05
grafo10376.92	92	125	8	37.87
grafo10378.100	100	122	6	4.371
grafo10379.95	95	132	8	17.94
grafo10384.99	99	124	8	22.5
grafo10387.97	97	137	9	33.25
grafo10389.94	94	131	9	36.13
grafo10390.95	95	131	9	44.11
grafo10391.94	94	129	9	99.2
grafo10392.94	94	132	10	110.4
grafo10394.100	100	127	7	6.089
grafo10395.36	36	44	4	0.003
grafo10396.33	33	38	4	0.004
grafo10397.36	36	46	4	0.003
grafo10398.35	35	40	3	0.003
grafo10399.33	33	43	4	0.003
grafo10400.33	33	38	3	0.002
grafo10401.38	38	48	5	0.014

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Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10402.40	40	47	3	0.003
grafo10403.38	38	53	6	0.013
grafo10406.97	97	124	8	26.16
grafo10407.93	93	121	8	15.44
grafo10408.93	93	123	8	54.85
grafo10410.93	93	124	7	2.768
grafo10411.98	98	130	9	180.1
grafo10412.94	94	126	9	33.9
grafo10417.95	95	128	9	44.85
grafo10419.91	91	132	10	107.9
grafo10421.99	99	139	9	102.0
grafo10424.93	93	120	8	86.93
grafo10425.93	93	122	7	66.92
grafo10426.100	100	138	9	80.24
grafo10427.95	95	126	9	105.8
grafo10428.35	35	42	4	0.003
grafo10430.95	95	120	7	5.215
grafo10431.95	95	132	8	15.47
grafo10435.96	96	123	8	28.94
grafo10437.97	97	124	8	55.43
grafo10438.97	97	128	9	58.54
grafo10439.96	96	130	9	78.83
grafo10440.93	93	123	8	25.82
grafo10442.97	97	125	7	5.931
grafo10443.98	98	125	7	3.894
grafo10444.100	100	136	9	100.2
grafo10447.99	99	129	8	40.91
grafo10448.98	98	124	7	118.5
grafo10449.96	96	126	9	63.7
grafo10450.36	36	46	5	0.004
grafo10454.33	33	42	4	0.003
grafo10455.38	38	42	3	0.003
grafo10456.33	33	38	3	0.003
grafo10457.36	36	45	4	0.004
grafo10458.31	31	36	3	0.003
grafo10459.37	37	46	4	0.003
grafo10460.36	36	39	3	0.003
grafo10461.36	36	45	4	0.004
grafo10462.36	36	40	3	0.003
grafo10463.36	36	50	6	0.009
grafo10464.96	96	119	5	0.125
grafo10465.96	96	129	9	84.15
grafo10466.94	94	121	7	4.477
grafo10468.99	99	129	7	5.848
grafo10471.94	94	125	7	3.33
grafo10472.32	32	37	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10475.98	98	125	8	48.22
grafo10476.95	95	116	7	7.793
grafo10477.91	91	108	7	6.861
grafo10478.94	94	122	6	0.418
grafo10480.95	95	124	8	35.32
grafo10481.95	95	120	7	6.011
grafo10482.94	94	122	9	23.73
grafo10483.34	34	45	5	0.004
grafo10485.94	94	125	7	5.383
grafo10486.97	97	125	8	52.08
grafo10487.95	95	121	7	4.213
grafo10490.99	99	134	9	80.43
grafo10493.94	94	119	7	4.266
grafo10494.40	40	50	5	0.011
grafo10495.97	97	131	9	49.72
grafo10496.98	98	137	9	137.0
grafo10497.95	95	125	9	117.4
grafo10498.99	99	129	9	55.42
grafo10499.96	96	125	8	35.91
grafo10500.91	91	120	8	11.73
grafo10501.96	96	138	9	40.25
grafo10503.100	100	132	8	16.05
grafo10504.100	100	129	8	42.76
grafo10505.39	39	52	5	0.004
grafo10506.98	98	134	9	98.47
grafo10507.93	93	128	8	26.36
grafo10508.100	100	143	9	95.51
grafo10509.32	32	38	4	0.002
grafo10510.35	35	42	3	0.003
grafo10511.34	34	41	4	0.004
grafo10512.36	36	42	4	0.004
grafo10513.37	37	47	4	0.003
grafo10514.39	39	49	5	0.008
grafo10515.39	39	54	5	0.004
grafo10520.99	99	131	8	49.37
grafo10524.97	97	119	6	0.989
grafo10525.100	100	128	7	38.91
grafo10526.97	97	133	9	87.29
grafo10529.98	98	131	7	3.37
grafo10530.100	100	130	8	41.64
grafo10531.96	96	123	8	7.126
grafo10532.99	99	135	9	103.6
grafo10533.100	100	135	8	20.03
grafo10535.100	100	123	7	4.534
grafo10538.100	100	141	9	104.6
grafo10540.97	97	121	8	68.47

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10543.95	95	125	8	151.3
grafo10544.93	93	120	7	2.354
grafo10545.93	93	121	8	34.35
grafo10546.98	98	126	8	34.95
grafo10550.100	100	124	7	6.618
grafo10551.90	90	119	7	1.121
grafo10553.98	98	117	6	3.85
grafo10554.93	93	110	5	0.286
grafo10555.98	98	130	8	39.33
grafo10556.100	100	130	9	99.83
grafo10558.97	97	131	9	35.85
grafo10561.97	97	129	8	7.097
grafo10562.33	33	39	3	0.003
grafo10563.41	41	48	4	0.004
grafo10564.37	37	47	4	0.004
grafo10565.32	32	40	3	0.002
grafo10566.36	36	48	5	0.005
grafo10567.38	38	47	4	0.006
grafo10568.39	39	56	4	0.003
grafo10569.36	36	47	5	0.006
grafo10570.95	95	120	7	2.922
grafo10571.93	93	129	8	18.22
grafo10573.93	93	124	8	25.42
grafo10574.94	94	128	9	86.56
grafo10575.99	99	137	9	79.48
grafo10577.100	100	135	9	68.4
grafo10579.96	96	119	7	9.141
grafo10581.98	98	128	8	5.992
grafo10582.94	94	126	9	51.75
grafo10583.94	94	124	8	14.26
grafo10584.100	100	129	7	5.025
grafo10585.93	93	135	9	75.33
grafo10587.94	94	119	8	18.63
grafo10588.93	93	128	8	13.99
grafo10589.93	93	136	10	109.4
grafo10590.96	96	118	6	1.489
grafo10591.99	99	119	7	100.7
grafo10592.98	98	140	9	57.48
grafo10594.94	94	132	9	92.89
grafo10595.95	95	121	8	24.79
grafo10597.95	95	117	7	9.259
grafo10598.99	99	130	7	6.837
grafo10599.97	97	124	7	11.58
grafo10601.93	93	128	8	16.8
grafo10602.94	94	113	5	0.353
grafo10606.94	94	127	8	144.6

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10607.94	94	128	8	12.77
grafo10609.100	100	132	9	51.38
grafo10611.94	94	122	7	2.587
grafo10612.94	94	121	7	3.373
grafo10613.96	96	131	9	60.78
grafo10614.92	92	129	10	122.0
grafo10615.40	40	50	4	0.003
grafo10616.96	96	130	9	35.12
grafo10617.34	34	45	4	0.003
grafo10618.38	38	54	6	0.008
grafo10619.36	36	41	3	0.003
grafo10620.35	35	41	3	0.003
grafo10621.37	37	49	5	0.004
grafo10622.39	39	54	5	0.007
grafo10623.98	98	130	9	38.99
grafo10625.100	100	128	7	6.892
grafo10627.96	96	133	9	36.78
grafo10628.96	96	124	7	11.81
grafo10630.94	94	142	10	106.1
grafo10631.98	98	132	9	97.85
grafo10636.95	95	135	9	31.91
grafo10639.91	91	120	9	61.94
grafo10640.94	94	122	8	42.24
grafo10641.99	99	131	8	63.77
grafo10642.90	90	118	9	46.73
grafo10643.94	94	118	8	31.25
grafo10645.95	95	124	9	90.35
grafo10649.95	95	125	9	65.33
grafo10651.90	90	120	8	10.59
grafo10654.96	96	129	9	38.74
grafo10655.34	34	40	3	0.003
grafo10656.98	98	125	7	3.311
grafo10657.39	39	50	4	0.004
grafo10658.35	35	41	4	0.003
grafo10659.38	38	57	5	0.004
grafo10660.37	37	49	5	0.005
grafo10665.100	100	127	8	26.33
grafo10666.98	98	128	8	28.65
grafo10667.98	98	128	8	17.53
grafo10668.99	99	128	7	8.013
grafo10669.93	93	130	9	89.9
grafo10671.100	100	144	9	48.22
grafo10673.93	93	120	8	26.35
grafo10674.99	99	145	9	48.57
grafo10675.95	95	131	9	85.32
grafo10676.100	100	136	9	41.0

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10677.95	95	122	8	26.83
grafo10678.98	98	125	7	6.67
grafo10679.100	100	129	7	5.67
grafo10680.95	95	126	9	155.5
grafo10681.93	93	124	9	41.9
grafo10682.98	98	128	8	28.73
grafo10683.97	97	124	7	12.07
grafo10684.95	95	126	9	40.37
grafo10686.96	96	123	7	5.764
grafo10687.96	96	134	9	29.36
grafo10689.98	98	140	9	101.5
grafo10690.96	96	116	8	45.43
grafo10691.95	95	123	7	4.926
grafo10692.92	92	121	8	15.57
grafo10693.98	98	150	10	81.69
grafo10697.95	95	123	8	19.1
grafo10699.98	98	123	7	15.57
grafo10701.99	99	120	6	3.717
grafo10702.33	33	41	4	0.003
grafo10703.95	95	126	7	1.211
grafo10704.37	37	44	4	0.004
grafo10705.97	97	133	9	67.23
grafo10706.37	37	47	3	0.004
grafo10707.33	33	37	3	0.002
grafo10708.35	35	46	5	0.005
grafo10709.98	98	134	9	77.52
grafo10710.93	93	118	7	3.189
grafo10711.93	93	123	8	19.58
grafo10715.92	92	118	6	0.632
grafo10716.97	97	127	9	81.81
grafo10718.98	98	120	6	0.889
grafo10719.96	96	133	9	93.7
grafo10720.96	96	127	9	147.0
grafo10721.96	96	125	8	48.51
grafo10723.96	96	112	5	0.247
grafo10724.92	92	120	7	2.307
grafo10725.99	99	129	8	63.77
grafo10728.34	34	40	3	0.002
grafo10729.36	36	46	4	0.004
grafo10730.38	38	48	4	0.004
grafo10731.32	32	35	3	0.003
grafo10732.33	33	37	3	0.003
grafo10733.39	39	53	5	0.005
grafo10734.37	37	51	5	0.004
grafo10736.99	99	137	8	12.23
grafo10738.96	96	124	9	106.0

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10739.93	93	113	6	5.418
grafo10740.92	92	117	7	1.803
grafo10742.99	99	130	9	79.43
grafo10743.96	96	118	7	20.64
grafo10744.96	96	129	9	139.2
grafo10745.31	31	36	3	0.002
grafo10746.36	36	42	3	0.003
grafo10747.38	38	44	3	0.003
grafo10748.39	39	58	6	0.014
grafo10749.32	32	39	4	0.002
grafo10751.36	36	48	5	0.005
grafo10752.35	35	42	4	0.003
grafo10753.33	33	42	3	0.003
grafo10754.35	35	42	3	0.003
grafo10755.41	41	56	5	0.006
grafo10756.42	42	55	5	0.007
grafo10757.96	96	134	9	38.14
grafo10759.96	96	122	8	45.5
grafo10761.95	95	117	9	159.7
grafo10762.99	99	133	9	196.4
grafo10763.92	92	129	9	32.98
grafo10764.96	96	131	8	68.75
grafo10765.92	92	119	6	0.375
grafo10766.33	33	38	4	0.003
grafo10767.38	38	50	5	0.005
grafo10768.35	35	49	4	0.003
grafo10769.36	36	48	4	0.003
grafo10770.35	35	46	5	0.005
grafo10771.92	92	127	9	40.26
grafo10773.93	93	126	9	93.62
grafo10774.93	93	127	9	44.14
grafo10775.94	94	124	8	16.86
grafo10776.96	96	117	6	11.01
grafo10778.100	100	128	9	82.6
grafo10779.96	96	125	7	4.785
grafo10784.98	98	126	8	53.86
grafo10785.94	94	134	9	124.9
grafo10786.100	100	131	8	15.52
grafo10787.95	95	121	7	4.994
grafo10788.98	98	132	9	80.09
grafo10790.98	98	125	8	41.43
grafo10791.34	34	35	3	0.003
grafo10793.95	95	135	9	43.76
grafo10794.100	100	130	8	32.13
grafo10795.32	32	35	3	0.003
grafo10796.33	33	38	3	0.002

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10797.94	94	125	7	2.935
grafo10798.37	37	47	4	0.004
grafo10799.34	34	39	3	0.002
grafo10800.37	37	45	5	0.01
grafo10801.35	35	39	3	0.003
grafo10802.37	37	48	4	0.003
grafo10803.99	99	132	8	8.011
grafo10804.35	35	46	5	0.004
grafo10812.98	98	128	8	25.2
grafo10813.93	93	126	8	16.08
grafo10815.97	97	126	8	14.22
grafo10816.93	93	119	8	25.75
grafo10817.96	96	126	7	4.585
grafo10818.97	97	128	7	18.82
grafo10819.95	95	122	9	39.35
grafo10820.100	100	141	9	66.92
grafo10821.96	96	115	8	40.23
grafo10823.96	96	129	9	102.5
grafo10824.92	92	116	7	4.497
grafo10826.93	93	125	9	67.2
grafo10827.99	99	135	9	56.78
grafo10828.97	97	135	8	2.886
grafo10829.97	97	136	8	34.61
grafo10830.92	92	129	9	37.9
grafo10833.98	98	132	9	58.67
grafo10835.39	39	45	3	0.003
grafo10837.95	95	125	7	1.948
grafo10838.37	37	45	4	0.004
grafo10839.32	32	36	3	0.003
grafo10840.36	36	50	6	0.01
grafo10841.35	35	45	4	0.004
grafo10842.33	33	42	3	0.003
grafo10843.34	34	39	3	0.003
grafo10844.39	39	49	5	0.009
grafo10845.41	41	53	5	0.011
grafo10846.40	40	59	6	0.02
grafo10847.93	93	115	6	5.96
grafo10848.94	94	119	6	0.356
grafo10850.94	94	129	8	15.42
grafo10851.95	95	134	9	75.08
grafo10852.94	94	110	6	2.088
grafo10853.92	92	113	6	1.425
grafo10854.99	99	135	8	74.78
grafo10855.96	96	113	6	1.528
grafo10856.91	91	119	9	49.67
grafo10857.95	95	126	9	125.8

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10858.93	93	118	7	2.531
grafo10859.97	97	137	10	89.32
grafo10863.94	94	126	9	74.07
grafo10868.96	96	117	6	0.951
grafo10870.94	94	129	10	365.5
grafo10871.95	95	125	8	17.96
grafo10872.93	93	115	5	0.169
grafo10874.94	94	122	7	61.02
grafo10875.97	97	122	8	87.53
grafo10877.97	97	124	7	3.389
grafo10878.94	94	138	11	314.2
grafo10879.92	92	124	9	83.18
grafo10880.95	95	119	7	3.993
grafo10881.97	97	130	8	34.54
grafo10884.93	93	122	8	11.48
grafo10886.97	97	130	8	15.56
grafo10887.31	31	36	3	0.003
grafo10888.35	35	46	5	0.004
grafo10889.36	36	42	4	0.003
grafo10890.34	34	39	3	0.002
grafo10891.95	95	118	7	5.612
grafo10892.37	37	48	5	0.007
grafo10895.98	98	130	9	47.83
grafo10896.96	96	115	6	7.407
grafo10899.96	96	121	7	9.636
grafo10902.33	33	42	4	0.003
grafo10903.93	93	134	10	459.9
grafo10904.94	94	129	9	47.5
grafo10906.97	97	116	7	16.35
grafo10909.96	96	124	7	2.927
grafo10910.94	94	118	6	1.993
grafo10912.92	92	126	8	9.695
grafo10913.97	97	130	9	41.91
grafo10914.96	96	127	7	1.889
grafo10916.95	95	118	7	9.482
grafo10917.94	94	132	8	22.21
grafo10920.95	95	122	7	8.01
grafo10922.100	100	130	8	9.068
grafo10924.98	98	129	8	35.97
grafo10925.95	95	127	9	65.34
grafo10926.99	99	139	9	34.29
grafo10927.95	95	132	9	40.77
grafo10928.100	100	140	8	46.23
grafo10929.94	94	130	9	83.59
grafo10931.94	94	117	6	1.114
grafo10932.94	94	124	8	14.73

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10933.94	94	128	9	91.8
grafo10934.95	95	131	8	21.65
grafo10935.94	94	127	10	121.0
grafo10936.98	98	124	8	64.44
grafo10937.100	100	136	9	156.0
grafo10938.33	33	36	3	0.003
grafo10939.33	33	38	2	0.003
grafo10940.39	39	47	5	0.022
grafo10941.37	37	49	4	0.003
grafo10942.35	35	46	5	0.005
grafo10944.96	96	127	9	51.52
grafo10946.92	92	120	8	24.98
grafo10947.97	97	128	9	95.21
grafo10948.98	98	130	7	10.12
grafo10950.97	97	143	10	179.7
grafo10951.97	97	122	7	9.801
grafo10953.93	93	118	8	370.3
grafo10954.94	94	120	8	27.62
grafo10956.95	95	129	8	10.99
grafo10957.92	92	122	7	1.69
grafo10959.97	97	131	9	125.5
grafo10961.96	96	126	8	32.38
grafo10963.97	97	127	9	57.28
grafo10964.95	95	122	6	1.968
grafo10966.96	96	132	9	55.24
grafo10967.93	93	122	8	35.08
grafo10968.99	99	128	7	5.138
grafo10969.98	98	131	8	55.21
grafo10970.100	100	135	8	13.46
grafo10971.96	96	119	8	16.25
grafo10972.95	95	138	10	128.7
grafo10973.94	94	125	9	50.57
grafo10974.97	97	124	7	16.39
grafo10975.96	96	128	9	63.62
grafo10977.94	94	122	8	19.54
grafo10979.39	39	45	4	0.006
grafo10980.95	95	121	8	34.19
grafo10981.33	33	39	4	0.003
grafo10982.34	34	42	3	0.003
grafo10983.34	34	38	3	0.003
grafo10984.98	98	132	9	414.7
grafo10985.96	96	128	9	34.26
grafo10986.96	96	122	7	20.89
grafo10987.96	96	134	8	7.254
grafo10988.98	98	127	6	0.299
grafo10989.97	97	126	8	22.33

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo10990.96	96	133	9	66.16
grafo10991.97	97	134	9	107.6
grafo10993.95	95	130	9	56.36
grafo10994.94	94	126	7	5.812
grafo10995.96	96	130	9	147.4
grafo10996.97	97	131	8	88.11
grafo10997.100	100	126	7	4.376
grafo10998.100	100	142	9	39.07
grafo10999.92	92	129	8	19.86
grafo11002.96	96	133	9	78.17
grafo11003.100	100	140	10	324.4
grafo11004.98	98	117	6	0.973
grafo11005.93	93	121	8	15.0
grafo11007.93	93	125	9	20.41
grafo11009.98	98	126	7	9.055
grafo11011.100	100	139	9	86.69
grafo11013.35	35	43	4	0.003
grafo11019.93	93	123	8	5.8
grafo11021.96	96	131	9	49.35
grafo11022.32	32	35	3	0.003
grafo11023.33	33	33	2	0.002
grafo11024.38	38	45	4	0.004
grafo11025.94	94	130	9	50.49
grafo11026.33	33	36	2	0.003
grafo11027.92	92	122	6	0.173
grafo11028.40	40	56	5	0.006
grafo11029.32	32	36	3	0.003
grafo11030.36	36	47	5	0.006
grafo11031.36	36	41	4	0.003
grafo11032.36	36	45	4	0.003
grafo11033.94	94	121	7	3.271
grafo11034.95	95	132	9	88.82
grafo11038.100	100	133	8	93.46
grafo11040.95	95	134	9	75.83
grafo11041.97	97	126	8	54.89
grafo11042.94	94	129	10	89.46
grafo11045.94	94	134	10	107.2
grafo11046.97	97	128	8	13.81
grafo11048.94	94	128	9	81.61
grafo11051.100	100	134	7	46.75
grafo11053.94	94	132	9	51.6
grafo11054.96	96	127	9	174.4
grafo11055.98	98	126	7	3.089
grafo11059.98	98	129	9	63.05
grafo11061.94	94	119	7	4.5
grafo11063.92	92	116	7	26.94

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo11064.94	94	126	8	55.45
grafo11065.100	100	127	7	8.359
grafo11066.96	96	127	8	34.19
grafo11067.98	98	137	9	108.7
grafo11068.96	96	118	6	1.38
grafo11071.94	94	124	8	18.75
grafo11074.96	96	129	9	83.77
grafo11075.97	97	127	9	117.2
grafo11077.36	36	40	3	0.004
grafo11078.100	100	130	7	1.114
grafo11079.39	39	48	4	0.005
grafo11080.93	93	126	9	74.5
grafo11081.34	34	39	3	0.002
grafo11082.33	33	42	3	0.003
grafo11083.37	37	49	4	0.003
grafo11084.36	36	44	4	0.004
grafo11085.97	97	121	6	0.572
grafo11086.96	96	125	8	25.48
grafo11087.96	96	129	8	18.09
grafo11089.93	93	114	5	0.236
grafo11090.93	93	112	6	1.441
grafo11093.100	100	130	8	35.34
grafo11094.98	98	132	9	123.9
grafo11098.96	96	131	8	16.38
grafo11103.93	93	116	8	133.7
grafo11106.99	99	136	9	140.4
grafo11107.94	94	123	7	4.846
grafo11108.94	94	124	7	5.846
grafo11113.98	98	137	9	111.5
grafo11114.93	93	137	10	121.5
grafo11116.92	92	112	7	6.714
grafo11117.95	95	130	9	31.74
grafo11118.99	99	125	7	11.73
grafo11120.96	96	128	8	18.81
grafo11121.32	32	41	4	0.004
grafo11122.37	37	44	4	0.004
grafo11123.32	32	38	3	0.003
grafo11124.37	37	43	3	0.003
grafo11126.36	36	46	4	0.004
grafo11127.31	31	37	3	0.003
grafo11128.36	36	47	5	0.004
grafo11129.34	34	39	3	0.003
grafo11130.33	33	42	3	0.003
grafo11131.36	36	46	5	0.006
grafo11133.93	93	127	8	50.36
grafo11134.91	91	116	8	29.48

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo11135.95	95	129	8	17.52
grafo11136.98	98	122	8	54.47
grafo11137.95	95	126	8	17.02
grafo11138.100	100	129	7	22.77
grafo11139.98	98	124	8	41.92
grafo11140.98	98	138	9	80.08
grafo11141.95	95	133	8	23.97
grafo11142.99	99	144	9	88.46
grafo11144.92	92	136	10	95.49
grafo11146.99	99	127	8	28.46
grafo11147.100	100	126	7	4.399
grafo11151.92	92	121	9	61.61
grafo11153.99	99	130	8	38.34
grafo11156.98	98	117	6	4.159
grafo11157.100	100	138	9	112.7
grafo11158.94	94	120	7	10.2
grafo11159.93	93	119	7	5.013
grafo11160.100	100	122	7	4.458
grafo11161.99	99	120	7	3.508
grafo11163.38	38	50	4	0.003
grafo11164.40	40	49	4	0.003
grafo11165.39	39	51	5	0.008
grafo11166.34	34	43	4	0.003
grafo11167.37	37	48	5	0.006
grafo11168.34	34	40	3	0.003
grafo11169.99	99	128	9	67.51
grafo11170.33	33	42	3	0.003
grafo11171.35	35	40	3	0.003
grafo11172.41	41	51	4	0.004
grafo11173.41	41	49	4	0.005
grafo11174.91	91	117	7	3.577
grafo11175.94	94	114	6	7.608
grafo11176.100	100	138	9	47.4
grafo11177.98	98	131	9	51.91
grafo11179.99	99	123	8	60.19
grafo11180.34	34	34	2	0.002
grafo11182.99	99	129	9	142.0
grafo11184.93	93	121	7	6.729
grafo11185.94	94	126	8	21.66
grafo11186.93	93	128	8	19.95
grafo11188.99	99	134	9	67.98
grafo11190.92	92	130	9	42.57
grafo11191.100	100	129	7	7.539
grafo11192.92	92	111	7	26.07
grafo11193.93	93	120	8	40.95
grafo11194.100	100	127	8	29.23

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo11196.100	100	121	6	1.051
grafo11197.92	92	122	8	17.19
grafo11200.93	93	124	8	7.9
grafo11202.32	32	38	3	0.002
grafo11206.91	91	126	9	83.15
grafo11207.34	34	38	3	0.002
grafo11208.38	38	47	4	0.004
grafo11209.36	36	45	4	0.004
grafo11210.33	33	42	3	0.003
grafo11211.33	33	37	3	0.002
grafo11212.41	41	56	6	0.031
grafo11213.37	37	49	5	0.005
grafo11214.40	40	52	4	0.004
grafo11216.94	94	127	8	10.59
grafo11217.95	95	131	9	74.51
grafo11219.94	94	131	9	124.6
grafo11221.92	92	113	7	3.364
grafo11222.93	93	123	7	5.823
grafo11224.34	34	37	3	0.003
grafo11225.94	94	122	8	13.86
grafo11226.91	91	117	7	2.295
grafo11228.94	94	125	8	6.419
grafo11229.94	94	125	8	17.9
grafo11230.100	100	129	7	9.34
grafo11233.93	93	126	9	67.9
grafo11234.35	35	35	2	0.003
grafo11235.35	35	44	4	0.007
grafo11236.38	38	52	5	0.004
grafo11237.35	35	41	3	0.003
grafo11238.37	37	47	4	0.004
grafo11239.31	31	38	4	0.003
grafo11240.36	36	47	5	0.006
grafo11241.34	34	39	3	0.003
grafo11242.41	41	52	5	0.005
grafo11243.37	37	50	4	0.003
grafo11244.36	36	48	5	0.006
grafo11245.92	92	118	7	2.592
grafo11246.93	93	116	7	4.968
grafo11247.36	36	47	5	0.005
grafo11248.99	99	132	8	12.05
grafo11249.94	94	128	7	6.98
grafo11253.94	94	127	9	122.3
grafo11255.94	94	121	7	7.818
grafo11256.99	99	126	8	13.66
grafo11257.91	91	129	9	18.39
grafo11258.94	94	119	6	0.662

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo11259.92	92	106	6	8.879
grafo11260.36	36	41	4	0.004
grafo11261.32	32	37	3	0.002
grafo11262.41	41	49	4	0.004
grafo11263.41	41	57	5	0.006
grafo11264.33	33	42	3	0.003
grafo11265.33	33	37	3	0.002
grafo11266.40	40	50	4	0.003
grafo11267.92	92	131	10	84.31
grafo11268.93	93	117	6	0.531
grafo11270.93	93	126	8	18.55
grafo11273.92	92	120	7	3.03
grafo11274.93	93	132	10	144.8
grafo11277.34	34	35	2	0.002
grafo11278.37	37	47	4	0.003
grafo11279.35	35	39	3	0.003
grafo11281.34	34	42	4	0.003
grafo11282.35	35	44	4	0.003
grafo11283.40	40	52	5	0.006
grafo11284.37	37	50	4	0.003
grafo11285.93	93	127	8	11.88
grafo11286.92	92	117	6	2.407
grafo11288.93	93	114	6	3.174
grafo11289.93	93	118	8	16.18
grafo11290.93	93	125	8	23.7
grafo11291.99	99	116	6	2.487
grafo11292.33	33	46	4	0.003
grafo11293.33	33	38	3	0.002
grafo11294.38	38	56	6	0.012
grafo11295.37	37	48	4	0.004
grafo11296.36	36	44	4	0.003
grafo11297.93	93	127	9	71.65
grafo11298.99	99	128	7	4.882
grafo11300.91	91	126	10	51.69
grafo11301.93	93	129	10	117.4
grafo11302.99	99	120	8	79.24
grafo11306.99	99	124	8	26.44
grafo11307.32	32	38	3	0.002
grafo11308.33	33	38	3	0.003
grafo11309.36	36	46	5	0.006
grafo11310.35	35	37	3	0.003
grafo11311.40	40	51	5	0.009
grafo11312.91	91	115	8	11.64
grafo11314.92	92	127	9	102.3
grafo11315.91	91	131	10	148.9
grafo11318.35	35	47	5	0.004

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo11319.34	34	40	4	0.003
grafo11320.35	35	42	3	0.002
grafo11321.35	35	40	3	0.003
grafo11322.38	38	50	4	0.003
grafo11323.37	37	47	5	0.006
grafo11325.35	35	36	3	0.002
grafo11326.35	35	42	4	0.003
grafo11327.39	39	53	5	0.008
grafo11328.32	32	40	3	0.003
grafo11329.36	36	49	5	0.004
grafo11330.35	35	40	4	0.003
grafo11331.34	34	41	3	0.003
grafo11332.34	34	40	3	0.003
grafo11333.39	39	50	5	0.009
grafo11334.37	37	49	4	0.003
grafo11336.36	36	47	5	0.005
grafo11337.92	92	118	7	3.226
grafo11338.92	92	122	8	13.11
grafo11339.91	91	115	8	42.75
grafo11340.36	36	42	4	0.003
grafo11341.33	33	35	2	0.002
grafo11342.37	37	42	3	0.003
grafo11343.35	35	44	4	0.004
grafo11344.35	35	40	3	0.003
grafo11345.38	38	56	5	0.004
grafo11346.36	36	49	6	0.01
grafo11347.93	93	115	7	3.306
grafo11348.35	35	46	5	0.005
grafo11349.91	91	107	5	0.313
grafo11350.91	91	120	9	27.47
grafo11351.90	90	125	9	19.86
grafo11353.92	92	117	7	8.365
grafo11356.31	31	37	3	0.002
grafo11357.39	39	48	4	0.003
grafo11359.37	37	47	4	0.004
grafo11360.32	32	37	3	0.002
grafo11361.38	38	46	4	0.004
grafo11362.35	35	45	4	0.003
grafo11363.40	40	54	6	0.012
grafo11364.38	38	53	5	0.005
grafo11365.92	92	132	9	27.1
grafo11366.92	92	121	8	38.43
grafo11367.92	92	118	7	5.45
grafo11368.92	92	113	6	1.056
grafo11370.33	33	38	3	0.002
grafo11371.36	36	39	3	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo11372.33	33	41	3	0.003
grafo11373.38	38	50	5	0.005
grafo11374.33	33	44	3	0.003
grafo11375.33	33	39	3	0.003
grafo11376.38	38	48	5	0.014
grafo11377.36	36	48	4	0.003
grafo11378.36	36	47	4	0.003
grafo11379.92	92	125	9	147.6
grafo11382.33	33	33	3	0.003
grafo11383.38	38	43	3	0.003
grafo11384.30	30	34	3	0.003
grafo11385.36	36	48	6	0.012
grafo11386.34	34	46	5	0.004
grafo11387.34	34	42	4	0.004
grafo11388.40	40	49	5	0.005
grafo11389.92	92	128	8	19.62
grafo11390.90	90	128	10	118.3
grafo11391.96	96	126	8	7.601
grafo11392.90	90	128	9	38.27
grafo11394.90	90	122	9	224.9
grafo11395.31	31	36	3	0.002
grafo11396.34	34	35	3	0.003
grafo11397.32	32	33	2	0.002
grafo11398.37	37	43	3	0.003
grafo11399.32	32	37	3	0.003
grafo11400.38	38	49	4	0.004
grafo11401.33	33	40	4	0.002
grafo11402.95	95	120	7	3.571
grafo11403.44	44	60	6	0.028
grafo11404.92	92	123	8	6.704
grafo11405.92	92	128	9	44.48
grafo11406.92	92	121	7	1.863
grafo11407.92	92	122	7	2.642
grafo11409.34	34	35	3	0.003
grafo11410.37	37	45	4	0.004
grafo11411.37	37	47	4	0.004
grafo11412.32	32	36	3	0.002
grafo11413.96	96	122	7	5.451
grafo11414.36	36	47	5	0.005
grafo11415.35	35	43	4	0.003
grafo11416.35	35	38	3	0.003
grafo11417.37	37	49	4	0.003
grafo11418.36	36	48	5	0.004
grafo11419.92	92	125	9	95.32
grafo11421.31	31	37	3	0.002
grafo11422.34	34	39	3	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo11423.35	35	42	4	0.003
grafo11424.95	95	129	7	4.152
grafo11425.38	38	49	4	0.004
grafo11426.33	33	38	3	0.003
grafo11427.35	35	42	3	0.003
grafo11428.39	39	49	4	0.004
grafo11429.37	37	48	4	0.003
grafo11430.91	91	121	9	78.58
grafo11432.92	92	126	9	37.05
grafo11434.33	33	43	4	0.004
grafo11435.92	92	117	6	1.206
grafo11436.37	37	47	4	0.004
grafo11437.36	36	47	5	0.005
grafo11438.37	37	45	4	0.003
grafo11440.90	90	129	9	33.92
grafo11441.38	38	43	4	0.004
grafo11442.33	33	37	3	0.003
grafo11443.35	35	42	4	0.003
grafo11444.36	36	46	4	0.003
grafo11445.36	36	41	3	0.003
grafo11446.96	96	130	7	5.037
grafo11447.37	37	50	4	0.003
grafo11448.91	91	127	9	85.03
grafo11449.36	36	43	3	0.003
grafo11450.37	37	46	4	0.005
grafo11451.32	32	35	3	0.002
grafo11452.38	38	50	5	0.006
grafo11454.31	31	36	3	0.002
grafo11455.35	35	35	2	0.003
grafo11456.32	32	33	2	0.002
grafo11459.37	37	45	4	0.004
grafo11460.37	37	53	5	0.004
grafo11461.35	35	42	4	0.003
grafo11462.39	39	50	5	0.008
grafo11463.33	33	39	4	0.003
grafo11464.35	35	47	5	0.005
grafo11465.34	34	40	3	0.003
grafo11466.39	39	47	4	0.003
grafo11467.37	37	48	5	0.004
grafo11468.36	36	47	5	0.005
grafo11471.91	91	130	10	135.3
grafo11473.37	37	42	3	0.003
grafo11474.41	41	46	4	0.005
grafo11475.35	35	46	4	0.004
grafo11476.32	32	38	3	0.002
grafo11477.36	36	48	6	0.013

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo11478.39	39	55	6	0.01
grafo11479.37	37	44	3	0.003
grafo11480.93	93	125	9	23.55
grafo11481.32	32	38	3	0.003
grafo11482.39	39	48	4	0.004
grafo11483.33	33	42	3	0.003
grafo11484.33	33	37	3	0.003
grafo11485.39	39	52	5	0.007
grafo11486.37	37	49	4	0.003
grafo11487.91	91	122	8	26.37
grafo11488.91	91	127	9	48.81
grafo11489.31	31	37	3	0.003
grafo11490.35	35	44	4	0.004
grafo11491.96	96	125	8	86.78
grafo11492.35	35	48	4	0.003
grafo11493.37	37	52	6	0.012
grafo11494.34	34	42	3	0.003
grafo11495.39	39	52	5	0.005
grafo11496.38	38	47	4	0.003
grafo11497.36	36	54	6	0.008
grafo11498.40	40	52	5	0.005
grafo11499.35	35	39	3	0.003
grafo11500.36	36	44	4	0.003
grafo11501.35	35	40	3	0.003
grafo11502.100	100	126	8	32.51
grafo11503.39	39	47	4	0.005
grafo11504.39	39	51	4	0.003
grafo11505.91	91	131	10	239.2
grafo11506.91	91	124	8	13.47
grafo11507.91	91	122	9	76.78
grafo11508.91	91	124	9	16.33
grafo11509.31	31	36	3	0.003
grafo11510.34	34	34	2	0.002
grafo11511.35	35	36	2	0.003
grafo11512.38	38	46	4	0.004
grafo11514.33	33	40	4	0.004
grafo11515.37	37	46	4	0.005
grafo11516.33	33	43	3	0.004
grafo11517.34	34	45	4	0.004
grafo11518.39	39	51	4	0.004
grafo11519.39	39	51	4	0.004
grafo11520.91	91	129	9	13.96
grafo11521.91	91	111	6	1.203
grafo11522.31	31	36	3	0.002
grafo11523.35	35	46	5	0.004
grafo11524.100	100	127	8	18.41

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo11525.36	36	45	4	0.003
grafo11526.91	91	118	7	32.36
grafo11527.33	33	40	4	0.003
grafo11528.35	35	42	4	0.003
grafo11529.36	36	52	5	0.005
grafo11530.34	34	49	4	0.004
grafo11531.34	34	38	3	0.003
grafo11532.39	39	51	4	0.003
grafo11533.36	36	48	5	0.004
grafo11534.91	91	124	8	9.896
grafo11535.97	97	127	8	13.59
grafo11536.91	91	132	10	110.4
grafo11537.91	91	130	9	37.3
grafo11538.33	33	38	3	0.002
grafo11539.36	36	42	3	0.004
grafo11540.37	37	48	4	0.004
grafo11541.37	37	47	5	0.007
grafo11542.34	34	45	3	0.003
grafo11543.34	34	41	3	0.003
grafo11544.34	34	34	2	0.003
grafo11545.39	39	47	4	0.004
grafo11546.97	97	140	9	82.66
grafo11547.31	31	36	3	0.003
grafo11548.35	35	46	5	0.004
grafo11549.35	35	46	4	0.003
grafo11550.35	35	44	4	0.003
grafo11551.33	33	38	3	0.003
grafo11552.39	39	47	4	0.004
grafo11553.37	37	49	5	0.004
grafo11554.36	36	50	6	0.011
grafo11555.39	39	52	4	0.003
grafo11556.36	36	42	4	0.003
grafo11558.37	37	43	3	0.003
grafo11559.31	31	35	3	0.002
grafo11560.35	35	47	5	0.007
grafo11561.35	35	39	3	0.003
grafo11562.36	36	53	4	0.003
grafo11563.39	39	50	5	0.006
grafo11564.37	37	47	5	0.005
grafo11565.39	39	45	3	0.004
grafo11566.37	37	53	6	0.009
grafo11567.35	35	43	3	0.003
grafo11568.95	95	123	8	72.67
grafo11570.34	34	37	3	0.003
grafo11571.38	38	45	4	0.004
grafo11572.34	34	47	4	0.003

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo11573.35	35	43	4	0.004
grafo11574.33	33	44	4	0.003
grafo11575.38	38	46	5	0.006
grafo11576.34	34	37	2	0.003
grafo11577.39	39	49	5	0.007
grafo11578.37	37	49	4	0.004
grafo11579.36	36	46	5	0.004
grafo11580.93	93	126	9	65.58
grafo11581.31	31	36	3	0.002
grafo11582.34	34	34	2	0.003
grafo11583.37	37	46	4	0.003
grafo11584.34	34	45	3	0.003
grafo11585.36	36	49	4	0.004
grafo11586.36	36	42	4	0.002
grafo11587.37	37	49	4	0.003
grafo11588.36	36	46	4	0.003
grafo11589.32	32	40	4	0.003
grafo11590.35	35	38	3	0.003
grafo11591.93	93	135	9	107.5
grafo11592.34	34	39	4	0.004
grafo11593.36	36	56	7	0.017
grafo11594.37	37	41	3	0.003
grafo11595.36	36	44	3	0.002
grafo11596.34	34	39	3	0.002
grafo11597.37	37	49	5	0.005
grafo11598.36	36	46	5	0.007
grafo11599.91	91	121	8	12.73
grafo11600.91	91	119	8	10.75
grafo11601.33	33	34	2	0.003
grafo11602.95	95	131	9	36.53
grafo11603.38	38	46	4	0.004
grafo11604.34	34	43	5	0.006
grafo11605.33	33	42	3	0.003
grafo11606.33	33	37	3	0.003
grafo11607.32	32	38	3	0.002
grafo11608.32	32	33	2	0.002
grafo11609.37	37	44	3	0.003
grafo11610.37	37	47	4	0.004
grafo11611.32	32	38	3	0.002
grafo11612.36	36	48	4	0.003
grafo11613.100	100	125	7	12.69
grafo11614.34	34	39	3	0.003
grafo11615.33	33	42	3	0.003
grafo11617.35	35	44	4	0.005
grafo11618.41	41	48	3	0.004
grafo11619.35	35	42	4	0.004

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Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo11620.33	33	39	3	0.003
grafo11621.40	40	50	5	0.009
grafo11622.37	37	49	4	0.004
grafo11623.43	43	54	5	0.009
grafo11625.37	37	51	5	0.004
grafo11626.38	38	48	5	0.006
grafo11627.37	37	53	5	0.005
grafo11628.34	34	40	4	0.003
grafo11629.36	36	46	5	0.006
grafo11630.34	34	40	3	0.003
grafo11631.33	33	43	4	0.003
grafo11632.40	40	59	6	0.015
grafo11633.35	35	46	4	0.002
grafo11634.32	32	36	3	0.003
grafo11636.32	32	32	2	0.003
grafo11637.38	38	44	4	0.004
grafo11638.33	33	38	3	0.003
grafo11639.35	35	42	4	0.003
grafo11640.44	44	59	5	0.011
grafo11641.31	31	36	3	0.002
grafo11642.36	36	49	6	0.011
grafo11643.33	33	37	3	0.003
grafo11644.38	38	48	5	0.014
grafo11645.36	36	50	5	0.004
grafo11646.32	32	34	2	0.003
grafo11648.90	90	131	9	38.33
grafo11649.38	38	43	4	0.004
grafo11650.34	34	41	4	0.003
grafo11651.36	36	47	5	0.006
grafo11652.39	39	51	5	0.005
grafo11653.37	37	51	4	0.003
grafo11654.35	35	46	5	0.004
grafo11655.91	91	125	8	25.04
grafo11656.91	91	123	8	18.53
grafo11657.100	100	131	9	59.62
grafo11658.35	35	48	5	0.005
grafo11659.37	37	42	3	0.003
grafo11660.34	34	36	3	0.003
grafo11661.38	38	48	5	0.014
grafo11662.36	36	48	4	0.003
grafo11663.38	38	52	6	0.01
grafo11664.35	35	38	3	0.002
grafo11665.40	40	48	4	0.004
grafo11666.37	37	50	5	0.005
grafo11667.30	30	34	3	0.003
grafo11668.36	36	44	4	0.003

Continued on next page

Table 17 – Continued from previous page

Name	**N**	**M**	**pw**	**time (in sec.)**
grafo11669.39	39	47	4	0.004
grafo11670.41	41	54	5	0.006
grafo11671.39	39	52	5	0.006
grafo11672.35	35	47	5	0.004
grafo11673.32	32	37	3	0.003
grafo11674.33	33	39	4	0.006
grafo11675.39	39	50	5	0.007
grafo11676.38	38	51	5	0.006
grafo11677.36	36	49	4	0.004
grafo11678.34	34	40	3	0.003

Table 18: Upper bounds for rome instance (10 min. per graph).

Name	**N**	**M**	**Upper bound on pw**
grafo3224.98	98	141	10
grafo3315.96	96	129	10
grafo3532.99	99	154	11
grafo3680.99	99	147	12
grafo3699.99	99	133	9
grafo3712.95	95	144	12
grafo3871.88	88	126	10
grafo3898.99	99	136	9
grafo3995.97	97	145	10
grafo4101.91	91	123	10
grafo6562.98	98	138	11
grafo6625.99	99	139	9
grafo6817.94	94	133	10
grafo6975.39	105	137	9
grafo7130.90	90	125	10
grafo7221.99	99	141	10
grafo7417.39	104	137	9
grafo7447.98	98	129	10
grafo7780.90	90	128	11
grafo7793.98	98	134	10
grafo7797.100	100	144	12
grafo7818.83	83	118	10
grafo8008.95	95	138	10
grafo8035.98	98	133	9
grafo8036.94	94	134	10
grafo8148.85	85	119	10
grafo8198.99	99	140	10
grafo8223.99	99	148	11
grafo8260.86	86	123	10
grafo8297.87	87	126	10
grafo8310.86	86	134	12

Continued on next page

Table 18 – Continued from previous page

Name	**N**	**M**	**Upper bound on pw**
grafo8330.88	88	125	10
grafo8348.99	99	133	9
grafo8373.100	100	138	9
grafo8452.85	85	118	10
grafo8476.95	95	135	10
grafo8490.95	95	137	11
grafo8510.100	100	142	10
grafo8514.95	95	130	9
grafo8551.85	85	129	11
grafo8558.90	90	125	10
grafo8571.94	94	139	11
grafo8578.87	87	125	10
grafo8585.91	91	123	10
grafo8601.87	87	135	11
grafo8619.84	84	117	10
grafo8645.92	92	129	10
grafo8647.91	91	131	11
grafo8651.92	92	126	10
grafo8655.95	95	135	10
grafo8659.92	92	135	10
grafo8664.89	89	124	10
grafo8673.98	98	140	10
grafo8674.100	100	135	9
grafo8675.93	93	130	10
grafo8684.86	86	118	10
grafo8701.90	90	130	11
grafo8719.93	93	136	11
grafo8739.99	99	135	9
grafo8753.91	91	125	11
grafo8777.98	98	140	10
grafo8790.97	97	133	10
grafo8791.94	94	136	10
grafo8793.100	100	138	10
grafo8800.93	93	129	9
grafo8812.99	99	155	13
grafo8817.88	88	127	11
grafo8821.94	94	131	11
grafo8823.93	93	136	11
grafo8826.100	100	152	11
grafo8831.91	91	111	8
grafo8836.88	88	121	10
grafo8837.87	87	123	10
grafo8857.99	99	135	10
grafo8864.98	98	141	11
grafo8865.100	100	135	10
grafo8867.97	97	147	11

Continued on next page

Table 18 – Continued from previous page

Name	**N**	**M**	**Upper bound on pw**
grafo8882.100	100	158	13
grafo8892.100	100	140	10
grafo8900.94	94	126	9
grafo8904.92	92	124	9
grafo8908.96	96	135	10
grafo8921.98	98	152	12
grafo8923.90	90	131	10
grafo8943.98	98	146	11
grafo8945.94	94	132	10
grafo8953.94	94	129	9
grafo8954.91	91	132	11
grafo8957.90	90	133	11
grafo8963.92	92	139	11
grafo8970.97	97	127	9
grafo8997.96	96	141	11
grafo9008.91	91	136	11
grafo9027.87	87	129	11
grafo9056.96	96	135	9
grafo9135.85	85	129	10
grafo9357.99	99	147	13
grafo9362.98	98	143	11
grafo9429.86	86	127	10
grafo9542.87	87	136	11
grafo9611.89	89	135	11
grafo9630.95	95	128	9
grafo9635.99	99	133	9
grafo9676.89	89	124	9
grafo9699.86	86	129	11
grafo9738.100	100	141	11
grafo9753.85	85	120	10
grafo9842.89	89	123	10
grafo9850.95	95	128	9
grafo9854.91	91	134	11
grafo9864.91	91	130	11
grafo9911.91	91	119	10
grafo9932.91	91	132	11
grafo9948.91	91	127	10
grafo10017.96	96	140	11
grafo10061.99	99	131	9
grafo10072.97	97	136	9
grafo10076.90	90	129	10
grafo10084.97	97	147	11
grafo10092.97	97	130	10
grafo10093.98	98	140	11
grafo10097.95	95	118	8
grafo10098.95	95	134	10

Continued on next page

Table 18 – Continued from previous page

Name	**N**	**M**	**Upper bound on pw**
grafo10099.94	94	144	12
grafo10100.99	99	139	11
grafo10104.96	96	134	10
grafo10105.93	93	137	12
grafo10112.98	98	137	10
grafo10113.94	94	139	13
grafo10116.100	100	149	11
grafo10118.97	97	128	9
grafo10124.100	100	139	11
grafo10126.98	98	144	11
grafo10130.97	97	138	10
grafo10132.97	97	134	9
grafo10147.94	94	132	11
grafo10149.95	95	134	10
grafo10151.94	94	140	11
grafo10154.94	94	132	10
grafo10155.97	97	129	9
grafo10156.97	97	148	12
grafo10160.96	96	138	11
grafo10161.99	99	148	10
grafo10164.98	98	137	10
grafo10170.96	96	127	9
grafo10171.99	99	140	12
grafo10173.97	97	142	10
grafo10175.99	99	143	11
grafo10176.97	97	142	10
grafo10179.97	97	143	11
grafo10183.100	100	132	9
grafo10184.100	100	140	10
grafo10195.99	99	142	10
grafo10197.96	96	135	10
grafo10203.97	97	141	11
grafo10204.100	100	148	11
grafo10205.97	97	141	11
grafo10207.98	98	137	11
grafo10209.99	99	145	10
grafo10213.99	99	132	10
grafo10215.93	93	142	11
grafo10216.97	97	128	9
grafo10218.99	99	142	11
grafo10220.97	97	137	9
grafo10222.99	99	128	9
grafo10223.100	100	135	9
grafo10237.100	100	141	11
grafo10240.97	97	134	10
grafo10244.99	99	141	10

Continued on next page

Table 18 – Continued from previous page

Name	**N**	**M**	**Upper bound on pw**
grafo10245.92	92	135	12
grafo10246.96	96	133	9
grafo10249.94	94	130	10
grafo10255.93	93	125	9
grafo10259.100	100	141	10
grafo10260.98	98	130	9
grafo10262.100	100	136	10
grafo10266.94	94	140	11
grafo10270.93	93	134	12
grafo10271.100	100	132	9
grafo10273.97	97	136	10
grafo10274.99	99	132	9
grafo10275.97	97	147	11
grafo10288.95	95	140	10
grafo10292.100	100	140	10
grafo10295.95	95	131	10
grafo10296.100	100	130	9
grafo10297.98	98	142	11
grafo10298.97	97	143	10
grafo10299.94	94	132	9
grafo10301.94	94	133	11
grafo10303.96	96	142	10
grafo10309.94	94	132	10
grafo10311.91	91	112	8
grafo10321.97	97	134	11
grafo10322.97	97	133	10
grafo10325.96	96	141	12
grafo10327.97	97	140	12
grafo10331.100	100	134	9
grafo10339.95	95	138	12
grafo10346.97	97	137	11
grafo10350.96	96	125	9
grafo10351.97	97	140	10
grafo10353.99	99	140	11
grafo10354.99	99	150	10
grafo10358.95	95	135	10
grafo10359.95	95	139	12
grafo10367.96	96	129	9
grafo10369.100	100	138	10
grafo10377.94	94	129	10
grafo10380.98	98	135	11
grafo10381.99	99	128	9
grafo10382.94	94	139	11
grafo10383.99	99	136	11
grafo10385.94	94	128	10
grafo10386.99	99	132	9

Continued on next page

Table 18 – Continued from previous page

Name	**N**	**M**	**Upper bound on pw**
grafo10388.95	95	136	10
grafo10393.96	96	139	10
grafo10404.97	97	130	10
grafo10405.97	97	145	12
grafo10409.96	96	138	10
grafo10413.93	93	129	10
grafo10414.98	98	132	10
grafo10415.94	94	132	10
grafo10416.96	96	138	11
grafo10418.100	100	141	12
grafo10420.97	97	148	11
grafo10422.97	97	132	10
grafo10429.100	100	132	9
grafo10432.99	99	146	11
grafo10433.97	97	128	9
grafo10434.98	98	140	9
grafo10436.95	95	145	13
grafo10441.98	98	137	10
grafo10445.94	94	140	12
grafo10446.95	95	153	13
grafo10451.95	95	132	10
grafo10452.94	94	138	10
grafo10453.97	97	136	10
grafo10467.100	100	138	10
grafo10469.100	100	148	12
grafo10470.92	92	135	11
grafo10473.95	95	125	9
grafo10474.94	94	142	12
grafo10479.98	98	130	10
grafo10484.99	99	147	12
grafo10488.98	98	145	12
grafo10489.95	95	138	10
grafo10491.97	97	137	10
grafo10492.96	96	153	12
grafo10502.91	91	136	11
grafo10516.94	94	138	10
grafo10517.93	93	133	10
grafo10518.94	94	133	11
grafo10519.98	98	130	9
grafo10522.99	99	136	10
grafo10523.97	97	139	11
grafo10527.93	93	133	11
grafo10528.98	98	134	10
grafo10534.100	100	141	11
grafo10536.99	99	142	10
grafo10537.95	95	138	11

Continued on next page

Table 18 – Continued from previous page

Name	**N**	**M**	**Upper bound on pw**
grafo10541.93	93	124	10
grafo10542.100	100	133	9
grafo10547.94	94	137	10
grafo10548.94	94	134	11
grafo10549.99	99	140	10
grafo10552.96	96	144	12
grafo10557.98	98	129	9
grafo10559.98	98	131	9
grafo10560.95	95	137	11
grafo10572.92	92	133	11
grafo10578.96	96	139	11
grafo10580.98	98	134	10
grafo10586.100	100	137	10
grafo10593.98	98	130	9
grafo10596.99	99	140	11
grafo10600.93	93	132	10
grafo10603.100	100	136	9
grafo10605.99	99	127	9
grafo10608.93	93	138	11
grafo10610.95	95	131	10
grafo10624.91	91	138	11
grafo10626.100	100	139	10
grafo10629.100	100	131	9
grafo10632.100	100	147	12
grafo10633.100	100	138	10
grafo10634.96	96	137	10
grafo10635.95	95	137	12
grafo10637.94	94	139	11
grafo10638.100	100	141	11
grafo10644.100	100	145	11
grafo10646.100	100	154	14
grafo10647.98	98	132	10
grafo10648.98	98	145	12
grafo10650.98	98	141	10
grafo10652.100	100	141	11
grafo10653.100	100	141	10
grafo10661.95	95	128	10
grafo10662.100	100	136	9
grafo10663.99	99	137	10
grafo10670.100	100	136	10
grafo10672.98	98	132	9
grafo10685.98	98	144	12
grafo10688.95	95	137	10
grafo10694.96	96	137	11
grafo10695.98	98	138	10
grafo10696.99	99	138	10

Continued on next page

Table 18 – Continued from previous page

Name	**N**	**M**	**Upper bound on pw**
grafo10698.95	95	137	10
grafo10700.98	98	139	10
grafo10712.98	98	141	10
grafo10713.92	92	136	11
grafo10714.99	99	137	11
grafo10717.96	96	127	8
grafo10722.96	96	139	12
grafo10726.99	99	140	10
grafo10727.94	94	131	11
grafo10735.99	99	136	10
grafo10737.99	99	142	11
grafo10741.92	92	132	10
grafo10750.100	100	135	10
grafo10758.96	96	142	12
grafo10760.96	96	145	12
grafo10772.100	100	156	13
grafo10777.100	100	133	9
grafo10780.99	99	149	12
grafo10781.100	100	142	11
grafo10782.95	95	127	9
grafo10789.91	91	133	11
grafo10792.98	98	137	11
grafo10805.98	98	135	10
grafo10806.97	97	139	11
grafo10807.95	95	140	10
grafo10808.98	98	136	10
grafo10809.99	99	131	9
grafo10810.97	97	144	11
grafo10811.96	96	142	11
grafo10814.98	98	141	11
grafo10822.97	97	134	10
grafo10825.98	98	138	11
grafo10831.98	98	146	10
grafo10832.94	94	142	11
grafo10834.93	93	133	10
grafo10836.97	97	139	11
grafo10849.95	95	138	11
grafo10860.93	93	138	13
grafo10861.100	100	138	10
grafo10862.98	98	136	9
grafo10864.99	99	140	9
grafo10865.100	100	141	10
grafo10866.98	98	135	10
grafo10867.95	95	135	11
grafo10869.96	96	135	11
grafo10873.97	97	131	10

Continued on next page

Table 18 – Continued from previous page

Name	**N**	**M**	**Upper bound on pw**
grafo10876.98	98	140	10
grafo10882.95	95	136	10
grafo10883.93	93	136	11
grafo10885.98	98	124	9
grafo10893.92	92	129	10
grafo10894.97	97	135	9
grafo10897.95	95	121	8
grafo10898.95	95	136	9
grafo10900.93	93	131	10
grafo10901.94	94	132	9
grafo10905.97	97	138	10
grafo10907.99	99	137	9
grafo10908.98	98	135	10
grafo10911.100	100	135	9
grafo10915.97	97	134	10
grafo10918.98	98	140	12
grafo10919.97	97	136	11
grafo10921.97	97	130	9
grafo10923.97	97	133	9
grafo10930.100	100	130	9
grafo10943.95	95	138	10
grafo10945.98	98	142	10
grafo10949.95	95	135	10
grafo10952.96	96	137	11
grafo10955.94	94	129	9
grafo10958.98	98	154	13
grafo10960.98	98	131	11
grafo10962.100	100	145	12
grafo10965.99	99	130	9
grafo10976.92	92	137	10
grafo10978.98	98	130	9
grafo10992.94	94	133	11
grafo11000.99	99	145	10
grafo11001.97	97	136	11
grafo11006.97	97	135	10
grafo11008.99	99	151	11
grafo11010.97	97	128	9
grafo11012.96	96	135	10
grafo11014.100	100	138	10
grafo11015.98	98	136	10
grafo11016.98	98	145	11
grafo11017.97	97	125	9
grafo11018.99	99	130	9
grafo11020.100	100	145	11
grafo11035.99	99	139	11
grafo11036.97	97	129	9

Continued on next page

Table 18 – Continued from previous page

Name	**N**	**M**	**Upper bound on pw**
grafo11037.99	99	144	11
grafo11039.96	96	143	11
grafo11043.94	94	132	10
grafo11044.95	95	138	11
grafo11047.92	92	141	11
grafo11050.98	98	141	10
grafo11052.97	97	134	11
grafo11056.98	98	136	10
grafo11057.96	96	133	10
grafo11058.98	98	130	9
grafo11060.99	99	135	10
grafo11062.99	99	124	8
grafo11069.93	93	139	12
grafo11070.94	94	136	11
grafo11072.98	98	143	10
grafo11073.100	100	149	12
grafo11076.97	97	136	10
grafo11088.97	97	139	11
grafo11091.97	97	125	9
grafo11092.97	97	134	10
grafo11095.93	93	126	10
grafo11096.97	97	138	10
grafo11097.96	96	132	10
grafo11099.99	99	151	12
grafo11100.95	95	137	10
grafo11101.95	95	139	10
grafo11102.98	98	136	9
grafo11104.95	95	135	10
grafo11105.95	95	136	10
grafo11109.94	94	130	10
grafo11110.99	99	135	10
grafo11111.94	94	127	9
grafo11112.96	96	138	12
grafo11115.92	92	142	12
grafo11119.98	98	135	10
grafo11125.100	100	140	10
grafo11132.95	95	133	10
grafo11143.98	98	135	10
grafo11145.99	99	140	10
grafo11148.99	99	138	10
grafo11149.100	100	136	9
grafo11150.99	99	133	10
grafo11152.98	98	134	10
grafo11154.95	95	134	10
grafo11155.99	99	125	9
grafo11162.100	100	136	9

Continued on next page

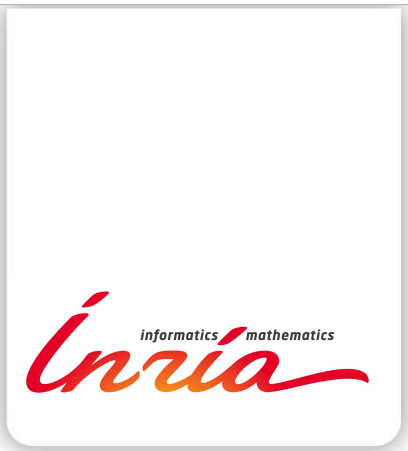
Table 18 – Continued from previous page

Name	**N**	**M**	**Upper bound on pw**
grafo11178.95	95	137	10
grafo11181.95	95	141	12
grafo11187.98	98	128	9
grafo11189.94	94	133	9
grafo11195.93	93	130	10
grafo11198.98	98	136	10
grafo11201.99	99	136	10
grafo11203.100	100	131	9
grafo11204.99	99	143	10
grafo11205.94	94	131	10
grafo11215.93	93	129	10
grafo11218.99	99	147	12
grafo11220.92	92	132	11
grafo11223.99	99	151	13
grafo11227.100	100	142	10
grafo11232.92	92	132	10
grafo11250.99	99	143	10
grafo11251.93	93	139	11
grafo11252.93	93	129	10
grafo11254.99	99	136	11
grafo11269.93	93	131	10
grafo11271.99	99	141	10
grafo11272.99	99	133	9
grafo11275.93	93	135	10
grafo11276.92	92	133	10
grafo11280.99	99	143	11
grafo11287.93	93	131	10
grafo11299.93	93	132	10
grafo11303.93	93	128	10
grafo11305.99	99	129	9
grafo11313.96	96	144	11
grafo11316.99	99	134	9
grafo11324.100	100	138	9
grafo11335.100	100	153	11
grafo11352.90	90	126	10
grafo11354.92	92	133	11
grafo11355.92	92	128	10
grafo11358.99	99	128	9
grafo11369.96	96	138	10
grafo11380.97	97	133	10
grafo11381.92	92	126	10
grafo11393.92	92	135	11
grafo11408.92	92	131	11
grafo11420.92	92	131	10
grafo11431.92	92	125	10
grafo11433.92	92	135	11

Continued on next page

Table 18 – Continued from previous page

Name	**N**	**M**	**Upper bound on pw**
grafo11439.92	92	130	10
grafo11453.91	91	128	10
grafo11457.92	92	130	11
grafo11458.100	100	142	10
grafo11469.96	96	136	10
grafo11470.91	91	131	11
grafo11472.91	91	135	11
grafo11557.95	95	133	11
grafo11569.93	93	136	11
grafo11616.91	91	130	11
grafo11624.96	96	129	10
grafo11635.92	92	128	10
grafo11647.90	90	130	11



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