# THE ALGEBRAIC ATIYAH-HIRZEBRUCH SPECTRAL SEQUENCE OF REAL PROJECTIVE SPECTRA

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Abstract. In this note, we use Curtis's algorithm and the Lambda algebra to compute the algebraic Atiyah-Hirzebruch spectral sequence of the suspension spectrum of $\mathbb{R}P^\infty$ with the aid of a computer, which gives us its Adams $E_2$-page in the range of $t < 72$. We also compute the transfer map on the Adams $E_2$-pages. These data are used in our computations of the stable homotopy groups of $\mathbb{R}P^\infty$ in [6] and of the stable homotopy groups of spheres in [7].

This note gives computer-generated computations to be used in [6] and [7]. The data here are "mindless" input to those papers, input that a computer can generate without human intervention. The papers [6] and [7] compute differentials, starting from the data presented here. We are minded to quote Frank Adams [1, page 58-59] from 1969:

*"$\cdots$ The history of the subject [algebraic topology] shows, in fact, that whenever a chance has arisen to show that a differential $d_r$ is non-zero, the experts have fallen on it with shouts of joy - 'Here is an interesting phenomenon! Here is a chance to do some nice, clean research!' - and they have solved the problem in short order. On the other hand, the calculation of $Ext^{s,t}$ groups is necessary not only for this spectral sequence, but also for the study of cohomology operations of the n-th kind: each such group can be calculated by a large amount of tedious mechanical work: but the process finds few people willing to take it on. $\cdots$"*

**Warning**: this note contains data of interest only to experts.

## 1. Notations

We work at the prime 2 in this paper. All cohomology groups are taken with coefficients $\mathbb{Z}/2$.

Let $\mathcal{A}$ be the Steenrod algebra. For any $\mathcal{A}$-module $M$, we will abbreviate $Ext_{\mathcal{A}}(M, \mathbb{Z}/2)$ by $Ext(M)$.

Let $V$ be a vector space with $\{v_j\}$ an ordered basis. We say that an element $v = \sum a_i v_i$ has leading term $a_k v_k$ if $k$ is the largest number for which $a_k \neq 0$.

For spectra, let $S^0$ be the sphere spectrum, and $P_1^\infty$ be the suspension spectrum of $\mathbb{R}P^\infty$. In general, we use $P_n^{n+k}$ to denote the suspension spectrum of $\mathbb{R}P^{n+k}/\mathbb{R}P^{n-1}$.

## 2. The Curtis table

We recall the notion of Curtis table in a general setting in this section.

Let $X_0 \to X_1 \to \dots$ be a complex of vector spaces (over $\mathbb{F}_2$). For each $X_i$, let $\{x_{i,j}\}$ be an ordered basis.

**Definition 2.1.** *A Curtis table for $X_*$ associated with the basis $\{x_{i,j}\}$ consists of a list $L_i$ for each $i$.*

*The items on the list $L_i$ are either an element $x_{i,j}$ for some $j$, or a tag of the form $x_{i,j} \leftarrow x_{i-1,k}$ for some $j, k$.*

*These lists satisfy the following:*

1. *Each element $x_{i,j}$ appears in these lists exactly once.*
2. *For any $i, j$, an item of the form $x_{i,j}$ or a tag of the form $x_{i,j} \leftarrow x_{i-1,k}$ appears in the list $L_i$ if an only if there is a cycle in $X_i$ with leading term $x_{i,j}$.*
3. *If a tag of the form $x_{i,j} \leftarrow x_{i-1,k}$ appears in the list $L_i$, then there is an element in $X_{i-1}$ with leading term $x_{i-1,k}$ whose boundary has leading term $x_{i,j}$.*

**Remark 2.2.** *By Theorem 3.3 and Corollary 3.4, the Curtis table exists and is unique for a finite dimensional complex with ordered basis.*

The Curtis algorithm constructs a Curtis table from a basis, and can output the full cycle from the input of a leading term.

For example, the Curtis table in the usual sense is for the lambda algebra with the basis of admissible monomials in lexicographic order. In [5] Tangora computed the Curtis table for the lambda algebra up to stem 51.

Another example is the minimal resolution for the sphere spectrum. This case is indeed trivial in the sense that there are no tags in the Curtis table.

## 3. The Curtis algorithm

The Curtis algorithm produces a Curtis table from an ordered basis. It can be described as follows:

**Algorithm 3.1.** *(Curtis)*

1. *For each $i$, construct a list $L_i$ which contains every $x_{i,j}$ such that the items are ordered with $j$ ascending.*
2. *For $i = 0, 1, 2, \ldots$ do the following:*
   (a) *Construct a pointer $p$ with initial value pointing to the beginning of $L_i$.*
   (b) *If $p$ points to the end of $L_i$ (i.e. after the last element), stop and proceed to the next $i$.*
   (c) *If the item pointed by $p$ is tagged, move $p$ to the next item and go to Step 2b.*
   (d) *Construct a vector $c \in X_i$. Give $c$ the initial value of the item pointed by $p$.*
   (e) *Compute the boundary $b \in X_{i+1}$ of $c$.*
   (f) *If $b = 0$, move $p$ to the next item and go to Step 2b.*
   (g) *Search the leading term $y$ of $b$ in $L_{i+1}$.*
   (h) *If $y$ is untagged, tag $y$ with the leading term of $c$. Remove the item pointed by $p$ and move $p$ to the next item. Go to Step 2b.*
   (i) *If $y$ is tagged by $z$, add $z$ to $c$. Go to Step 2e.*

**Example 3.2.** *As an example, we compute the Curtis table for the lambda algebra for $t = 3$. We start with*

$$L_1 = \{\lambda_2\}$$
$$L_2 = \{\lambda_1\lambda_0\}$$
$$L_3 = \{\lambda_0^3\}$$

*We next compute the boundary of $\lambda_2$:*

$$d(\lambda_2) = \lambda_1\lambda_0.$$

*We therefore remove it from $L_1$ and tag $\lambda_1\lambda_0$ with $\lambda_2$. The output gives us the following:*

$$L_1 = \emptyset$$
$$L_2 = \{\lambda_1\lambda_0 \leftarrow \lambda_2\}$$
$$L_3 = \{\lambda_0^3\}$$

**Theorem 3.3.** *(Curtis) The Curtis algorithm ends after finitely many steps when $X_*$ is finite dimensional. Moreover, let $Y_*$ be the graded vector space generated by those untagged items on the $L_i$'s. Denote by $C_*$ the subspace of cycles in $X_*$. There is an algorithm which constructs a map $Y_i \to C_i$ and a map $C_i \to Y_i$ which induce an isomorphism between $Y_*$ and the homology of $X_*$.*

*Proof.* See [5]. □

**Corollary 3.4.** *The Curtis table is unique for a finite dimensional complex $X_*$ with ordered basis. In fact, it is specified in the following way:*

*Let $l(x)$ denote the leading term of $x$.*

*If there is a tag $a \leftarrow b$, then $a$ is the minimal element of the set $\{l(d(x))|l(x) = b\}$.*

*If an item $a$ is untagged, then it is the leading term of an element with lowest leading term in a homology class.*

*Proof.* See [5]. □

## 4. Curtis table and spectral sequences

Now suppose $V$ is a filtered vector space with $\cdots \subset F_iV \subset F_{i+1}V \cdots \subset V$. We call an ordered set of basis $\{v_k\}$ compatible if for any $i$ there is a $k_i$ such that $F_iV$ is spanned by $\{v_k : k \leq k_i\}$.

Let $X_0 \to X_1 \to \dots$ be a complex of filtered vector spaces such that the differentials preserve the filtration. Then there is a spectral sequence converging to the homology of $X$ with the $E_1$-term $F_kX_i/F_{k-1}X_i$. Suppose we have compatible bases $\{x_{i,j}\}$ of $X_i$.

**Theorem 4.1.** *The Curtis table of $X_*$ consists of the following:*

1. *The tags of the Curtis table for $(E_r, d_r)$ of the spectral sequence, for all $r \geq 1$.*
2. *The untagged items from the $E_\infty$-term.*

*Here we label the basis of $E_r$ as the following. In the $E_1$-page, we use the image of the $x_{i,j}$'s as the basis, and label them by the same name. Inductively, we use Theorem 3.3 to label a basis of $E_r$ by the untagged items in the Curtis table of $E_{r-1}$.*

*Proof.* We check the conditions of Definition 2.1. They follow directly from the definition of the spectral sequence, the conditions for the Curtis tables of the $E_r$'s, and Theorem 3.3. □

Consequently, we can identify the Curtis table with the table for the differentials and permanent cycles of the spectral sequence. For example, in the lambda algebra, we have a filtration by the first number of an admissible sequence. The induced spectral sequence is the algebraic EHP sequence. So the usual Curtis table can be identified with the algebraic EHP sequence. See [3] for more details.

In practice, the Curtis table for the $E_1$ terms is often known before hand. Then we could skip those part of the Curtis algorithm dealing with the tags coming from the $E_1$ term. And we often omit this part in the output of Curtis table.

## 5. The algebraic Atiyah-Hirzebruch spectral sequence

Let $X$ be a spectrum. There is a filtration on $H^*(X)$ by the degrees. For any $n$ there is a short exact sequence $0 \to H^{\geq n+1}(X) \to H^{\geq n}(X) \to H^n(X) \to 0$. This induces a long exact sequence

$$\cdots \to Ext(\mathbb{Z}/2) \otimes H^n(X) \to Ext(H^{\geq n}(X)) \to Ext(H^{\geq n+1}(X)) \to \dots$$

Combining the long exact sequences for all $n$ we get the algebraic Atiyah-Hirzebruch spectral sequence

$$\oplus_n Ext(\mathbb{Z}/2) \otimes H^n(X) \Rightarrow Ext(H^*(X))$$

There is another way to look at the algebraic Atiyah-Hirzebruch spectral sequence.

Let us fix a free resolution $\cdots \to F_1 \to F_0 \to \mathbb{F}_2$ of $\mathbb{F}_2$ as $\mathcal{A}$-modules. For example, we can take $F_*$ to be the Koszul resolution, which gives the lambda algebra constructed in [2]. We can also take $F_*$ to the the minimal resolution.

Then for $X$ a finite CW spectrum, we can identify $R\mathcal{H}om_{\mathcal{A}}(H^*(X), \mathbb{Z}/2)$ with the complex $C^*(H^*(X)) = Hom_{\mathcal{A}}(H^*(X) \otimes_{\mathbb{F}_2} F_*, \mathbb{F}_2)$ where we take the diagonal action of the Steenrod algebra on $H^*(X) \otimes_{\mathbb{F}_2} F_*$ using the Cartan formula.

The cell filtration on $H_*(X)$ induces a filtration on $H^*(X) \otimes_{\mathbb{F}_2} F_*$, and we can identify the algebraic Atiyah-Hirzebruch spectral sequence with the spectral sequence generated by this filtration. In fact, the map $H^*(X) \otimes_{\mathbb{F}_2} F_* \to H^*(X)$ preserves these filtrations and induces a quasi-isomorphism on each layer. So they define equivalent sequences in the derived category, hence generate the same spectral sequence.

## 6. The Curtis algorithm in computing the algebraic Atiyah-Hirzebruch spectral sequence

Let $X$ be a finite CW spectrum.

Let $r^*_{i,j} \in F_i$ be a set of $\mathcal{A}$-basis for the free $\mathcal{A}$-module $F_i$. Let $r_{i,j} \in Hom_{\mathcal{A}}(F_i, \mathbb{Z}/2)$ be the dual basis.

We choose an ordered $\mathbb{F}_2$-basis $e^*_k$ of $H^*(X)$ such that elements with lower degrees come first. Let $e_k \in H_*(X)$ be the dual basis. Then the set $\{e^*_k \otimes r^*_{i,j}\}$ is a set of $\mathcal{A}$-basis for $H^*(X) \otimes_{\mathbb{F}_2} F_*$. Let $e_k \otimes r_{i,j} \in Hom_{\mathcal{A}}(H^*(X) \otimes_{\mathbb{F}_2} F_*, \mathbb{F}_2)$ be the dual basis with the lexicographic order.

The following is a corollary of Theorem 4.1.

**Theorem 6.1.** *The Curtis table for* $C^*(H^*(X)) = Hom_{\mathcal{A}}(H^*(X) \otimes_{\mathbb{F}_2} F_*, \mathbb{F}_2)$ *satisfies*

1. *If there is a tag* $a \leftarrow b$ *in the Curtis table of* $Hom_{\mathcal{A}}(F_i, \mathbb{Z}/2)$*, there are tags of the form* $e_k \otimes a \leftarrow e_k \otimes b$*.*
2. *The table of all tags which are not contained in Case 1 is the same as the table for the algebraic Atiyah-Hirzebruch differentials of* $X$*.*
3. *The items not contained in the previous cases are untagged items. They correspond to the permanent cycles in the algebraic Atiyah-Hirzebruch spectral sequence.*

Consequently, we can read off the $E_2$-term of the Adams spectral sequence of any truncation of $X$.

**Theorem 6.2.** *Let* $X^n_m$ *be the truncation of* $X$ *which consists of all cells of* $X$ *in dimensions between (and including)* $m$ *and* $n$*. Therefore in the Curtis table of* $X^n_m$*, all the tags are those tags in the Curtis table of* $X$ *lying within the corresponding range. (Note there could be more untagged items, which are just those not appearing in any tags.)*

*Proof.* This follows from the previous theorem because the Atiyah-Hirzebruch spectral sequence is truncated this way. □

We present two examples. The latter one is used in our computation in [7] that the 2-primary $\pi_{61} = 0$. For notation, in the Lambda algebra, we will abbreviate an element $\lambda_{i_1} \dots \lambda_{i_n}$ by $i_1 \dots i_n$. In the Lambda complex of $P^\infty_1$, we will abbreviate an element $e_k \otimes \lambda_{i_1} \dots \lambda_{i_n}$ by $(k)i_1 \dots i_n$. The Curtis table is separated into lists labeled by $(t-s, t)$ on the top, in which those untagged items give a basis for $Ext^{s-1,t-1}(H^*(P^\infty_1))$.

**Example 6.3.** *As a relatively easy example, we compute* $Ext^{2,2+9}(H^*(P^8_2))$ *using the Curtis table of* $P^\infty_1$ *in the Appendix.*

*There are only two boxes that are used in this computation: the ones labeled with* $(9,3)$ *and* $(8,4)$*. The box labeled with* $(9,3)$ *is the following:*

(1) 5 3

(3) 3 3

(7) 1 1 ← (9) 1

*The spectrum* $P^8_2$ *only has cells in dimensions 2 through 8. We remove the item* (1) 5 3*, since it comes from the cell in dimension 1. We also remove the tag* (9) 1*, since it comes from the cell in dimension 9. Therefore, the only items remaining in this box are* (3) 3 3 *and* (7) 1 1*.*

*The box labeled with* $(8,4)$ *is the following:*

(1) 5 1 1 ← (2) 6 1

(5) 1 1 1 ← (6) 2 1

*After removing the element* (1) 5 1 1*, which comes from the cell in dimension 1, the element* (2) 6 1 *tags nothing. We move the element* (2) 6 1 *from the box labeled with* $(8,4)$ *to the one labeled with* $(9,3)$*. Therefore, we have the conclusion that the group* $Ext^{2,2+9}(H^*(P^8_2))$ *has dimension* 3*, generated by*

(3) 3 3, (7) 1 1, *and* (2) 6 1.

*One can even recover the names of these generators in the algebraic Atiyah-Hirzebruch spectral sequence. See Notation 3.3 in* [7] *for the notation. In* $Ext(\mathbb{Z}/2)$*, the elements* 3 3*,* 1 1 *and* 6 1 *all lie in the bidegrees which contain only one nontrivial element. Therefore, we can identify their Adams* $E_2$*-page names as* $h_2^2$*,* $h_1^1$ *and* $h_0h_3$*. This gives us the algebraic Atiyah-Hirzebruch* $E_1$*-page names of these generators:*

$$h_2^2[3],\ h_1^1[7],\ \textit{and}\ h_0h_3[2].$$

**Example 6.4.** *We present the computation of the Adams* $E_2$ *page of* $P_{16}^{22}$ *in the 60 and 61 stem for* $s \leq 7$*, which is used in the proof of Lemma 8.2 in* [7]*. The boxes that are used in this computation have the following labels:*

$$(59, s)\ \textit{for}\ s \leq 7,\ \textit{and}\ (60, s'), (61, s')\ \textit{for}\ s \leq 8.$$

*The spectrum* $P_{16}^{22}$ *consists of cells in dimensions 16 through 22.*

*We start with the 60 stem.*

*We have* $Ext^{1,1+60}(P_{16}^{22}) = Ext^{2,2+60}(P_{16}^{22}) = 0$*, since the boxes labeled with* $(60, 2)$*,* $(59, 3)$ *and* $(60, 3)$*,* $(59, 4)$ *becomes empty.*

*We have* $Ext^{3,3+60}(P_{16}^{22}) = \mathbb{Z}/2$*, generated by* (19) 11 15 15 *from the box labeled with* $(59, 5)$*. The box labeled with* $(60, 4)$ *becomes empty. Since* 11 15 15 $\in Ext^{3,3+41} = \mathbb{Z}/2$*, generated by* $c_2$*, we identify* (19) 11 15 15 *with its Atiyah-Hirzebruch name* $c_2[19]$*.*

*We have* $Ext^{4,4+60}(P_{16}^{22}) = \mathbb{Z}/2 \oplus \mathbb{Z}/2$*, generated by* (16) 13 13 11 7 *from the box labeled with* $(59, 6)$*, and by* (20) 19 7 7 7 *from the box labeled with* $(60, 5)$*. We find their Atiyah-Hirzebruch names* $g_2[16]$ *and* $f_1[20]$*.*

*We have* $Ext^{5,5+60}(P_{16}^{22}) = \mathbb{Z}/2 \oplus \mathbb{Z}/2$*, generated by* (16) 11 14 5 7 7 *and* (21) 7 13 5 7 7 *from the box labeled with* $(59, 7)$*. The box labeled with* $(60, 6)$ *becomes empty. We find their Atiyah-Hirzebruch names* $h_0g_2[16]$ *and* $h_1e_1[21]$*.*

*We have* $Ext^{6,6+60}(P_{16}^{22}) = \mathbb{Z}/2 \oplus \mathbb{Z}/2 \oplus \mathbb{Z}/2$*, generated by* (16) 7 14 4 5 7 7 *from the box labeled with* $(59, 8)$*, and by* (20) 5 5 9 7 7 7 *and* (22) 3 5 9 7 7 7 *from the box labeled with* $(60, 7)$*. We find their Atiyah-Hirzebruch names* $h_0^2g_2[16]$*,* $h_0^2f_1[20]$ *and* $h_1x[22]$*.*

*We have* $Ext^{7,7+60}(P_{16}^{22}) = \mathbb{Z}/2$*, generated by* (21) 3 5 9 3 5 7 7 *from the box labeled with* $(60, 8)$*. The box labeled with* $(59, 9)$ *becomes empty. We find its Atiyah-Hirzebruch name* $h_1y[21]$*.*

*Similarly, one can compute the 61 stem. The computation is summarized in the following Table 1.*

TABLE 1. The Adams $E_2$ page of $P^{22}_{16}$ in the 60 and 61 stems for $s \leq 7$

| $s\backslash t-s$ | *60* | *61* |
|---|---|---|
| *7* | $h_1y[21]$ | $h_0^2h_5d_0[16]$ |
| | | $h_1y[22]$ |
| *6* | $h_0^2g_2[16]$ | $h_0h_5d_0[16]$ |
| | $h_0^2f_1[20]$ | $Ph_2h_5[19]$ |
| | $h_1x[22]$ | |
| *5* | $h_0g_2[16]$ | $h_1g_2[16]$ |
| | $h_1e_1[21]$ | $h_5d_0[16]$ |
| | | $h_1f_1[20]$ |
| | | $h_1h_5c_0[21]$ |
| | | $h_3d_1[22]$ |
| *4* | $g_2[16]$ | $h_0h_4^3[16]$ |
| | $f_1[20]$ | $g_2[17]$ |
| | | $f_1[21]$ |
| | | $h_1^2h_3h_5[21]$ |
| | | $h_5c_0[22]$ |
| *3* | $c_2[19]$ | $h_4^3[16]$ |
| | | $h_1h_3h_5[22]$ |

## 7. THE HOMOMORPHISM INDUCED BY A MAP

Let $f : X \to Y$ be a map which induces the zero map on homology. Let $Z$ be the cofiber of $f$. Then the homology of $Z$ can be identified with the direct sum of $H_*(X)$ and $H_*(Y)$ as a vector space. If $x_1, \ldots, x_k$ is an ordered basis of $H_*(X)$ and $y_1, \ldots, y_l$ is an ordered basis of $H_*(Y)$, then $y_1, \ldots, y_l, x_1, \ldots, x_k$ is an ordered basis of $H_*(Z)$ with certain degree shifts. Note we do not make elements with lower degree go first here. Instead elements $y_i$ always go before elements $x_j$ regardless of degree.

Note that in this case, there is a map of Adams spectral sequence of $X$ and $Y$ which raises the Adams filtration by one, and on the $E_2$ page it is the boundary homomorphism for the Ext group for the exact sequence $0 \to H^{*+1}(X) \to H^*(Z) \to H^*(Y) \to 0$. We call this the map induced by $f$.

**Theorem 7.1.** *The Curtis table for $C^*(H^*(Z)) = Hom_{\mathcal{A}}(H^*(Z) \otimes_{\mathbb{F}_2} F_*, \mathbb{F}_2)$ from Section 5 with this ordered basis satisfies*

1. *All of the tags in the Curtis table for $C^*(H^*(X))$ and for $C^*(H^*(Y))$ also appear in the Curtis table for $C^*(H^*(Z))$.*
2. *The remaining tags give the table for the homomorphism on the Adams $E_2$-page induced by $f$.*
3. *The untagged items give basis for the kernel and cokernel of the homomorphism induced by $f$.*

*Proof.* This follows from Theorem 4.1 by using the filtration $Y \subset Z$, and identifying the $d_2$-differential with the attaching map $X \to Y$. □

So we can use the Curtis algorithm to compute the homomorphism induced by a map.

## 8. The algebraic Atiyah-Hirzebruch spectral sequence of the real projective spectra

We use the Curtis algorithm to compute the algebraic Atiyah-Hirzebruch spectral sequence for the real projective spectra. We take the lambda algebra for the resolution of $\mathbb{Z}/2$ and use the usual Curtis table for the sphere spectrum as input. We have carried out the computation through stems with $t < 72$. As a usual convention to out put the Curtis table, we abbreviate the sequence 2 4 1 1 by $*$; when there are multiple 2's consecutively, we replace them by the same amount of dots.

Together with the algebraic Kahn-Priddy theorem [4] and known information of $Ext(\mathbb{Z}/2)$, this gives the Adams $E_2$-page of $P_1^\infty$ up to $t - s \leq 61$.

We also compute the transfer map. Recall that the fiber of the transfer map has one more cell than $P_1^\infty$ in dimension $-1$, and all the $Sq^i$ acts nontrivially on the class in dimension $-1$. We will use Theorem 7.1 to identify the table for transfer with a portion of the Curtis table for this complex.

For notation, in the Lambda algebra, we will abbreviate an element $\lambda_{i_1} \dots \lambda_{i_n}$ by $i_1 \dots i_n$. We will abbreviate an element $e_k \otimes \lambda_{i_1} \dots \lambda_{i_n}$ by $(k)i_1 \dots i_n$ in the Lambda complex of $P_1^\infty$. The symbol $o$ means zero. The Curtis table is separated into lists labeled by $(t - s, t)$ on the top, in which the untagged items give a basis for $Ext^{s-1,t-1}(H^*(P_1^\infty))$.

The table for the transfer is the output of the algorithm: (We put the table for the transfer map first since it is shorter)

In this table we only list the nontrivial items. Others either map to something with the same name, or to the only choice comparable with the algebraic Kahn-Priddy theorem. For example, (1) maps to 1, i.e. the inclusion of the bottom cell maps to $\eta$. As another example, (5) 3 maps to 5 3, which can be proved independently by the Massey product

$$\langle h_2, h_1, h_2 \rangle = h_1 h_3.$$

We do not include such items in the transfer table.

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Table 2: The table for the transfer map

| | |
|---|---|
| (1) 7 | 5 3 |
| (1) 5 3 | 3 3 3 |
| (1) 6 2 3 3 | 2 4 3 3 3 |
| (1) 15 | 13 3 |
| (1) 13 3 | 11 3 3 |
| (3) 15 | 11 7 |
| (2) 13 3 | 10 5 3 |
| (1) 11 3 3 | 9 3 3 3 |
| (4) 6 5 3 | 5 7 3 3 |
| (1) 8 3 3 3 | 4 5 3 3 3 |
| (3) 8 3 3 3 | 4 7 3 3 3 |
| (3) 11 7 | 7 7 7 |
| (1) 6 6 5 3 | 3 5 7 3 3 |
| (5) 11 3 3 | 3 5 7 7 |
| (2) 7 7 7 | 4 5 7 7 |
| (1) 6 2 3 4 4 1 1 1 | 2 4 1 1 2 4 3 3 3 |
| (1) 4 5 7 7 | 2 3 5 7 7 |
| (3) 13 1 2 4 1 1 1 | 4 2 2 4 5 3 3 3 |
| (1) 8 1 1 2 4 3 3 3 | 2 2 2 2 4 5 3 3 3 |
| (5) 13 1 2 4 1 1 1 | 6 2 2 4 5 3 3 3 |
| (3) 8 1 1 2 4 3 3 3 | 4 2 2 2 4 5 3 3 3 |
| (1) 6 2 2 4 5 3 3 3 | 2 2 2 2 3 5 7 3 3 |
| (8) 3 5 7 7 | 12 9 3 3 3 |
| (1) 15 15 | 13 11 7 |
| (12) 5 7 7 | o |
| (1) 6 2 3 4 4 1 1 2 4 1 1 1 | 2 4 1 1 2 4 1 1 2 4 3 3 3 |
| (1) 31 | 29 3 |
| (2) 12 9 3 3 3 | 9 3 6 6 5 3 |
| (1) 5 6 2 4 5 3 3 3 | 2 2 2 3 3 6 6 5 3 |
| (1) 29 3 | 27 3 3 |
| (1) 13 5 7 7 | 11 3 5 7 7 |
| (1) 9 3 6 6 5 3 | 5 5 3 6 6 5 3 |
| (3) 12 4 5 3 3 3 | 5 5 3 6 6 5 3 |
| (3) 31 | 27 7 |
| (2) 29 3 | 26 5 3 |
| (1) 27 3 3 | 25 3 3 3 |
| (3) 9 3 5 7 7 | 5 7 3 5 7 7 |
| (4) 12 9 3 3 3 | 5 7 3 5 7 7 |
| (1) 8 1 1 2 4 1 1 2 4 3 3 3 | 2 2 2 2 2 2 2 2 4 5 3 3 3 |
| (3) 13 5 7 7 | 5 9 7 7 7 |
| (5) 12 4 5 3 3 3 | 6 5 2 3 5 7 7 |
| (1) 5 6 2 3 5 7 3 3 | 2 4 3 3 3 6 6 5 3 |
| (3) 8 1 1 2 4 1 1 2 4 3 3 3 | 4 2 2 2 2 2 2 2 4 5 3 3 3 |
| (3) 27 7 | 23 7 7 |
| (1) 5 9 3 5 7 7 | 3 5 7 3 5 7 7 |

| | |
|---|---|
| (4) 5 5 3 6 6 5 3 | 4 7 3 3 6 6 5 3 |
| (7) 31 | 23 15 |
| (6) 29 3 | 22 13 3 |
| (5) 27 3 3 | 21 11 3 3 |
| (4) 25 3 3 3 | 20 9 3 3 3 |
| (1) 14 4 5 7 7 | 3 5 9 7 7 7 |
| (1) 23 15 | 21 11 7 |
| (5) 27 7 | 21 11 7 |
| (2) 23 7 7 | 20 5 7 7 |
| (1) 17 7 7 7 | 7 13 5 7 7 |
| (1) 8 12 9 3 3 3 | 3 5 9 3 5 7 7 |
| (1) 21 11 7 | 19 7 7 7 |
| (3) 23 7 7 | 19 7 7 7 |
| (9) 13 11 7 | 11 15 7 7 |
| (1) 20 5 7 7 | 18 3 5 7 7 |
| (2) 17 7 7 7 | 7 14 5 7 7 |
| (1) 7 13 5 7 7 | 5 5 9 7 7 7 |
| (2) 20 9 3 3 3 | 17 3 6 6 5 3 |
| (1) 11 15 7 7 | 9 11 7 7 7 |
| (3) 17 7 7 7 | 9 11 7 7 7 |
| (1) 17 3 6 6 5 3 | 11 12 4 5 3 3 3 |
| (4) 20 9 3 3 3 | 12 12 9 3 3 3 |
| (2) 17 3 6 6 5 3 | 10 9 3 6 6 5 3 |
| (1) 11 12 4 5 3 3 3 | 9 5 5 3 6 6 5 3 |
| (2) 5 6 5 2 3 5 7 7 | 4 5 5 5 3 6 6 5 3 |
| (7) 23 15 | 15 15 15 |
| (6) 21 11 7 | 14 13 11 7 |
| (1) 13 13 11 7 | 9 15 7 7 7 |
| (6) 20 5 7 7 | 13 13 5 7 7 +9 15 7 7 7 |
| (7) 17 7 7 7 | 9 15 7 7 7 |
| (5) 18 3 5 7 7 | 12 11 3 5 7 7 |
| (3) 12 12 9 3 3 3 | 7 8 12 9 3 3 3 |
| (1) 13 13 5 7 7 | 11 5 9 7 7 7 |
| (8) 20 9 3 3 3 | 11 5 9 7 7 7 |
| (2) 7 14 4 5 7 7 | 8 3 5 9 7 7 7 |
| (6) 17 3 6 6 5 3 | 8 3 5 9 7 7 7 |
| (3) 13 13 11 7 | 7 11 15 7 7 |
| (2) 9 15 7 7 7 | 6 9 11 7 7 7 |
| (1) 11 5 9 7 7 7 | 9 3 5 9 7 7 7 |
| (1) 8 3 5 9 7 7 7 | 4 5 3 5 9 7 7 7 |
| (2) 7 8 12 9 3 3 3 | 8 3 5 9 3 5 7 7 |
| (11) 23 7 7 | 7 11 15 15 |
| (8) 19 7 7 7 | 10 17 7 7 7 |
| (3) 13 13 5 7 7 | 9 7 13 5 7 7 |
| (2) 11 5 9 7 7 7 | 8 5 5 9 7 7 7 |
| (4) 7 14 4 5 7 7 | 5 10 11 3 5 7 7 |

| | |
|---|---|
| (2) 8 3 5 9 7 7 7 | 4 6 3 5 9 7 7 7 |
| (1) 4 5 3 5 9 7 7 7 | 2 3 5 3 5 9 7 7 7 |
| (1) 8 3 5 9 3 5 7 7 | 4 5 3 5 9 3 5 7 7 |
| (4) 14 13 11 7 | 9 11 15 7 7 |
| (1) 10 17 7 7 7 | 8 9 11 7 7 7 |
| (5) 15 15 15 | 9 11 15 15 |
| (6) 14 13 11 7 | 7 13 13 11 7 |
| (3) 10 17 7 7 7 | 6 9 15 7 7 7 |
| (2) 8 9 11 7 7 7 | 4 6 9 11 7 7 7 |
| (4) 9 3 5 9 7 7 7 | 3 5 10 11 3 5 7 7 |
| (1) 7 13 13 11 7 | 5 7 11 15 7 7 |
| (3) 9 11 15 7 7 | 5 7 11 15 7 7 |
| (3) 9 11 15 15 | 5 7 11 15 15 |
| (1) 8 4 5 3 5 9 3 5 7 7 | 4 5 4 5 3 5 9 3 5 7 7 |
| (3) 16 2 3 5 5 3 6 6 5 3 | 4 5 4 5 3 5 9 3 5 7 7 |
| (1) 27 12 4 5 3 3 3 | 25 5 5 3 6 6 5 3 |
| (20) 5 5 9 7 7 7 | o |
| (3) 27 12 4 5 3 3 3 | 5 1 2 4 7 11 15 15 |
| (2) 25 5 5 3 6 6 5 3 | 3 6 4 6 9 11 7 7 7 |
| (1) 6 2 3 5 10 11 3 5 7 7 | 2 2 4 5 9 3 5 9 7 7 7 |
| (4) 5 5 9 3 5 7 3 5 7 7 | o |
| (7) 18 2 4 3 3 3 6 6 5 3 | 8 4 2 3 5 3 5 9 7 7 7 +2 2 4 5 9 3 5 9 7 7 7 |
| (8) 5 7 11 15 15 | o |
| (9) 4 7 11 15 15 | 28 11 3 5 7 7 |
| (3) 28 12 9 3 3 3 | 23 8 12 9 3 3 3 |
| (1) 6 2 4 7 11 15 15 | 2 4 3 4 7 11 15 15 |

The Curtis table for the Adams $E_2$-page of $P_1^\infty$ in the range of $t < 72$ is the following:

$* = 2\ 4\ 1\ 1$

$. = 2$

**(1, 1)**

(1)

**(2, 2)**

(1) 1

**(3, 1)**

(3)

**(3, 2)**

(2) 1

**(3, 3)**

(1) 1 1

**(4, 2)**

(1) 3
(3) 1 ← (5)

**(4, 3)**

(1) 2 1 ← (2) 3
(2) 1 1 ← (4) 1

**(4, 4)**

(1) 1 1 1 ← (2) 2 1

**(5, 3)**

(3) 1 1 ← (5) 1

**(5, 4)**

(2) 1 1 1 ← (4) 1 1

**(6, 2)**

(3) 3

**(6, 3)**

(3) 2 1 ← (4) 3

**(6, 4)**

(3) 1 1 1 ← (4) 2 1

**(7, 1)**

(7)

**(7, 2)**

(6) 1

**(7, 3)**

(1) 3 3
(5) 1 1

**(7, 4)**

(4) 1 1 1

**(8, 2)**

(1) 7
(5) 3
(7) 1 ← (9)

**(8, 3)**

(1) 6 1 ← (2) 7
(2) 3 3
(5) 2 1 ← (6) 3
(6) 1 1 ← (8) 1

**(8, 4)**

(1) 5 1 1 ← (2) 6 1
(5) 1 1 1 ← (6) 2 1

**(8, 5)**

(1) 4 1 1 1 ← (2) 5 1 1

**(9, 3)**

(1) 5 3
(3) 3 3
(7) 1 1 ← (9) 1

**(9, 4)**

(1) 2 3 3
(6) 1 1 1 ← (8) 1 1

**(9, 5)**

(2) 4 1 1 1

**(10, 2)**

(3) 7
(7) 3 ← (11)

**(10, 3)**

(2) 5 3
(3) 6 1 ← (4) 7
(4) 3 3 ← (10) 1
(7) 2 1 ← (8) 3

**(10, 4)**

(1) 3 3 3
(2) 2 3 3 ← (9) 1 1
(3) 5 1 1 ← (4) 6 1
(7) 1 1 1 ← (8) 2 1

**(10, 5)**

(1) 1 2 3 3 ← (8) 1 1 1
(3) 4 1 1 1 ← (4) 5 1 1

**(10, 6)**

(1) * 1

**(11, 3)**

(3) 5 3 ← (5) 7
(5) 3 3 ← (9) 3

**(11, 4)**

(2) 3 3 3 ← (4) 5 3
(3) 2 3 3 ← (6) 3 3

**(11, 5)**

(2) 1 2 3 3 ← (4) 2 3 3
(4) 4 1 1 1

**(11, 6)**

(2) * 1

**(11, 7)**

(1) 1 * 1

**(12, 2)**

(11) 1 ← (13)

**(12, 3)**

(5) 6 1 ← (6) 7
(9) 2 1 ← (10) 3
(10) 1 1 ← (12) 1

**(12, 4)**

(3) 3 3 3 ← (5) 5 3
(5) 5 1 1 ← (6) 6 1
(9) 1 1 1 ← (10) 2 1

**(12, 5)**

(3) 1 2 3 3 ← (5) 2 3 3
(5) 4 1 1 1 ← (6) 5 1 1

**(12, 6)**

(1) 4 4 1 1 1 ← (4) 1 2 3 3
(3) * 1 ← (6) 4 1 1 1

**(12, 7)**

(1) 2 * 1 ← (2) 4 4 1 1 1
(2) 1 * 1 ← (4) * 1

**(12, 8)**

(1) 1 1 * 1 ← (2) 2 * 1

**(13, 3)**

(7) 3 3 ← (11) 3
(11) 1 1 ← (13) 1

**(13, 4)**

(4) 3 3 3 ← (8) 3 3
(10) 1 1 1 ← (12) 1 1

**(13, 7)**

(3) 1 * 1 ← (5) * 1

**(13, 8)**

(2) 1 1 * 1 ← (4) 1 * 1

**(14, 2)**

(7) 7

**(14, 3)**

(6) 5 3
(7) 6 1 ← (8) 7
(11) 2 1 ← (12) 3

**(14, 4)**

(5) 3 3 3 ← (9) 3 3
(6) 2 3 3
(7) 5 1 1 ← (8) 6 1
(11) 1 1 1 ← (12) 2 1

**(14, 5)**

(5) 1 2 3 3
(7) 4 1 1 1 ← (8) 5 1 1

**(14, 6)**

(3) 4 4 1 1 1

**(14, 7)**

(3) 2 * 1 ← (4) 4 4 1 1 1

**(14, 8)**

(3) 1 1 * 1 ← (4) 2 * 1

**(15, 1)**

(15)

**(15, 2)**

(14) 1

**(15, 3)**

(1) 7 7
(7) 5 3 ← (9) 7
(13) 1 1

**(15, 4)**

(1) 6 5 3 ← (2) 7 7
(6) 3 3 3 ← (8) 5 3
(7) 2 3 3 ← (10) 3 3
(12) 1 1 1

**(15, 5)**

(1) 6 2 3 3
(6) 1 2 3 3 ← (8) 2 3 3
(8) 4 1 1 1

**(15, 6)**

(1) 5 1 2 3 3 ← (2) 6 2 3 3
(6) * 1

**(15, 7)**

(1) 3 4 4 1 1 1 ← (2) 5 1 2 3 3
(5) 1 * 1

**(15, 8)**

(4) 1 1 * 1

**(16, 2)**

(1) 15
(13) 3
(15) 1 ← (17)

**(16, 3)**

(1) 14 1 ← (2) 15
(9) 6 1 ← (10) 7
(13) 2 1 ← (14) 3
(14) 1 1 ← (16) 1

**(16, 4)**

(1) 13 1 1 ← (2) 14 1
(2) 6 5 3
(7) 3 3 3 ← (9) 5 3
(9) 5 1 1 ← (10) 6 1
(13) 1 1 1 ← (14) 2 1

**(16, 5)**

(1) 12 1 1 1 ← (2) 13 1 1
(7) 1 2 3 3 ← (9) 2 3 3
(9) 4 1 1 1 ← (10) 5 1 1

**(16, 6)**

(1) 2 4 3 3 3
(1) 8 4 1 1 1 ← (2) 12 1 1 1
(5) 4 4 1 1 1 ← (8) 1 2 3 3
(7) * 1 ← (10) 4 1 1 1

**(16, 7)**

(1) 6 * 1 ← (2) 8 4 1 1 1
(2) 3 4 4 1 1 1
(5) 2 * 1 ← (6) 4 4 1 1 1
(6) 1 * 1 ← (8) * 1

**(16, 8)**

(1) 5 1 * 1 ← (2) 6 * 1
(5) 1 1 * 1 ← (6) 2 * 1

**(16, 9)**

(1) 4 1 1 * 1 ← (2) 5 1 * 1

**(17, 3)**

(1) 13 3
(3) 7 7
(11) 3 3
(15) 1 1 ← (17) 1

**(17, 4)**

(3) 6 5 3 ← (4) 7 7
(8) 3 3 3
(14) 1 1 1 ← (16) 1 1

**(17, 5)**

(3) 6 2 3 3

**(17, 6)**

(2) 2 4 3 3 3
(3) 5 1 2 3 3 ← (4) 6 2 3 3

**(17, 7)**

(1) 1 2 4 3 3 3
(3) 3 4 4 1 1 1 ← (4) 5 1 2 3 3
(7) 1 * 1 ← (9) * 1

**(17, 8)**

(1) 2 3 4 4 1 1 1
(6) 1 1 * 1 ← (8) 1 * 1

**(17, 9)**

(2) 4 1 1 * 1

**(18, 2)**

(3) 15
(11) 7
(15) 3 ← (19)

**(18, 3)**

(2) 13 3
(3) 14 1 ← (4) 15
(10) 5 3
(11) 6 1 ← (12) 7
(12) 3 3 ← (18) 1
(15) 2 1 ← (16) 3

**(18, 4)**

(1) 11 3 3
(3) 13 1 1 ← (4) 14 1
(4) 6 5 3
(9) 3 3 3
(10) 2 3 3 ← (17) 1 1
(11) 5 1 1 ← (12) 6 1
(15) 1 1 1 ← (16) 2 1

**(18, 5)**

(1) 8 3 3 3
(3) 12 1 1 1 ← (4) 13 1 1
(9) 1 2 3 3 ← (16) 1 1 1
(11) 4 1 1 1 ← (12) 5 1 1

**(18, 6)**

(1) 3 6 2 3 3 ← (2) 8 3 3 3
(3) 2 4 3 3 3 ← (5) 6 2 3 3
(3) 8 4 1 1 1 ← (4) 12 1 1 1
(7) 4 4 1 1 1 ← (12) 4 1 1 1

**(18, 7)**

(1) ..4 3 3 3 ← (2) 3 6 2 3 3
(2) 1 2 4 3 3 3 ← (4) 2 4 3 3 3
(3) 6 * 1 ← (4) 8 4 1 1 1
(4) 3 4 4 1 1 1 ← (10) * 1
(7) 2 * 1 ← (8) 4 4 1 1 1

**(18, 8)**

(1) 1 1 2 4 3 3 3 ← (2) ..4 3 3 3
(2) 2 3 4 4 1 1 1 ← (9) 1 * 1
(3) 5 1 * 1 ← (4) 6 * 1
(7) 1 1 * 1 ← (8) 2 * 1

**(18, 9)**

(1) 1 2 3 4 4 1 1 1 ← (8) 1 1 * 1
(3) 4 1 1 * 1 ← (4) 5 1 * 1

**(18, 10)**

(1) * * 1

**(19, 3)**

(1) 11 7
(3) 13 3 ← (5) 15
(5) 7 7
(11) 5 3 ← (13) 7
(13) 3 3 ← (17) 3

**(19, 4)**

(1) 10 5 3 ← (2) 11 7
(2) 11 3 3 ← (4) 13 3
(5) 6 5 3 ← (6) 7 7
(10) 3 3 3 ← (12) 5 3
(11) 2 3 3 ← (14) 3 3

**(19, 5)**

(1) 5 7 3 3
(1) 9 3 3 3 ← (2) 10 5 3
(10) 1 2 3 3 ← (12) 2 3 3

**(19, 6)**

(1) 4 5 3 3 3 ← (2) 5 7 3 3
(5) 5 1 2 3 3 ← (6) 6 2 3 3

**(19, 7)**

(3) 1 2 4 3 3 3 ← (5) 2 4 3 3 3
(5) 3 4 4 1 1 1 ← (6) 5 1 2 3 3

**(19, 8)**

(2) 1 1 2 4 3 3 3 ← (4) 1 2 4 3 3 3
(3) 2 3 4 4 1 1 1 ← (6) 3 4 4 1 1 1

**(19, 9)**

(2) 1 2 3 4 4 1 1 1 ← (4) 2 3 4 4 1 1 1
(4) 4 1 1 * 1

**(19, 10)**

(2) * * 1

**(19, 11)**

(1) 1 * * 1

**(20, 2)**

(19) 1 ← (21)

**(20, 3)**

(5) 14 1 ← (6) 15
(13) 6 1 ← (14) 7
(17) 2 1 ← (18) 3
(18) 1 1 ← (20) 1

**(20, 4)**

(1) 5 7 7
(3) 11 3 3 ← (5) 13 3
(5) 13 1 1 ← (6) 14 1
(6) 6 5 3
(11) 3 3 3 ← (13) 5 3
(13) 5 1 1 ← (14) 6 1
(17) 1 1 1 ← (18) 2 1

**(20, 5)**

(2) 9 3 3 3 ← (4) 11 3 3
(3) 8 3 3 3
(5) 12 1 1 1 ← (6) 13 1 1
(11) 1 2 3 3 ← (13) 2 3 3
(13) 4 1 1 1 ← (14) 5 1 1

**(20, 6)**

(2) 4 5 3 3 3
(3) 3 6 2 3 3 ← (4) 8 3 3 3
(5) 8 4 1 1 1 ← (6) 12 1 1 1
(9) 4 4 1 1 1 ← (12) 1 2 3 3
(11) * 1 ← (14) 4 1 1 1

**(20, 7)**

(3) ..4 3 3 3 ← (4) 3 6 2 3 3
(5) 6 * 1 ← (6) 8 4 1 1 1
(9) 2 * 1 ← (10) 4 4 1 1 1
(10) 1 * 1 ← (12) * 1

**(20, 8)**

(3) 1 1 2 4 3 3 3 ← (4) ..4 3 3 3
(5) 5 1 * 1 ← (6) 6 * 1
(9) 1 1 * 1 ← (10) 2 * 1

**(20, 9)**

(3) 1 2 3 4 4 1 1 1 ← (5) 2 3 4 4 1 1 1
(5) 4 1 1 * 1 ← (6) 5 1 * 1

**(20, 10)**

(1) 4 4 1 1 * 1 ← (4) 1 2 3 4 4 1 1 1
(3) * * 1 ← (6) 4 1 1 * 1

**(20, 11)**

(1) 2 * * 1 ← (2) 4 4 1 1 * 1
(2) 1 * * 1 ← (4) * * 1

**(20, 12)**

(1) 1 1 * * 1 ← (2) 2 * * 1

**(21, 3)**

(3) 11 7
(7) 7 7
(15) 3 3 ← (19) 3
(19) 1 1 ← (21) 1

**(21, 4)**

(2) 5 7 7
(3) 10 5 3 ← (4) 11 7
(7) 6 5 3 ← (8) 7 7
(12) 3 3 3 ← (16) 3 3
(18) 1 1 1 ← (20) 1 1

**(21, 5)**

(1) 6 6 5 3
(3) 5 7 3 3
(3) 9 3 3 3 ← (4) 10 5 3
(7) 6 2 3 3 ← (14) 2 3 3

**(21, 6)**

(1) 4 7 3 3 3 ← (2) 6 6 5 3
(3) 4 5 3 3 3 ← (4) 5 7 3 3
(6) 2 4 3 3 3 ← (13) 1 2 3 3
(7) 5 1 2 3 3 ← (8) 6 2 3 3

**(21, 7)**

(1) 2 4 5 3 3 3 ← (2) 4 7 3 3 3
(5) 1 2 4 3 3 3 ← (11) 4 4 1 1 1
(7) 3 4 4 1 1 1 ← (8) 5 1 2 3 3
(11) 1 * 1 ← (13) * 1

**(21, 8)**

(4) 1 1 2 4 3 3 3 ← (8) 3 4 4 1 1 1
(10) 1 1 * 1 ← (12) 1 * 1

**(21, 11)**

(3) 1 * * 1 ← (5) * * 1

**(21, 12)**

(2) 1 1 * * 1 ← (4) 1 * * 1

**(22, 2)**

(7) 15
(15) 7 ← (23)

**(22, 3)**

(6) 13 3
(7) 14 1 ← (8) 15
(14) 5 3 ← (22) 1
(15) 6 1 ← (16) 7
(19) 2 1 ← (20) 3

**(22, 4)**

(1) 7 7 7
(3) 5 7 7
(5) 11 3 3
(7) 13 1 1 ← (8) 14 1
(8) 6 5 3 ← (21) 1 1
(13) 3 3 3 ← (17) 3 3
(15) 5 1 1 ← (16) 6 1
(19) 1 1 1 ← (20) 2 1

**(22, 5)**

(4) 9 3 3 3
(5) 8 3 3 3 ← (20) 1 1 1
(7) 12 1 1 1 ← (8) 13 1 1
(15) 4 1 1 1 ← (16) 5 1 1

**(22, 6)**

(1) 3 5 7 3 3
(4) 4 5 3 3 3 ← (16) 4 1 1 1
(5) 3 6 2 3 3 ← (6) 8 3 3 3
(7) 2 4 3 3 3 ← (9) 6 2 3 3
(7) 8 4 1 1 1 ← (8) 12 1 1 1

**(22, 7)**

(2) 2 4 5 3 3 3 ← (14) * 1
(5) ..4 3 3 3 ← (6) 3 6 2 3 3
(6) 1 2 4 3 3 3 ← (8) 2 4 3 3 3
(7) 6 * 1 ← (8) 8 4 1 1 1
(11) 2 * 1 ← (12) 4 4 1 1 1

**(22, 8)**

(5) 1 1 2 4 3 3 3 ← (6) ..4 3 3 3
(6) 2 3 4 4 1 1 1
(7) 5 1 * 1 ← (8) 6 * 1
(11) 1 1 * 1 ← (12) 2 * 1

**(22, 9)**

(5) 1 2 3 4 4 1 1 1
(7) 4 1 1 * 1 ← (8) 5 1 * 1

**(22, 10)**

(3) 4 4 1 1 * 1

**(22, 11)**

(3) 2 * * 1 ← (4) 4 4 1 1 * 1

**(22, 12)**

(3) 1 1 * * 1 ← (4) 2 * * 1

**(23, 3)**

(5) 11 7
(7) 13 3 ← (9) 15
(9) 7 7 ← (21) 3
(15) 5 3 ← (17) 7

**(23, 4)**

(2) 7 7 7
(4) 5 7 7
(5) 10 5 3 ← (6) 11 7
(6) 11 3 3 ← (8) 13 3
(9) 6 5 3 ← (10) 7 7
(14) 3 3 3 ← (16) 5 3
(15) 2 3 3 ← (18) 3 3

**(23, 5)**

(1) 3 5 7 7
(3) 6 6 5 3
(5) 5 7 3 3 ← (10) 6 5 3
(5) 9 3 3 3 ← (6) 10 5 3
(14) 1 2 3 3 ← (16) 2 3 3

**(23, 6)**

(2) 3 5 7 3 3
(3) 4 7 3 3 3 ← (4) 6 6 5 3
(5) 4 5 3 3 3 ← (6) 5 7 3 3
(9) 5 1 2 3 3 ← (10) 6 2 3 3

**(23, 7)**

(3) 2 4 5 3 3 3 ← (4) 4 7 3 3 3
(7) 1 2 4 3 3 3 ← (9) 2 4 3 3 3
(9) 3 4 4 1 1 1 ← (10) 5 1 2 3 3
(13) 1 * 1

**(23, 8)**

(6) 1 1 2 4 3 3 3 ← (8) 1 2 4 3 3 3
(7) 2 3 4 4 1 1 1 ← (10) 3 4 4 1 1 1
(12) 1 1 * 1

**(23, 9)**

(1) 6 2 3 4 4 1 1 1
(6) 1 2 3 4 4 1 1 1 ← (8) 2 3 4 4 1 1 1
(8) 4 1 1 * 1

**(23, 10)**

(1) 5 1 2 3 4 4 1 1 1 ← (2) 6 2 3 4 4 1 1 1
(6) * * 1

**(23, 11)**

(1) 3 4 4 1 1 * 1 ← (2) 5 1 2 3 4 4 1 1 1
(5) 1 * * 1

**(23, 12)**

(4) 1 1 * * 1

**(24, 2)**

(23) 1 ← (25)

**(24, 3)**

(9) 14 1 ← (10) 15
(17) 6 1 ← (18) 7
(21) 2 1 ← (22) 3
(22) 1 1 ← (24) 1

**(24, 4)**

(3) 7 7 7
(5) 5 7 7 ← (19) 3 3
(7) 11 3 3 ← (9) 13 3
(9) 13 1 1 ← (10) 14 1
(15) 3 3 3 ← (17) 5 3
(17) 5 1 1 ← (18) 6 1
(21) 1 1 1 ← (22) 2 1

**(24, 5)**

(1) 4 5 7 7
(2) 3 5 7 7
(6) 9 3 3 3 ← (8) 11 3 3
(7) 8 3 3 3 ← (16) 3 3 3
(9) 12 1 1 1 ← (10) 13 1 1
(15) 1 2 3 3 ← (17) 2 3 3
(17) 4 1 1 1 ← (18) 5 1 1

**(24, 6)**

(1) 3 6 6 5 3
(3) 3 5 7 3 3 ← (5) 6 6 5 3
(6) 4 5 3 3 3 ← (11) 6 2 3 3
(7) 3 6 2 3 3 ← (8) 8 3 3 3
(9) 8 4 1 1 1 ← (10) 12 1 1 1
(13) 4 4 1 1 1 ← (16) 1 2 3 3
(15) * 1 ← (18) 4 1 1 1

**(24, 7)**

(1) 2 3 5 7 3 3 ← (2) 3 6 6 5 3
(4) 2 4 5 3 3 3 ← (10) 2 4 3 3 3
(7) ..4 3 3 3 ← (8) 3 6 2 3 3
(9) 6 * 1 ← (10) 8 4 1 1 1
(13) 2 * 1 ← (14) 4 4 1 1 1
(14) 1 * 1 ← (16) * 1

**(24, 8)**

(1) 13 1 * 1 ← (9) 1 2 4 3 3 3
(7) 1 1 2 4 3 3 3 ← (8) ..4 3 3 3
(9) 5 1 * 1 ← (10) 6 * 1
(13) 1 1 * 1 ← (14) 2 * 1

**(24, 9)**

(1) 12 1 1 * 1 ← (2) 13 1 * 1
(7) 1 2 3 4 4 1 1 1 ← (9) 2 3 4 4 1 1 1
(9) 4 1 1 * 1 ← (10) 5 1 * 1

**(24, 10)**

(1) * 2 4 3 3 3
(1) 8 4 1 1 * 1 ← (2) 12 1 1 * 1
(5) 4 4 1 1 * 1 ← (8) 1 2 3 4 4 1 1 1
(7) * * 1 ← (10) 4 1 1 * 1

**(24, 11)**

(1) 6 * * 1 ← (2) 8 4 1 1 * 1
(2) 3 4 4 1 1 * 1
(5) 2 * * 1 ← (6) 4 4 1 1 * 1
(6) 1 * * 1 ← (8) * * 1

**(24, 12)**

(1) 5 1 * * 1 ← (2) 6 * * 1
(5) 1 1 * * 1 ← (6) 2 * * 1

**(24, 13)**

(1) 4 1 1 * * 1 ← (2) 5 1 * * 1

**(25, 3)**

(7) 11 7 ← (11) 15
(11) 7 7 ← (19) 7
(23) 1 1 ← (25) 1

**(25, 4)**

(4) 7 7 7 ← (10) 13 3
(6) 5 7 7 ← (18) 5 3
(7) 10 5 3 ← (8) 11 7
(11) 6 5 3 ← (12) 7 7
(22) 1 1 1 ← (24) 1 1

**(25, 5)**

(2) 4 5 7 7 ← (9) 11 3 3
(3) 3 5 7 7 ← (17) 3 3 3
(7) 5 7 3 3 ← (12) 6 5 3
(7) 9 3 3 3 ← (8) 10 5 3

**(25, 6)**

(1) 2 3 5 7 7 ← (8) 9 3 3 3
(4) 3 5 7 3 3 ← (9) 8 3 3 3
(5) 4 7 3 3 3 ← (6) 6 6 5 3
(7) 4 5 3 3 3 ← (8) 5 7 3 3
(11) 5 1 2 3 3 ← (12) 6 2 3 3

**(25, 7)**

(2) 2 3 5 7 3 3 ← (8) 4 5 3 3 3
(5) 2 4 5 3 3 3 ← (6) 4 7 3 3 3
(11) 3 4 4 1 1 1 ← (12) 5 1 2 3 3
(15) 1 * 1 ← (17) * 1

**(25, 8)**

(8) 1 1 2 4 3 3 3
(14) 1 1 * 1 ← (16) 1 * 1

**(25, 9)**

(3) 6 2 3 4 4 1 1 1

**(25, 10)**

(2) * 2 4 3 3 3
(3) 5 1 2 3 4 4 1 1 1 ← (4) 6 2 3 4 4 1 1 1

**(25, 11)**

(1) 1 * 2 4 3 3 3
(3) 3 4 4 1 1 * 1 ← (4) 5 1 2 3 4 4 1 1 1
(7) 1 * * 1 ← (9) * * 1

**(25, 12)**

(1) 2 3 4 4 1 1 * 1
(6) 1 1 * * 1 ← (8) 1 * * 1

**(25, 13)**

(2) 4 1 1 * * 1

**(26, 2)**

(23) 3 ← (27)

**(26, 3)**

(11) 14 1 ← (12) 15
(19) 6 1 ← (20) 7
(20) 3 3 ← (26) 1
(23) 2 1 ← (24) 3

**(26, 4)**

(5) 7 7 7 ← (9) 11 7
(7) 5 7 7 ← (13) 7 7
(11) 13 1 1 ← (12) 14 1
(18) 2 3 3 ← (25) 1 1
(19) 5 1 1 ← (20) 6 1
(23) 1 1 1 ← (24) 2 1

**(26, 5)**

(3) 4 5 7 7 ← (6) 7 7 7
(4) 3 5 7 7 ← (8) 5 7 7
(11) 12 1 1 1 ← (12) 13 1 1
(17) 1 2 3 3 ← (24) 1 1 1
(19) 4 1 1 1 ← (20) 5 1 1

**(26, 6)**

(2) 2 3 5 7 7 ← (4) 4 5 7 7
(3) 3 6 6 5 3
(5) 3 5 7 3 3 ← (9) 5 7 3 3
(9) 3 6 2 3 3 ← (10) 8 3 3 3
(11) 2 4 3 3 3 ← (13) 6 2 3 3
(11) 8 4 1 1 1 ← (12) 12 1 1 1
(15) 4 4 1 1 1 ← (20) 4 1 1 1

**(26, 7)**

(3) 2 3 5 7 3 3 ← (4) 3 6 6 5 3
(6) 2 4 5 3 3 3
(9) ..4 3 3 3 ← (10) 3 6 2 3 3
(10) 1 2 4 3 3 3 ← (12) 2 4 3 3 3
(11) 6 * 1 ← (12) 8 4 1 1 1
(12) 3 4 4 1 1 1 ← (18) * 1
(15) 2 * 1 ← (16) 4 4 1 1 1

**(26, 8)**

(3) 13 1 * 1
(9) 1 1 2 4 3 3 3 ← (10) ..4 3 3 3
(10) 2 3 4 4 1 1 1 ← (17) 1 * 1
(11) 5 1 * 1 ← (12) 6 * 1
(15) 1 1 * 1 ← (16) 2 * 1

**(26, 9)**

(1) 8 1 1 2 4 3 3 3
(3) 12 1 1 * 1 ← (4) 13 1 * 1
(9) 1 2 3 4 4 1 1 1 ← (16) 1 1 * 1
(11) 4 1 1 * 1 ← (12) 5 1 * 1

**(26, 10)**

(1) 3 6 2 3 4 4 1 1 1 ← (2) 8 1 1 2 4 3 3 3
(3) * 2 4 3 3 3 ← (5) 6 2 3 4 4 1 1 1
(3) 8 4 1 1 * 1 ← (4) 12 1 1 * 1
(7) 4 4 1 1 * 1 ← (12) 4 1 1 * 1

**(26, 11)**

(1) 2 * 2 4 3 3 3 ← (2) 3 6 2 3 4 4 1 1 1
(2) 1 * 2 4 3 3 3 ← (4) * 2 4 3 3 3
(3) 6 * * 1 ← (4) 8 4 1 1 * 1
(4) 3 4 4 1 1 * 1 ← (10) * * 1
(7) 2 * * 1 ← (8) 4 4 1 1 * 1

**(26, 12)**

(1) 1 1 * 2 4 3 3 3 ← (2) 2 * 2 4 3 3 3
(2) 2 3 4 4 1 1 * 1 ← (9) 1 * * 1
(3) 5 1 * * 1 ← (4) 6 * * 1
(7) 1 1 * * 1 ← (8) 2 * * 1

**(26, 13)**

(1) 1 2 3 4 4 1 1 * 1 ← (8) 1 1 * * 1
(3) 4 1 1 * * 1 ← (4) 5 1 * * 1

**(26, 14)**

(1) * * * 1

**(27, 3)**

(11) 13 3 ← (13) 15
(19) 5 3 ← (21) 7
(21) 3 3 ← (25) 3

**(27, 4)**

(9) 10 5 3 ← (10) 11 7
(10) 11 3 3 ← (12) 13 3
(13) 6 5 3 ← (14) 7 7
(18) 3 3 3 ← (20) 5 3
(19) 2 3 3 ← (22) 3 3

**(27, 5)**

(5) 3 5 7 7 ← (9) 5 7 7
(7) 6 6 5 3 ← (14) 6 5 3
(9) 9 3 3 3 ← (10) 10 5 3
(18) 1 2 3 3 ← (20) 2 3 3

**(27, 6)**

(3) 2 3 5 7 7 ← (5) 4 5 7 7
(6) 3 5 7 3 3 ← (11) 8 3 3 3
(7) 4 7 3 3 3 ← (8) 6 6 5 3
(9) 4 5 3 3 3 ← (10) 5 7 3 3
(13) 5 1 2 3 3 ← (14) 6 2 3 3

**(27, 7)**

(1) 3 3 6 6 5 3 ← (4) 2 3 5 7 7
(4) 2 3 5 7 3 3 ← (10) 4 5 3 3 3
(7) 2 4 5 3 3 3 ← (8) 4 7 3 3 3
(11) 1 2 4 3 3 3 ← (13) 2 4 3 3 3
(13) 3 4 4 1 1 1 ← (14) 5 1 2 3 3

**(27, 8)**

(1) 6 2 4 5 3 3 3 ← (8) 2 4 5 3 3 3
(10) 1 1 2 4 3 3 3 ← (12) 1 2 4 3 3 3
(11) 2 3 4 4 1 1 1 ← (14) 3 4 4 1 1 1

**(27, 9)**

(1) 4 ..4 5 3 3 3 ← (2) 6 2 4 5 3 3 3
(10) 1 2 3 4 4 1 1 1 ← (12) 2 3 4 4 1 1 1

**(27, 10)**

(1) ....4 5 3 3 3 ← (2) 4 ..4 5 3 3 3
(5) 5 1 2 3 4 4 1 1 1 ← (6) 6 2 3 4 4 1 1 1

**(27, 11)**

(3) 1 * 2 4 3 3 3 ← (5) * 2 4 3 3 3
(5) 3 4 4 1 1 * 1 ← (6) 5 1 2 3 4 4 1 1 1

**(27, 12)**

(2) 1 1 * 2 4 3 3 3 ← (4) 1 * 2 4 3 3 3
(3) 2 3 4 4 1 1 * 1 ← (6) 3 4 4 1 1 * 1

**(27, 13)**

(2) 1 2 3 4 4 1 1 * 1 ← (4) 2 3 4 4 1 1 * 1
(4) 4 1 1 * * 1

**(27, 14)**

(2) * * * 1

**(27, 15)**

(1) 1 * * * 1

**(28, 2)**

(27) 1 ← (29)

**(28, 3)**

(13) 14 1 ← (14) 15
(21) 6 1 ← (22) 7
(25) 2 1 ← (26) 3
(26) 1 1 ← (28) 1

**(28, 4)**

(7) 7 7 7 ← (11) 11 7
(11) 11 3 3 ← (13) 13 3
(13) 13 1 1 ← (14) 14 1
(19) 3 3 3 ← (21) 5 3
(21) 5 1 1 ← (22) 6 1
(25) 1 1 1 ← (26) 2 1

**(28, 5)**

(6) 3 5 7 7 ← (10) 5 7 7
(10) 9 3 3 3 ← (12) 11 3 3
(13) 12 1 1 1 ← (14) 13 1 1
(19) 1 2 3 3 ← (21) 2 3 3
(21) 4 1 1 1 ← (22) 5 1 1

**(28, 6)**

(5) 3 6 6 5 3 ← (11) 5 7 3 3
(7) 3 5 7 3 3 ← (9) 6 6 5 3
(11) 3 6 2 3 3 ← (12) 8 3 3 3
(13) 8 4 1 1 1 ← (14) 12 1 1 1
(17) 4 4 1 1 1 ← (20) 1 2 3 3
(19) * 1 ← (22) 4 1 1 1

**(28, 7)**

(2) 3 3 6 6 5 3 ← (8) 3 5 7 3 3
(5) 2 3 5 7 3 3 ← (6) 3 6 6 5 3
(11) ..4 3 3 3 ← (12) 3 6 2 3 3
(13) 6 * 1 ← (14) 8 4 1 1 1
(17) 2 * 1 ← (18) 4 4 1 1 1
(18) 1 * 1 ← (20) * 1

**(28, 8)**

(5) 13 1 * 1
(11) 1 1 2 4 3 3 3 ← (12) ..4 3 3 3
(13) 5 1 * 1 ← (14) 6 * 1
(17) 1 1 * 1 ← (18) 2 * 1

(28, 9)

(3) 8 1 1 2 4 3 3 3
(5) 12 1 1 * 1 ← (6) 13 1 * 1
(11) 1 2 3 4 4 1 1 1 ← (13) 2 3 4 4 1 1 1
(13) 4 1 1 * 1 ← (14) 5 1 * 1

(28, 10)

(2) ....4 5 3 3 3
(3) 3 6 2 3 4 4 1 1 1 ← (4) 8 1 1 2 4 3 3 3
(5) 8 4 1 1 * 1 ← (6) 12 1 1 * 1
(9) 4 4 1 1 * 1 ← (12) 1 2 3 4 4 1 1 1
(11) * * 1 ← (14) 4 1 1 * 1

(28, 11)

(3) 2 * 2 4 3 3 3 ← (4) 3 6 2 3 4 4 1 1 1
(5) 6 * * 1 ← (6) 8 4 1 1 * 1
(9) 2 * * 1 ← (10) 4 4 1 1 * 1
(10) 1 * * 1 ← (12) * * 1

(28, 12)

(3) 1 1 * 2 4 3 3 3 ← (4) 2 * 2 4 3 3 3
(5) 5 1 * * 1 ← (6) 6 * * 1
(9) 1 1 * * 1 ← (10) 2 * * 1

(28, 13)

(3) 1 2 3 4 4 1 1 * 1 ← (5) 2 3 4 4 1 1 * 1
(5) 4 1 1 * * 1 ← (6) 5 1 * * 1

(28, 14)

(1) 4 4 1 1 * * 1 ← (4) 1 2 3 4 4 1 1 * 1
(3) * * * 1 ← (6) 4 1 1 * * 1

(28, 15)

(1) 2 * * * 1 ← (2) 4 4 1 1 * * 1
(2) 1 * * * 1 ← (4) * * * 1

(28, 16)

(1) 1 1 * * * 1 ← (2) 2 * * * 1

(29, 3)

(15) 7 7 ← (23) 7
(23) 3 3 ← (27) 3
(27) 1 1 ← (29) 1

(29, 4)

(8) 7 7 7 ← (22) 5 3
(11) 10 5 3 ← (12) 11 7
(15) 6 5 3 ← (16) 7 7
(20) 3 3 3 ← (24) 3 3
(26) 1 1 1 ← (28) 1 1

(29, 5)

(6) 4 5 7 7 ← (16) 6 5 3
(7) 3 5 7 7 ← (11) 5 7 7
(11) 9 3 3 3 ← (12) 10 5 3
(15) 6 2 3 3 ← (22) 2 3 3

(29, 6)

(5) 2 3 5 7 7 ← (13) 8 3 3 3
(9) 4 7 3 3 3 ← (10) 6 6 5 3
(11) 4 5 3 3 3 ← (12) 5 7 3 3
(14) 2 4 3 3 3 ← (21) 1 2 3 3
(15) 5 1 2 3 3 ← (16) 6 2 3 3

(29, 7)

(3) 3 3 6 6 5 3 ← (9) 3 5 7 3 3
(6) 2 3 5 7 3 3
(9) 2 4 5 3 3 3 ← (10) 4 7 3 3 3
(13) 1 2 4 3 3 3 ← (19) 4 4 1 1 1
(15) 3 4 4 1 1 1 ← (16) 5 1 2 3 3
(19) 1 * 1 ← (21) * 1

(29, 8)

(3) 6 2 4 5 3 3 3
(12) 1 1 2 4 3 3 3 ← (16) 3 4 4 1 1 1
(18) 1 1 * 1 ← (20) 1 * 1

(29, 9)

(1) 6 ..4 5 3 3 3
(3) 4 ..4 5 3 3 3 ← (4) 6 2 4 5 3 3 3
(7) 6 2 3 4 4 1 1 1 ← (14) 2 3 4 4 1 1 1

(29, 10)

(1) 4 ...4 5 3 3 3 ← (2) 6 ..4 5 3 3 3
(3) ....4 5 3 3 3 ← (4) 4 ..4 5 3 3 3
(6) * 2 4 3 3 3 ← (13) 1 2 3 4 4 1 1 1
(7) 5 1 2 3 4 4 1 1 1 ← (8) 6 2 3 4 4 1 1 1

(29, 11)

(1) .....4 5 3 3 3 ← (2) 4 ...4 5 3 3 3
(5) 1 * 2 4 3 3 3 ← (11) 4 4 1 1 * 1
(7) 3 4 4 1 1 * 1 ← (8) 5 1 2 3 4 4 1 1 1
(11) 1 * * 1 ← (13) * * 1

(29, 12)

(4) 1 1 * 2 4 3 3 3 ← (8) 3 4 4 1 1 * 1
(10) 1 1 * * 1 ← (12) 1 * * 1

(29, 15)

(3) 1 * * * 1 ← (5) * * * 1

**(29, 16)**

(2) 1 1 * * * 1 ← (4) 1 * * * 1

**(30, 2)**

(15) 15

**(30, 3)**

(14) 13 3
(15) 14 1 ← (16) 15
(23) 6 1 ← (24) 7
(27) 2 1 ← (28) 3

**(30, 4)**

(9) 7 7 7 ← (17) 7 7
(13) 11 3 3
(15) 13 1 1 ← (16) 14 1
(21) 3 3 3 ← (25) 3 3
(23) 5 1 1 ← (24) 6 1
(27) 1 1 1 ← (28) 2 1

**(30, 5)**

(7) 4 5 7 7 ← (10) 7 7 7
(8) 3 5 7 7
(12) 9 3 3 3
(15) 12 1 1 1 ← (16) 13 1 1
(23) 4 1 1 1 ← (24) 5 1 1

**(30, 6)**

(6) 2 3 5 7 7 ← (8) 4 5 7 7
(7) 3 6 6 5 3 ← (11) 6 6 5 3
(12) 4 5 3 3 3
(13) 3 6 2 3 3 ← (14) 8 3 3 3
(15) 2 4 3 3 3 ← (17) 6 2 3 3
(15) 8 4 1 1 1 ← (16) 12 1 1 1

**(30, 7)**

(4) 3 3 6 6 5 3 ← (10) 3 5 7 3 3
(7) 2 3 5 7 3 3 ← (8) 3 6 6 5 3
(10) 2 4 5 3 3 3
(13) ..4 3 3 3 ← (14) 3 6 2 3 3
(14) 1 2 4 3 3 3 ← (16) 2 4 3 3 3
(15) 6 * 1 ← (16) 8 4 1 1 1
(19) 2 * 1 ← (20) 4 4 1 1 1

**(30, 8)**

(1) 6 2 3 5 7 3 3 ← (8) 2 3 5 7 3 3
(7) 13 1 * 1
(13) 1 1 2 4 3 3 3 ← (14) ..4 3 3 3
(15) 5 1 * 1 ← (16) 6 * 1
(19) 1 1 * 1 ← (20) 2 * 1

**(30, 9)**

(1) 3 6 2 4 5 3 3 3 ← (2) 6 2 3 5 7 3 3
(5) 8 1 1 2 4 3 3 3
(7) 12 1 1 * 1 ← (8) 13 1 * 1
(15) 4 1 1 * 1 ← (16) 5 1 * 1

**(30, 10)**

(1) ....3 5 7 3 3 ← (2) 3 6 2 4 5 3 3 3
(4) ....4 5 3 3 3
(5) 3 6 2 3 4 4 1 1 1 ← (6) 8 1 1 2 4 3 3 3
(7) * 2 4 3 3 3 ← (9) 6 2 3 4 4 1 1 1
(7) 8 4 1 1 * 1 ← (8) 12 1 1 * 1

**(30, 11)**

(2) .....4 5 3 3 3
(5) 2 * 2 4 3 3 3 ← (6) 3 6 2 3 4 4 1 1 1
(6) 1 * 2 4 3 3 3 ← (8) * 2 4 3 3 3
(7) 6 * * 1 ← (8) 8 4 1 1 * 1
(11) 2 * * 1 ← (12) 4 4 1 1 * 1

**(30, 12)**

(5) 1 1 * 2 4 3 3 3 ← (6) 2 * 2 4 3 3 3
(6) 2 3 4 4 1 1 * 1
(7) 5 1 * * 1 ← (8) 6 * * 1
(11) 1 1 * * 1 ← (12) 2 * * 1

**(30, 13)**

(5) 1 2 3 4 4 1 1 * 1
(7) 4 1 1 * * 1 ← (8) 5 1 * * 1

**(30, 14)**

(3) 4 4 1 1 * * 1

**(30, 15)**

(3) 2 * * * 1 ← (4) 4 4 1 1 * * 1

**(30, 16)**

(3) 1 1 * * * 1 ← (4) 2 * * * 1

**(31, 1)**

(31)

**(31, 2)**

(30) 1

**(31, 3)**

(1) 15 15
(13) 11 7
(15) 13 3 ← (17) 15
(23) 5 3 ← (25) 7
(29) 1 1

**(31, 4)**

(1) 14 13 3 ← (2) 15 15
(12) 5 7 7
(13) 10 5 3 ← (14) 11 7
(14) 11 3 3 ← (16) 13 3
(17) 6 5 3 ← (18) 7 7
(22) 3 3 3 ← (24) 5 3
(23) 2 3 3 ← (26) 3 3
(28) 1 1 1

**(31, 5)**

(1) 13 11 3 3 ← (2) 14 13 3
(9) 3 5 7 7
(13) 5 7 3 3 ← (18) 6 5 3
(13) 9 3 3 3 ← (14) 10 5 3
(22) 1 2 3 3 ← (24) 2 3 3
(24) 4 1 1 1

**(31, 6)**

(1) 12 9 3 3 3 ← (2) 13 11 3 3
(7) 2 3 5 7 7 ← (9) 4 5 7 7
(11) 4 7 3 3 3 ← (12) 6 6 5 3
(13) 4 5 3 3 3 ← (14) 5 7 3 3
(17) 5 1 2 3 3 ← (18) 6 2 3 3
(22) * 1

**(31, 7)**

(1) 12 4 5 3 3 3
(5) 3 3 6 6 5 3 ← (8) 2 3 5 7 7
(11) 2 4 5 3 3 3 ← (12) 4 7 3 3 3
(15) 1 2 4 3 3 3 ← (17) 2 4 3 3 3
(17) 3 4 4 1 1 1 ← (18) 5 1 2 3 3
(21) 1 * 1

**(31, 8)**

(1) 10 2 4 5 3 3 3 ← (2) 12 4 5 3 3 3
(5) 6 2 4 5 3 3 3
(14) 1 1 2 4 3 3 3 ← (16) 1 2 4 3 3 3
(15) 2 3 4 4 1 1 1 ← (18) 3 4 4 1 1 1
(20) 1 1 * 1

**(31, 9)**

(1) 7 13 1 * 1 ← (2) 10 2 4 5 3 3 3
(3) 6 ..4 5 3 3 3
(5) 4 ..4 5 3 3 3 ← (6) 6 2 4 5 3 3 3
(14) 1 2 3 4 4 1 1 1 ← (16) 2 3 4 4 1 1 1
(16) 4 1 1 * 1

**(31, 10)**

(1) 5 8 1 1 2 4 3 3 3 ← (2) 7 13 1 * 1
(2) ....3 5 7 3 3
(3) 4 ...4 5 3 3 3 ← (4) 6 ..4 5 3 3 3
(5) ....4 5 3 3 3 ← (6) 4 ..4 5 3 3 3
(9) 5 1 2 3 4 4 1 1 1 ← (10) 6 2 3 4 4 1 1 1
(14) * * 1

**(31, 11)**

(1) 4 ....4 5 3 3 3 ← (2) 5 8 1 1 2 4 3 3 3
(3) .....4 5 3 3 3 ← (4) 4 ...4 5 3 3 3
(7) 1 * 2 4 3 3 3 ← (9) * 2 4 3 3 3
(9) 3 4 4 1 1 * 1 ← (10) 5 1 2 3 4 4 1 1 1
(13) 1 * * 1

**(31, 12)**

(1) ......4 5 3 3 3 ← (2) 4 ....4 5 3 3 3
(6) 1 1 * 2 4 3 3 3 ← (8) 1 * 2 4 3 3 3
(7) 2 3 4 4 1 1 * 1 ← (10) 3 4 4 1 1 * 1
(12) 1 1 * * 1

**(31, 13)**

(1) 6 2 3 4 4 1 1 * 1
(6) 1 2 3 4 4 1 1 * 1 ← (8) 2 3 4 4 1 1 * 1
(8) 4 1 1 * * 1

**(31, 14)**

(1) 5 1 2 3 4 4 1 1 * 1 ← (2) 6 2 3 4 4 1 1 * 1
(6) * * * 1

**(31, 15)**

(1) 3 4 4 1 1 * * 1 ← (2) 5 1 2 3 4 4 1 1 * 1
(5) 1 * * * 1

**(31, 16)**

(4) 1 1 * * * 1

**(32, 2)**

(1) 31
(29) 3
(31) 1 ← (33)

**(32, 3)**

(1) 30 1 ← (2) 31
(17) 14 1 ← (18) 15
(25) 6 1 ← (26) 7
(29) 2 1 ← (30) 3
(30) 1 1 ← (32) 1

**(32, 4)**

(1) 13 11 7
(1) 29 1 1 ← (2) 30 1
(11) 7 7 7 ← (19) 7 7
(13) 5 7 7
(15) 11 3 3 ← (17) 13 3
(17) 13 1 1 ← (18) 14 1
(23) 3 3 3 ← (25) 5 3
(25) 5 1 1 ← (26) 6 1
(29) 1 1 1 ← (30) 2 1

**(32, 5)**

(1) 28 1 1 1 ← (2) 29 1 1
(10) 3 5 7 7
(14) 9 3 3 3 ← (16) 11 3 3
(15) 8 3 3 3 ← (24) 3 3 3
(17) 12 1 1 1 ← (18) 13 1 1
(23) 1 2 3 3 ← (25) 2 3 3
(25) 4 1 1 1 ← (26) 5 1 1

**(32, 6)**

(1) 9 3 5 7 7
(1) 24 4 1 1 1 ← (2) 28 1 1 1
(2) 12 9 3 3 3
(9) 3 6 6 5 3
(11) 3 5 7 3 3 ← (13) 6 6 5 3
(14) 4 5 3 3 3 ← (19) 6 2 3 3
(15) 3 6 2 3 3 ← (16) 8 3 3 3
(17) 8 4 1 1 1 ← (18) 12 1 1 1
(21) 4 4 1 1 1 ← (24) 1 2 3 3
(23) * 1 ← (26) 4 1 1 1

**(32, 7)**

(1) 22 * 1 ← (2) 24 4 1 1 1
(6) 3 3 6 6 5 3
(9) 2 3 5 7 3 3 ← (10) 3 6 6 5 3
(12) 2 4 5 3 3 3 ← (18) 2 4 3 3 3
(15) ..4 3 3 3 ← (16) 3 6 2 3 3
(17) 6 * 1 ← (18) 8 4 1 1 1
(21) 2 * 1 ← (22) 4 4 1 1 1
(22) 1 * 1 ← (24) * 1

**(32, 8)**

(1) 21 1 * 1 ← (2) 22 * 1
(3) 6 2 3 5 7 3 3
(9) 13 1 * 1 ← (17) 1 2 4 3 3 3
(15) 1 1 2 4 3 3 3 ← (16) ..4 3 3 3
(17) 5 1 * 1 ← (18) 6 * 1
(21) 1 1 * 1 ← (22) 2 * 1

**(32, 9)**

(1) 5 6 2 4 5 3 3 3
(1) 20 1 1 * 1 ← (2) 21 1 * 1
(3) 3 6 2 4 5 3 3 3 ← (4) 6 2 3 5 7 3 3
(7) 8 1 1 2 4 3 3 3 ← (16) 1 1 2 4 3 3 3
(9) 12 1 1 * 1 ← (10) 13 1 * 1
(15) 1 2 3 4 4 1 1 1 ← (17) 2 3 4 4 1 1 1
(17) 4 1 1 * 1 ← (18) 5 1 * 1

**(32, 10)**

(1) 3 6 ..4 5 3 3 3 ← (2) 5 6 2 4 5 3 3 3
(1) 16 4 1 1 * 1 ← (2) 20 1 1 * 1
(3) ....3 5 7 3 3 ← (4) 3 6 2 4 5 3 3 3
(6) ....4 5 3 3 3 ← (11) 6 2 3 4 4 1 1 1
(7) 3 6 2 3 4 4 1 1 1 ← (8) 8 1 1 2 4 3 3 3
(9) 8 4 1 1 * 1 ← (10) 12 1 1 * 1
(13) 4 4 1 1 * 1 ← (16) 1 2 3 4 4 1 1 1
(15) * * 1 ← (18) 4 1 1 * 1

**(32, 11)**

(1) .....3 5 7 3 3 ← (2) 3 6 ..4 5 3 3 3
(1) 14 * * 1 ← (2) 16 4 1 1 * 1
(4) .....4 5 3 3 3 ← (10) * 2 4 3 3 3
(7) 2 * 2 4 3 3 3 ← (8) 3 6 2 3 4 4 1 1 1
(9) 6 * * 1 ← (10) 8 4 1 1 * 1
(13) 2 * * 1 ← (14) 4 4 1 1 * 1
(14) 1 * * 1 ← (16) * * 1

**(32, 12)**

(1) 13 1 * * 1 ← (2) 14 * * 1
(2) ......4 5 3 3 3 ← (9) 1 * 2 4 3 3 3
(7) 1 1 * 2 4 3 3 3 ← (8) 2 * 2 4 3 3 3
(9) 5 1 * * 1 ← (10) 6 * * 1
(13) 1 1 * * 1 ← (14) 2 * * 1

**(32, 13)**

(1) 12 1 1 * * 1 ← (2) 13 1 * * 1
(7) 1 2 3 4 4 1 1 * 1 ← (9) 2 3 4 4 1 1 * 1
(9) 4 1 1 * * 1 ← (10) 5 1 * * 1

**(32, 14)**

(1) * * 2 4 3 3 3
(1) 8 4 1 1 * * 1 ← (2) 12 1 1 * * 1
(5) 4 4 1 1 * * 1 ← (8) 1 2 3 4 4 1 1 * 1
(7) * * * 1 ← (10) 4 1 1 * * 1

**(32, 15)**

(1) 6 * * * 1 ← (2) 8 4 1 1 * * 1
(2) 3 4 4 1 1 * * 1
(5) 2 * * * 1 ← (6) 4 4 1 1 * * 1
(6) 1 * * * 1 ← (8) * * * 1

**(32, 16)**

(1) 5 1 * * * 1 ← (2) 6 * * * 1
(5) 1 1 * * * 1 ← (6) 2 * * * 1

**(32, 17)**

(1) 4 1 1 * * * 1 ← (2) 5 1 * * * 1

**(33, 3)**

(1) 29 3
(3) 15 15
(15) 11 7 ← (19) 15
(27) 3 3
(31) 1 1 ← (33) 1

**(33, 4)**

(2) 13 11 7
(3) 14 13 3 ← (4) 15 15
(12) 7 7 7 ← (18) 13 3
(14) 5 7 7
(15) 10 5 3 ← (16) 11 7
(19) 6 5 3 ← (20) 7 7
(30) 1 1 1 ← (32) 1 1

**(33, 5)**

(1) 13 5 7 7
(3) 13 11 3 3 ← (4) 14 13 3
(10) 4 5 7 7 ← (17) 11 3 3
(11) 3 5 7 7
(15) 5 7 3 3 ← (20) 6 5 3
(15) 9 3 3 3 ← (16) 10 5 3

**(33, 6)**

(2) 9 3 5 7 7
(3) 12 9 3 3 3 ← (4) 13 11 3 3
(9) 2 3 5 7 7 ← (16) 9 3 3 3
(12) 3 5 7 3 3 ← (17) 8 3 3 3
(13) 4 7 3 3 3 ← (14) 6 6 5 3
(15) 4 5 3 3 3 ← (16) 5 7 3 3
(19) 5 1 2 3 3 ← (20) 6 2 3 3

**(33, 7)**

(1) 9 3 6 6 5 3
(3) 12 4 5 3 3 3
(7) 3 3 6 6 5 3 ← (11) 3 6 6 5 3
(10) 2 3 5 7 3 3 ← (16) 4 5 3 3 3
(13) 2 4 5 3 3 3 ← (14) 4 7 3 3 3
(19) 3 4 4 1 1 1 ← (20) 5 1 2 3 3
(23) 1 * 1 ← (25) * 1

**(33, 8)**

(1) 6 3 3 6 6 5 3 ← (8) 3 3 6 6 5 3
(3) 10 2 4 5 3 3 3 ← (4) 12 4 5 3 3 3
(7) 6 2 4 5 3 3 3 ← (14) 2 4 5 3 3 3
(22) 1 1 * 1 ← (24) 1 * 1

**(33, 9)**

(1) 3 6 2 3 5 7 3 3 ← (2) 6 3 3 6 6 5 3
(3) 7 13 1 * 1 ← (4) 10 2 4 5 3 3 3
(5) 6 ..4 5 3 3 3 ← (11) 13 1 * 1
(7) 4 ..4 5 3 3 3 ← (8) 6 2 4 5 3 3 3

**(33, 10)**

(1) ...3 3 6 6 5 3 ← (2) 3 6 2 3 5 7 3 3
(3) 5 8 1 1 2 4 3 3 3 ← (4) 7 13 1 * 1
(4) ....3 5 7 3 3 ← (9) 8 1 1 2 4 3 3 3
(5) 4 ...4 5 3 3 3 ← (6) 6 ..4 5 3 3 3
(7) ....4 5 3 3 3 ← (8) 4 ..4 5 3 3 3
(11) 5 1 2 3 4 4 1 1 1 ← (12) 6 2 3 4 4 1 1 1

**(33, 11)**

(2) .....3 5 7 3 3 ← (8) ....4 5 3 3 3
(3) 4 ....4 5 3 3 3 ← (4) 5 8 1 1 2 4 3 3 3
(5) .....4 5 3 3 3 ← (6) 4 ...4 5 3 3 3
(11) 3 4 4 1 1 * 1 ← (12) 5 1 2 3 4 4 1 1 1
(15) 1 * * 1 ← (17) * * 1

**(33, 12)**

(3) ......4 5 3 3 3 ← (4) 4 ....4 5 3 3 3
(8) 1 1 * 2 4 3 3 3
(14) 1 1 * * 1 ← (16) 1 * * 1

**(33, 13)**

(3) 6 2 3 4 4 1 1 * 1

**(33, 14)**

(2) * * 2 4 3 3 3
(3) 5 1 2 3 4 4 1 1 * 1 ← (4) 6 2 3 4 4 1 1 * 1

**(33, 15)**

(1) 1 * * 2 4 3 3 3
(3) 3 4 4 1 1 * * 1 ← (4) 5 1 2 3 4 4 1 1 * 1
(7) 1 * * * 1 ← (9) * * * 1

**(33, 16)**

(1) 2 3 4 4 1 1 * * 1
(6) 1 1 * * * 1 ← (8) 1 * * * 1

**(33, 17)**

(2) 4 1 1 * * * 1

**(34, 2)**

(3) 31
(27) 7
(31) 3 ← (35)

**(34, 3)**

(2) 29 3
(3) 30 1 ← (4) 31
(19) 14 1 ← (20) 15
(26) 5 3
(27) 6 1 ← (28) 7
(28) 3 3 ← (34) 1
(31) 2 1 ← (32) 3

**(34, 4)**

(1) 27 3 3
(3) 13 11 7 ← (5) 15 15
(3) 29 1 1 ← (4) 30 1
(13) 7 7 7 ← (17) 11 7
(15) 5 7 7 ← (21) 7 7
(19) 13 1 1 ← (20) 14 1
(25) 3 3 3
(26) 2 3 3 ← (33) 1 1
(27) 5 1 1 ← (28) 6 1
(31) 1 1 1 ← (32) 2 1

**(34, 5)**

(1) 14 5 7 7 ← (4) 13 11 7
(2) 13 5 7 7
(3) 28 1 1 1 ← (4) 29 1 1
(11) 4 5 7 7 ← (14) 7 7 7
(12) 3 5 7 7 ← (16) 5 7 7
(19) 12 1 1 1 ← (20) 13 1 1
(25) 1 2 3 3 ← (32) 1 1 1
(27) 4 1 1 1 ← (28) 5 1 1

**(34, 6)**

(1) 11 3 5 7 7 ← (2) 14 5 7 7
(3) 9 3 5 7 7
(3) 24 4 1 1 1 ← (4) 28 1 1 1
(4) 12 9 3 3 3
(10) 2 3 5 7 7 ← (12) 4 5 7 7
(13) 3 5 7 3 3 ← (17) 5 7 3 3
(17) 3 6 2 3 3 ← (18) 8 3 3 3
(19) 2 4 3 3 3 ← (21) 6 2 3 3
(19) 8 4 1 1 1 ← (20) 12 1 1 1
(23) 4 4 1 1 1 ← (28) 4 1 1 1

**(34, 7)**

(2) 9 3 6 6 5 3
(3) 22 * 1 ← (4) 24 4 1 1 1
(11) 2 3 5 7 3 3 ← (12) 3 6 6 5 3
(17) ..4 3 3 3 ← (18) 3 6 2 3 3
(18) 1 2 4 3 3 3 ← (20) 2 4 3 3 3
(19) 6 * 1 ← (20) 8 4 1 1 1
(20) 3 4 4 1 1 1 ← (26) * 1
(23) 2 * 1 ← (24) 4 4 1 1 1

**(34, 8)**

(1) 5 5 3 6 6 5 3
(3) 21 1 * 1 ← (4) 22 * 1
(5) 6 2 3 5 7 3 3
(17) 1 1 2 4 3 3 3 ← (18) ..4 3 3 3
(18) 2 3 4 4 1 1 1 ← (25) 1 * 1
(19) 5 1 * 1 ← (20) 6 * 1
(23) 1 1 * 1 ← (24) 2 * 1

**(34, 9)**

(3) 5 6 2 4 5 3 3 3
(3) 20 1 1 * 1 ← (4) 21 1 * 1
(5) 3 6 2 4 5 3 3 3 ← (6) 6 2 3 5 7 3 3
(11) 12 1 1 * 1 ← (12) 13 1 * 1
(17) 1 2 3 4 4 1 1 1 ← (24) 1 1 * 1
(19) 4 1 1 * 1 ← (20) 5 1 * 1

**(34, 10)**

(2) ...3 3 6 6 5 3
(3) 3 6 ..4 5 3 3 3 ← (4) 5 6 2 4 5 3 3 3
(3) 16 4 1 1 * 1 ← (4) 20 1 1 * 1
(5) ....3 5 7 3 3 ← (6) 3 6 2 4 5 3 3 3
(9) 3 6 2 3 4 4 1 1 1 ← (10) 8 1 1 2 4 3 3 3
(11) * 2 4 3 3 3 ← (13) 6 2 3 4 4 1 1 1
(11) 8 4 1 1 * 1 ← (12) 12 1 1 * 1
(15) 4 4 1 1 * 1 ← (20) 4 1 1 * 1

**(34, 11)**

(3) .....3 5 7 3 3 ← (4) 3 6 ..4 5 3 3 3
(3) 14 * * 1 ← (4) 16 4 1 1 * 1
(6) .....4 5 3 3 3
(9) 2 * 2 4 3 3 3 ← (10) 3 6 2 3 4 4 1 1 1
(10) 1 * 2 4 3 3 3 ← (12) * 2 4 3 3 3
(11) 6 * * 1 ← (12) 8 4 1 1 * 1
(12) 3 4 4 1 1 * 1 ← (18) * * 1
(15) 2 * * 1 ← (16) 4 4 1 1 * 1

**(34, 12)**

(3) 13 1 * * 1 ← (4) 14 * * 1
(4) ......4 5 3 3 3
(9) 1 1 * 2 4 3 3 3 ← (10) 2 * 2 4 3 3 3
(10) 2 3 4 4 1 1 * 1 ← (17) 1 * * 1
(11) 5 1 * * 1 ← (12) 6 * * 1
(15) 1 1 * * 1 ← (16) 2 * * 1

**(34, 13)**

(1) 8 1 1 * 2 4 3 3 3
(3) 12 1 1 * * 1 ← (4) 13 1 * * 1
(9) 1 2 3 4 4 1 1 * 1 ← (16) 1 1 * * 1
(11) 4 1 1 * * 1 ← (12) 5 1 * * 1

**(34, 14)**

(1) 3 6 2 3 4 4 1 1 * 1 ← (2) 8 1 1 * 2 4 3 3 3
(3) * * 2 4 3 3 3 ← (5) 6 2 3 4 4 1 1 * 1
(3) 8 4 1 1 * * 1 ← (4) 12 1 1 * * 1
(7) 4 4 1 1 * * 1 ← (12) 4 1 1 * * 1

**(34, 15)**

(1) 2 * * 2 4 3 3 3 ← (2) 3 6 2 3 4 4 1 1 * 1
(2) 1 * * 2 4 3 3 3 ← (4) * * 2 4 3 3 3
(3) 6 * * * 1 ← (4) 8 4 1 1 * * 1
(4) 3 4 4 1 1 * * 1 ← (10) * * * 1
(7) 2 * * * 1 ← (8) 4 4 1 1 * * 1

**(34, 16)**

(1) 1 1 * * 2 4 3 3 3 ← (2) 2 * * 2 4 3 3 3
(2) 2 3 4 4 1 1 * * 1 ← (9) 1 * * * 1
(3) 5 1 * * * 1 ← (4) 6 * * * 1
(7) 1 1 * * * 1 ← (8) 2 * * * 1

**(34, 17)**

(1) 1 2 3 4 4 1 1 * * 1 ← (8) 1 1 * * * 1
(3) 4 1 1 * * * 1 ← (4) 5 1 * * * 1

**(34, 18)**

(1) * * * * 1

**(35, 3)**

(1) 27 7
(3) 29 3 ← (5) 31
(19) 13 3 ← (21) 15
(27) 5 3 ← (29) 7
(29) 3 3 ← (33) 3

**(35, 4)**

(1) 26 5 3 ← (2) 27 7
(2) 27 3 3 ← (4) 29 3
(5) 14 13 3 ← (6) 15 15
(17) 10 5 3 ← (18) 11 7
(18) 11 3 3 ← (20) 13 3
(21) 6 5 3 ← (22) 7 7
(26) 3 3 3 ← (28) 5 3
(27) 2 3 3 ← (30) 3 3

**(35, 5)**

(1) 25 3 3 3 ← (2) 26 5 3
(3) 13 5 7 7
(5) 13 11 3 3 ← (6) 14 13 3
(13) 3 5 7 7 ← (17) 5 7 7
(15) 6 6 5 3 ← (22) 6 5 3
(17) 9 3 3 3 ← (18) 10 5 3
(26) 1 2 3 3 ← (28) 2 3 3

**(35, 6)**

(2) 11 3 5 7 7 ← (4) 13 5 7 7
(4) 9 3 5 7 7
(5) 12 9 3 3 3 ← (6) 13 11 3 3
(11) 2 3 5 7 7 ← (13) 4 5 7 7
(14) 3 5 7 3 3 ← (19) 8 3 3 3
(15) 4 7 3 3 3 ← (16) 6 6 5 3
(17) 4 5 3 3 3 ← (18) 5 7 3 3
(21) 5 1 2 3 3 ← (22) 6 2 3 3

**(35, 7)**

(1) 5 7 3 5 7 7
(3) 9 3 6 6 5 3 ← (6) 12 9 3 3 3
(5) 12 4 5 3 3 3
(9) 3 3 6 6 5 3 ← (12) 2 3 5 7 7
(12) 2 3 5 7 3 3 ← (18) 4 5 3 3 3
(15) 2 4 5 3 3 3 ← (16) 4 7 3 3 3
(19) 1 2 4 3 3 3 ← (21) 2 4 3 3 3
(21) 3 4 4 1 1 1 ← (22) 5 1 2 3 3

**(35, 8)**

(2) 5 5 3 6 6 5 3 ← (4) 9 3 6 6 5 3
(3) 6 3 3 6 6 5 3
(5) 10 2 4 5 3 3 3 ← (6) 12 4 5 3 3 3
(9) 6 2 4 5 3 3 3 ← (16) 2 4 5 3 3 3
(18) 1 1 2 4 3 3 3 ← (20) 1 2 4 3 3 3
(19) 2 3 4 4 1 1 1 ← (22) 3 4 4 1 1 1

**(35, 9)**

(1) 5 6 2 3 5 7 3 3
(3) 3 6 2 3 5 7 3 3 ← (4) 6 3 3 6 6 5 3
(5) 7 13 1 * 1 ← (6) 10 2 4 5 3 3 3
(7) 6 ..4 5 3 3 3 ← (13) 13 1 * 1
(9) 4 ..4 5 3 3 3 ← (10) 6 2 4 5 3 3 3
(18) 1 2 3 4 4 1 1 1 ← (20) 2 3 4 4 1 1 1

**(35, 10)**

(1) 3 5 6 2 4 5 3 3 3 ← (2) 5 6 2 3 5 7 3 3
(3) ...3 3 6 6 5 3 ← (4) 3 6 2 3 5 7 3 3
(5) 5 8 1 1 2 4 3 3 3 ← (6) 7 13 1 * 1
(6) ....3 5 7 3 3 ← (11) 8 1 1 2 4 3 3 3
(7) 4 ...4 5 3 3 3 ← (8) 6 ..4 5 3 3 3
(9) ....4 5 3 3 3 ← (10) 4 ..4 5 3 3 3
(13) 5 1 2 3 4 4 1 1 1 ← (14) 6 2 3 4 4 1 1 1

**(35, 11)**

(1) ....3 3 6 6 5 3 ← (2) 3 5 6 2 4 5 3 3 3
(4) .....3 5 7 3 3 ← (10) ....4 5 3 3 3
(5) 4 ....4 5 3 3 3 ← (6) 5 8 1 1 2 4 3 3 3
(7) .....4 5 3 3 3 ← (8) 4 ...4 5 3 3 3
(11) 1 * 2 4 3 3 3 ← (13) * 2 4 3 3 3
(13) 3 4 4 1 1 * 1 ← (14) 5 1 2 3 4 4 1 1 1

**(35, 12)**

(1) 6 .....4 5 3 3 3 ← (8) .....4 5 3 3 3
(5) .....4 5 3 3 3 ← (6) 4 ....4 5 3 3 3
(10) 1 1 * 2 4 3 3 3 ← (12) 1 * 2 4 3 3 3
(11) 2 3 4 4 1 1 * 1 ← (14) 3 4 4 1 1 * 1

**(35, 13)**

(1) 4 .....4 5 3 3 3 ← (2) 6 .....4 5 3 3 3
(10) 1 2 3 4 4 1 1 * 1 ← (12) 2 3 4 4 1 1 * 1

**(35, 14)**

(1) .....4 5 3 3 3 ← (2) 4 .....4 5 3 3 3
(5) 5 1 2 3 4 4 1 1 * 1 ← (6) 6 2 3 4 4 1 1 * 1

**(35, 15)**

(3) 1 * * 2 4 3 3 3 ← (5) * * 2 4 3 3 3
(5) 3 4 4 1 1 * * 1 ← (6) 5 1 2 3 4 4 1 1 * 1

**(35, 16)**

(2) 1 1 * * 2 4 3 3 3 ← (4) 1 * * 2 4 3 3 3
(3) 2 3 4 4 1 1 * * 1 ← (6) 3 4 4 1 1 * * 1

**(35, 17)**

(2) 1 2 3 4 4 1 1 * * 1 ← (4) 2 3 4 4 1 1 * * 1
(4) 4 1 1 * * * 1

**(35, 18)**

(2) * * * * 1

**(35, 19)**

(1) 1 * * * * 1

**(36, 2)**

(35) 1 ← (37)

**(36, 3)**

(5) 30 1 ← (6) 31
(21) 14 1 ← (22) 15
(29) 6 1 ← (30) 7
(33) 2 1 ← (34) 3
(34) 1 1 ← (36) 1

**(36, 4)**

(3) 27 3 3 ← (5) 29 3
(5) 13 11 7
(5) 29 1 1 ← (6) 30 1
(15) 7 7 7 ← (19) 11 7
(19) 11 3 3 ← (21) 13 3
(21) 13 1 1 ← (22) 14 1
(27) 3 3 3 ← (29) 5 3
(29) 5 1 1 ← (30) 6 1
(33) 1 1 1 ← (34) 2 1

**(36, 5)**

(2) 25 3 3 3 ← (4) 27 3 3
(3) 14 5 7 7 ← (16) 7 7 7
(5) 28 1 1 1 ← (6) 29 1 1
(14) 3 5 7 7 ← (18) 5 7 7
(18) 9 3 3 3 ← (20) 11 3 3
(21) 12 1 1 1 ← (22) 13 1 1
(27) 1 2 3 3 ← (29) 2 3 3
(29) 4 1 1 1 ← (30) 5 1 1

**(36, 6)**

(1) 5 9 7 7 7
(3) 11 3 5 7 7 ← (4) 14 5 7 7
(5) 9 3 5 7 7
(5) 24 4 1 1 1 ← (6) 28 1 1 1
(13) 3 6 6 5 3 ← (19) 5 7 3 3
(15) 3 5 7 3 3 ← (17) 6 6 5 3
(19) 3 6 2 3 3 ← (20) 8 3 3 3
(21) 8 4 1 1 1 ← (22) 12 1 1 1
(25) 4 4 1 1 1 ← (28) 1 2 3 3
(27) * 1 ← (30) 4 1 1 1

**(36, 7)**

(2) 5 7 3 5 7 7
(5) 22 * 1 ← (6) 24 4 1 1 1
(10) 3 3 6 6 5 3 ← (16) 3 5 7 3 3
(13) 2 3 5 7 3 3 ← (14) 3 6 6 5 3
(19) ..4 3 3 3 ← (20) 3 6 2 3 3
(21) 6 * 1 ← (22) 8 4 1 1 1
(25) 2 * 1 ← (26) 4 4 1 1 1
(26) 1 * 1 ← (28) * 1

**(36, 8)**

(1) 6 5 2 3 5 7 7
(3) 5 5 3 6 6 5 3 ← (5) 9 3 6 6 5 3
(5) 21 1 * 1 ← (6) 22 * 1
(7) 6 2 3 5 7 3 3 ← (14) 2 3 5 7 3 3
(19) 1 1 2 4 3 3 3 ← (20) ..4 3 3 3
(21) 5 1 * 1 ← (22) 6 * 1
(25) 1 1 * 1 ← (26) 2 * 1

**(36, 9)**

(1) 3 6 3 3 6 6 5 3 ← (2) 6 5 2 3 5 7 7
(5) 5 6 2 4 5 3 3 3 ← (11) 6 2 4 5 3 3 3
(5) 20 1 1 * 1 ← (6) 21 1 * 1
(7) 3 6 2 4 5 3 3 3 ← (8) 6 2 3 5 7 3 3
(13) 12 1 1 * 1 ← (14) 13 1 * 1
(19) 1 2 3 4 4 1 1 1 ← (21) 2 3 4 4 1 1 1
(21) 4 1 1 * 1 ← (22) 5 1 * 1

**(36, 10)**

(1) 2 4 3 3 3 6 6 5 3 ← (2) 3 6 3 3 6 6 5 3
(4) ...3 3 6 6 5 3 ← (9) 6 ..4 5 3 3 3
(5) 3 6 ..4 5 3 3 3 ← (6) 5 6 2 4 5 3 3 3
(5) 16 4 1 1 * 1 ← (6) 20 1 1 * 1
(7) ....3 5 7 3 3 ← (8) 3 6 2 4 5 3 3 3
(11) 3 6 2 3 4 4 1 1 1 ← (12) 8 1 1 2 4 3 3 3
(13) 8 4 1 1 * 1 ← (14) 12 1 1 * 1
(17) 4 4 1 1 * 1 ← (20) 1 2 3 4 4 1 1 1
(19) * * 1 ← (22) 4 1 1 * 1

**(36, 11)**

(2) ....3 3 6 6 5 3 ← (8) ....3 5 7 3 3
(5) .....3 5 7 3 3 ← (6) 3 6 ..4 5 3 3 3
(5) 14 * * 1 ← (6) 16 4 1 1 * 1
(11) 2 * 2 4 3 3 3 ← (12) 3 6 2 3 4 4 1 1 1
(13) 6 * * 1 ← (14) 8 4 1 1 * 1
(17) 2 * * 1 ← (18) 4 4 1 1 * 1
(18) 1 * * 1 ← (20) * * 1

**(36, 12)**

(5) 13 1 * * 1 ← (6) 14 * * 1
(6) ......4 5 3 3 3
(11) 1 1 * 2 4 3 3 3 ← (12) 2 * 2 4 3 3 3
(13) 5 1 * * 1 ← (14) 6 * * 1
(17) 1 1 * * 1 ← (18) 2 * * 1

**(36, 13)**

(3) 8 1 1 * 2 4 3 3 3
(5) 12 1 1 * * 1 ← (6) 13 1 * * 1
(11) 1 2 3 4 4 1 1 * 1 ← (13) 2 3 4 4 1 1 * 1
(13) 4 1 1 * * 1 ← (14) 5 1 * * 1

**(36, 14)**

(2) ........4 5 3 3 3
(3) 3 6 2 3 4 4 1 1 * 1 ← (4) 8 1 1 * 2 4 3 3 3
(5) 8 4 1 1 * * 1 ← (6) 12 1 1 * * 1
(9) 4 4 1 1 * * 1 ← (12) 1 2 3 4 4 1 1 * 1
(11) * * * 1 ← (14) 4 1 1 * * 1

**(36, 15)**

(3) 2 * * 2 4 3 3 3 ← (4) 3 6 2 3 4 4 1 1 * 1
(5) 6 * * * 1 ← (6) 8 4 1 1 * * 1
(9) 2 * * * 1 ← (10) 4 4 1 1 * * 1
(10) 1 * * * 1 ← (12) * * * 1

**(36, 16)**

(3) 1 1 * * 2 4 3 3 3 ← (4) 2 * * 2 4 3 3 3
(5) 5 1 * * * 1 ← (6) 6 * * * 1
(9) 1 1 * * * 1 ← (10) 2 * * * 1

**(36, 17)**

(3) 1 2 3 4 4 1 1 * * 1 ← (5) 2 3 4 4 1 1 * * 1
(5) 4 1 1 * * * 1 ← (6) 5 1 * * * 1

**(36, 18)**

(1) 4 4 1 1 * * * 1 ← (4) 1 2 3 4 4 1 1 * * 1
(3) * * * * 1 ← (6) 4 1 1 * * * 1

**(36, 19)**

(1) 2 * * * * 1 ← (2) 4 4 1 1 * * * 1
(2) 1 * * * * 1 ← (4) * * * * 1

**(36, 20)**

(1) 1 1 * * * * 1 ← (2) 2 * * * * 1

**(37, 3)**

(3) 27 7
(7) 15 15
(23) 7 7
(31) 3 3 ← (35) 3
(35) 1 1 ← (37) 1

**(37, 4)**

(3) 26 5 3 ← (4) 27 7
(6) 13 11 7
(7) 14 13 3 ← (8) 15 15
(19) 10 5 3 ← (20) 11 7
(23) 6 5 3 ← (24) 7 7
(28) 3 3 3 ← (32) 3 3
(34) 1 1 1 ← (36) 1 1

**(37, 5)**

(3) 25 3 3 3 ← (4) 26 5 3
(5) 13 5 7 7
(7) 13 11 3 3 ← (8) 14 13 3
(14) 4 5 7 7
(15) 3 5 7 7 ← (19) 5 7 7
(19) 9 3 3 3 ← (20) 10 5 3
(23) 6 2 3 3 ← (30) 2 3 3

**(37, 6)**

(2) 5 9 7 7 7
(4) 11 3 5 7 7
(6) 9 3 5 7 7 ← (16) 3 5 7 7
(7) 12 9 3 3 3 ← (8) 13 11 3 3
(13) 2 3 5 7 7
(17) 4 7 3 3 3 ← (18) 6 6 5 3
(19) 4 5 3 3 3 ← (20) 5 7 3 3
(22) 2 4 3 3 3 ← (29) 1 2 3 3
(23) 5 1 2 3 3 ← (24) 6 2 3 3

**(37, 7)**

(1) 5 9 3 5 7 7
(3) 5 7 3 5 7 7
(7) 12 4 5 3 3 3
(11) 3 3 6 6 5 3 ← (17) 3 5 7 3 3
(17) 2 4 5 3 3 3 ← (18) 4 7 3 3 3
(21) 1 2 4 3 3 3 ← (27) 4 4 1 1 1
(23) 3 4 4 1 1 1 ← (24) 5 1 2 3 3
(27) 1 * 1 ← (29) * 1

**(37, 8)**

(4) 5 5 3 6 6 5 3
(5) 6 3 3 6 6 5 3
(7) 10 2 4 5 3 3 3 ← (8) 12 4 5 3 3 3
(20) 1 1 2 4 3 3 3 ← (24) 3 4 4 1 1 1
(26) 1 1 * 1 ← (28) 1 * 1

**(37, 9)**

(3) 5 6 2 3 5 7 3 3
(5) 3 6 2 3 5 7 3 3 ← (6) 6 3 3 6 6 5 3
(7) 7 13 1 * 1 ← (8) 10 2 4 5 3 3 3
(11) 4 ..4 5 3 3 3 ← (12) 6 2 4 5 3 3 3
(15) 6 2 3 4 4 1 1 1 ← (22) 2 3 4 4 1 1 1

**(37, 10)**

(2) 2 4 3 3 3 6 6 5 3
(3) 3 5 6 2 4 5 3 3 3 ← (4) 5 6 2 3 5 7 3 3
(5) ...3 3 6 6 5 3 ← (6) 3 6 2 3 5 7 3 3
(7) 5 8 1 1 2 4 3 3 3 ← (8) 7 13 1 * 1
(9) 4 ...4 5 3 3 3 ← (10) 6 ..4 5 3 3 3
(11) ....4 5 3 3 3 ← (12) 4 ..4 5 3 3 3
(14) * 2 4 3 3 3 ← (21) 1 2 3 4 4 1 1 1
(15) 5 1 2 3 4 4 1 1 1 ← (16) 6 2 3 4 4 1 1 1

**(37, 11)**

(3) ....3 3 6 6 5 3 ← (4) 3 5 6 2 4 5 3 3 3
(6) .....3 5 7 3 3
(7) 4 ....4 5 3 3 3 ← (8) 5 8 1 1 2 4 3 3 3
(9) .....4 5 3 3 3 ← (10) 4 ...4 5 3 3 3
(13) 1 * 2 4 3 3 3 ← (19) 4 4 1 1 * 1
(15) 3 4 4 1 1 * 1 ← (16) 5 1 2 3 4 4 1 1 1
(19) 1 * * 1 ← (21) * * 1

**(37, 12)**

(3) 6 .....4 5 3 3 3
(7) .....4 5 3 3 3 ← (8) 4 ....4 5 3 3 3
(12) 1 1 * 2 4 3 3 3 ← (16) 3 4 4 1 1 * 1
(18) 1 1 * * 1 ← (20) 1 * * 1

**(37, 13)**

(1) 6 .....4 5 3 3 3
(3) 4 .....4 5 3 3 3 ← (4) 6 .....4 5 3 3 3
(7) 6 2 3 4 4 1 1 * 1 ← (14) 2 3 4 4 1 1 * 1

**(37, 14)**

(1) 4 .....4 5 3 3 3 ← (2) 6 .....4 5 3 3 3
(3) .....4 5 3 3 3 ← (4) 4 .....4 5 3 3 3
(6) * * 2 4 3 3 3 ← (13) 1 2 3 4 4 1 1 * 1
(7) 5 1 2 3 4 4 1 1 * 1 ← (8) 6 2 3 4 4 1 1 * 1

**(37, 15)**

(1) .....4 5 3 3 3 ← (2) 4 .....4 5 3 3 3
(5) 1 * * 2 4 3 3 3 ← (11) 4 4 1 1 * * 1
(7) 3 4 4 1 1 * * 1 ← (8) 5 1 2 3 4 4 1 1 * 1
(11) 1 * * * 1 ← (13) * * * 1

**(37, 16)**

(4) 1 1 * * 2 4 3 3 3 ← (8) 3 4 4 1 1 * * 1
(10) 1 1 * * * 1 ← (12) 1 * * * 1

**(37, 19)**

(3) 1 * * * * 1 ← (5) * * * * 1

**(37, 20)**

(2) 1 1 * * * * 1 ← (4) 1 * * * * 1

**(38, 2)**

(7) 31
(23) 15
(31) 7 ← (39)

**(38, 3)**

(6) 29 3
(7) 30 1 ← (8) 31
(22) 13 3
(23) 14 1 ← (24) 15
(30) 5 3 ← (38) 1
(31) 6 1 ← (32) 7
(35) 2 1 ← (36) 3

**(38, 4)**

(1) 23 7 7
(5) 27 3 3
(7) 13 11 7 ← (9) 15 15
(7) 29 1 1 ← (8) 30 1
(17) 7 7 7
(21) 11 3 3
(23) 13 1 1 ← (24) 14 1
(24) 6 5 3 ← (37) 1 1
(29) 3 3 3 ← (33) 3 3
(31) 5 1 1 ← (32) 6 1
(35) 1 1 1 ← (36) 2 1

**(38, 5)**

(4) 25 3 3 3
(5) 14 5 7 7 ← (8) 13 11 7
(6) 13 5 7 7
(7) 28 1 1 1 ← (8) 29 1 1
(15) 4 5 7 7 ← (18) 7 7 7
(20) 9 3 3 3
(21) 8 3 3 3 ← (36) 1 1 1
(23) 12 1 1 1 ← (24) 13 1 1
(31) 4 1 1 1 ← (32) 5 1 1

**(38, 6)**

(1) 14 4 5 7 7
(3) 5 9 7 7 7
(5) 11 3 5 7 7 ← (6) 14 5 7 7
(7) 9 3 5 7 7 ← (17) 3 5 7 7
(7) 24 4 1 1 1 ← (8) 28 1 1 1
(8) 12 9 3 3 3
(14) 2 3 5 7 7 ← (16) 4 5 7 7
(15) 3 6 6 5 3 ← (19) 6 6 5 3
(20) 4 5 3 3 3 ← (32) 4 1 1 1
(21) 3 6 2 3 3 ← (22) 8 3 3 3
(23) 2 4 3 3 3 ← (25) 6 2 3 3
(23) 8 4 1 1 1 ← (24) 12 1 1 1

**(38, 7)**

(1) 13 2 3 5 7 7 ← (2) 14 4 5 7 7
(2) 5 9 3 5 7 7
(4) 5 7 3 5 7 7 ← (8) 9 3 5 7 7
(6) 9 3 6 6 5 3
(7) 22 * 1 ← (8) 24 4 1 1 1
(12) 3 3 6 6 5 3 ← (18) 3 5 7 3 3
(15) 2 3 5 7 3 3 ← (16) 3 6 6 5 3
(18) 2 4 5 3 3 3 ← (30) * 1
(21) ..4 3 3 3 ← (22) 3 6 2 3 3
(22) 1 2 4 3 3 3 ← (24) 2 4 3 3 3
(23) 6 * 1 ← (24) 8 4 1 1 1
(27) 2 * 1 ← (28) 4 4 1 1 1

**(38, 8)**

(1) 3 5 7 3 5 7 7
(1) 7 12 4 5 3 3 3 ← (2) 13 2 3 5 7 7
(3) 6 5 2 3 5 7 7
(5) 5 5 3 6 6 5 3 ← (9) 12 4 5 3 3 3
(7) 21 1 * 1 ← (8) 22 * 1
(9) 6 2 3 5 7 3 3 ← (16) 2 3 5 7 3 3
(15) 13 1 * 1 ← (29) 1 * 1
(21) 1 1 2 4 3 3 3 ← (22) ..4 3 3 3
(23) 5 1 * 1 ← (24) 6 * 1
(27) 1 1 * 1 ← (28) 2 * 1

**(38, 9)**

(1) 4 7 3 3 6 6 5 3
(1) 5 6 3 3 6 6 5 3 ← (2) 7 12 4 5 3 3 3
(3) 3 6 3 3 6 6 5 3 ← (4) 6 5 2 3 5 7 7
(7) 5 6 2 4 5 3 3 3 ← (13) 6 2 4 5 3 3 3
(7) 20 1 1 * 1 ← (8) 21 1 * 1
(9) 3 6 2 4 5 3 3 3 ← (10) 6 2 3 5 7 3 3
(13) 8 1 1 2 4 3 3 3 ← (28) 1 1 * 1
(15) 12 1 1 * 1 ← (16) 13 1 * 1
(23) 4 1 1 * 1 ← (24) 5 1 * 1

**(38, 10)**

(1) 3 5 6 2 3 5 7 3 3 ← (2) 5 6 3 3 6 6 5 3
(3) 2 4 3 3 3 6 6 5 3 ← (4) 3 6 3 3 6 6 5 3
(6) ...3 3 6 6 5 3 ← (11) 6 ..4 5 3 3 3
(7) 3 6 ..4 5 3 3 3 ← (8) 5 6 2 4 5 3 3 3
(7) 16 4 1 1 * 1 ← (8) 20 1 1 * 1
(9) ....3 5 7 3 3 ← (10) 3 6 2 4 5 3 3 3
(12) ....4 5 3 3 3 ← (24) 4 1 1 * 1
(13) 3 6 2 3 4 4 1 1 1 ← (14) 8 1 1 2 4 3 3 3
(15) * 2 4 3 3 3 ← (17) 6 2 3 4 4 1 1 1
(15) 8 4 1 1 * 1 ← (16) 12 1 1 * 1

**(38, 11)**

(1) ..4 3 3 3 6 6 5 3 ← (2) 3 5 6 2 3 5 7 3 3
(4) ....3 3 6 6 5 3 ← (10) ....3 5 7 3 3
(7) .....3 5 7 3 3 ← (8) 3 6 ..4 5 3 3 3
(7) 14 * * 1 ← (8) 16 4 1 1 * 1
(10) .....4 5 3 3 3 ← (22) * * 1
(13) 2 * 2 4 3 3 3 ← (14) 3 6 2 3 4 4 1 1 1
(14) 1 * 2 4 3 3 3 ← (16) * 2 4 3 3 3
(15) 6 * * 1 ← (16) 8 4 1 1 * 1
(19) 2 * * 1 ← (20) 4 4 1 1 * 1

**(38, 12)**

(1) 6 .....3 5 7 3 3 ← (8) .....3 5 7 3 3
(7) 13 1 * * 1 ← (8) 14 * * 1
(8) ......4 5 3 3 3 ← (21) 1 * * 1
(13) 1 1 * 2 4 3 3 3 ← (14) 2 * 2 4 3 3 3
(15) 5 1 * * 1 ← (16) 6 * * 1
(19) 1 1 * * 1 ← (20) 2 * * 1

**(38, 13)**

(1) 3 6 .....4 5 3 3 3 ← (2) 6 .....3 5 7 3 3
(5) 8 1 1 * 2 4 3 3 3 ← (20) 1 1 * * 1
(7) 12 1 1 * * 1 ← (8) 13 1 * * 1
(15) 4 1 1 * * 1 ← (16) 5 1 * * 1

**(38, 14)**

(1) .....3 5 7 3 3 ← (2) 3 6 .....4 5 3 3 3
(4) .....4 5 3 3 3 ← (16) 4 1 1 * * 1
(5) 3 6 2 3 4 4 1 1 * 1 ← (6) 8 1 1 * 2 4 3 3 3
(7) * * 2 4 3 3 3 ← (9) 6 2 3 4 4 1 1 * 1
(7) 8 4 1 1 * * 1 ← (8) 12 1 1 * * 1

**(38, 15)**

(2) .....4 5 3 3 3 ← (14) * * * 1
(5) 2 * * 2 4 3 3 3 ← (6) 3 6 2 3 4 4 1 1 * 1
(6) 1 * * 2 4 3 3 3 ← (8) * * 2 4 3 3 3
(7) 6 * * * 1 ← (8) 8 4 1 1 * * 1
(11) 2 * * * 1 ← (12) 4 4 1 1 * * 1

**(38, 16)**

(5) 1 1 * * 2 4 3 3 3 ← (6) 2 * * 2 4 3 3 3
(6) 2 3 4 4 1 1 * * 1
(7) 5 1 * * * 1 ← (8) 6 * * * 1
(11) 1 1 * * * 1 ← (12) 2 * * * 1

**(38, 17)**

(5) 1 2 3 4 4 1 1 * * 1
(7) 4 1 1 * * * 1 ← (8) 5 1 * * * 1

**(38, 18)**

(3) 4 4 1 1 * * * 1

**(38, 19)**

(3) 2 * * * * 1 ← (4) 4 4 1 1 * * * 1

**(38, 20)**

(3) 1 1 * * * * 1 ← (4) 2 * * * * 1

**(39, 3)**

(1) 23 15
(5) 27 7
(7) 29 3 ← (9) 31
(21) 11 7
(23) 13 3 ← (25) 15
(25) 7 7 ← (37) 3
(31) 5 3 ← (33) 7

**(39, 4)**

(1) 22 13 3 ← (2) 23 15
(2) 23 7 7
(5) 26 5 3 ← (6) 27 7
(6) 27 3 3 ← (8) 29 3
(9) 14 13 3 ← (10) 15 15
(20) 5 7 7
(21) 10 5 3 ← (22) 11 7
(22) 11 3 3 ← (24) 13 3
(25) 6 5 3 ← (26) 7 7
(30) 3 3 3 ← (32) 5 3
(31) 2 3 3 ← (34) 3 3

**(39, 5)**

(1) 17 7 7 7
(1) 21 11 3 3 ← (2) 22 13 3
(5) 25 3 3 3 ← (6) 26 5 3
(7) 13 5 7 7
(9) 13 11 3 3 ← (10) 14 13 3
(21) 5 7 3 3 ← (26) 6 5 3
(21) 9 3 3 3 ← (22) 10 5 3
(30) 1 2 3 3 ← (32) 2 3 3

**(39, 6)**

(1) 20 9 3 3 3 ← (2) 21 11 3 3
(4) 5 9 7 7 7
(6) 11 3 5 7 7 ← (8) 13 5 7 7
(9) 12 9 3 3 3 ← (10) 13 11 3 3
(15) 2 3 5 7 7 ← (17) 4 5 7 7
(19) 4 7 3 3 3 ← (20) 6 6 5 3
(21) 4 5 3 3 3 ← (22) 5 7 3 3
(25) 5 1 2 3 3 ← (26) 6 2 3 3

**(39, 7)**

(1) 3 5 9 7 7 7
(1) 8 12 9 3 3 3
(3) 5 9 3 5 7 7
(5) 5 7 3 5 7 7 ← (9) 9 3 5 7 7
(7) 9 3 6 6 5 3 ← (10) 12 9 3 3 3
(13) 3 3 6 6 5 3 ← (16) 2 3 5 7 7
(19) 2 4 5 3 3 3 ← (20) 4 7 3 3 3
(23) 1 2 4 3 3 3 ← (25) 2 4 3 3 3
(25) 3 4 4 1 1 1 ← (26) 5 1 2 3 3

**(39, 8)**

(1) 6 9 3 6 6 5 3 ← (2) 8 12 9 3 3 3
(2) 3 5 7 3 5 7 7 ← (4) 5 9 3 5 7 7
(6) 5 5 3 6 6 5 3 ← (8) 9 3 6 6 5 3
(7) 6 3 3 6 6 5 3 ← (14) 3 3 6 6 5 3
(9) 10 2 4 5 3 3 3 ← (10) 12 4 5 3 3 3
(22) 1 1 2 4 3 3 3 ← (24) 1 2 4 3 3 3
(23) 2 3 4 4 1 1 1 ← (26) 3 4 4 1 1 1

**(39, 9)**

(1) 3 6 5 2 3 5 7 7 ← (2) 6 9 3 6 6 5 3
(2) 4 7 3 3 6 6 5 3
(5) 5 6 2 3 5 7 3 3 ← (11) 6 2 3 5 7 3 3
(7) 3 6 2 3 5 7 3 3 ← (8) 6 3 3 6 6 5 3
(9) 7 13 1 * 1 ← (10) 10 2 4 5 3 3 3
(13) 4 ..4 5 3 3 3 ← (14) 6 2 4 5 3 3 3
(22) 1 2 3 4 4 1 1 1 ← (24) 2 3 4 4 1 1 1

**(39, 10)**

(1) 2 3 5 5 3 6 6 5 3 ← (2) 3 6 5 2 3 5 7 7
(4) 2 4 3 3 3 6 6 5 3 ← (9) 5 6 2 4 5 3 3 3
(5) 3 5 6 2 4 5 3 3 3 ← (6) 5 6 2 3 5 7 3 3
(7) ...3 3 6 6 5 3 ← (8) 3 6 2 3 5 7 3 3
(9) 5 8 1 1 2 4 3 3 3 ← (10) 7 13 1 * 1
(11) 4 ...4 5 3 3 3 ← (12) 6 ..4 5 3 3 3
(13) ....4 5 3 3 3 ← (14) 4 ..4 5 3 3 3
(17) 5 1 2 3 4 4 1 1 1 ← (18) 6 2 3 4 4 1 1 1

**(39, 11)**

(2) ..4 3 3 3 6 6 5 3 ← (8) ...3 3 6 6 5 3
(5) ....3 3 6 6 5 3 ← (6) 3 5 6 2 4 5 3 3 3
(9) 4 ....4 5 3 3 3 ← (10) 5 8 1 1 2 4 3 3 3
(11) .....4 5 3 3 3 ← (12) 4 ...4 5 3 3 3
(15) 1 * 2 4 3 3 3 ← (17) * 2 4 3 3 3
(17) 3 4 4 1 1 * 1 ← (18) 5 1 2 3 4 4 1 1 1

**(39, 12)**

(5) 6 .....4 5 3 3 3
(9) ......4 5 3 3 3 ← (10) 4 ....4 5 3 3 3
(14) 1 1 * 2 4 3 3 3 ← (16) 1 * 2 4 3 3 3
(15) 2 3 4 4 1 1 * 1 ← (18) 3 4 4 1 1 * 1

**(39, 13)**

(3) 6 ......4 5 3 3 3
(5) 4 ......4 5 3 3 3 ← (6) 6 .....4 5 3 3 3
(14) 1 2 3 4 4 1 1 * 1 ← (16) 2 3 4 4 1 1 * 1

**(39, 14)**

(2) ........3 5 7 3 3
(3) 4 .......4 5 3 3 3 ← (4) 6 ......4 5 3 3 3
(5) ........4 5 3 3 3 ← (6) 4 ......4 5 3 3 3
(9) 5 1 2 3 4 4 1 1 * 1 ← (10) 6 2 3 4 4 1 1 * 1

**(39, 15)**

(3) .........4 5 3 3 3 ← (4) 4 .......4 5 3 3 3
(7) 1 * * 2 4 3 3 3 ← (9) * * 2 4 3 3 3
(9) 3 4 4 1 1 * * 1 ← (10) 5 1 2 3 4 4 1 1 * 1
(13) 1 * * * 1

**(39, 16)**

(6) 1 1 * * 2 4 3 3 3 ← (8) 1 * * 2 4 3 3 3
(7) 2 3 4 4 1 1 * * 1 ← (10) 3 4 4 1 1 * * 1
(12) 1 1 * * * 1

**(39, 17)**

(1) 6 2 3 4 4 1 1 * * 1
(6) 1 2 3 4 4 1 1 * * 1 ← (8) 2 3 4 4 1 1 * * 1
(8) 4 1 1 * * * 1

**(39, 18)**

(1) 5 1 2 3 4 4 1 1 * * 1 ← (2) 6 2 3 4 4 1 1 * * 1
(6) * * * * 1

**(39, 19)**

(1) 3 4 4 1 1 * * * 1 ← (2) 5 1 2 3 4 4 1 1 * * 1
(5) 1 * * * * 1

**(39, 20)**

(4) 1 1 * * * * 1

**(40, 2)**

(39) 1 ← (41)

**(40, 3)**

(9) 30 1 ← (10) 31
(25) 14 1 ← (26) 15
(33) 6 1 ← (34) 7
(37) 2 1 ← (38) 3
(38) 1 1 ← (40) 1

**(40, 4)**

(1) 21 11 7
(3) 23 7 7
(7) 27 3 3 ← (9) 29 3
(9) 13 11 7
(9) 29 1 1 ← (10) 30 1
(19) 7 7 7
(21) 5 7 7 ← (35) 3 3
(23) 11 3 3 ← (25) 13 3
(25) 13 1 1 ← (26) 14 1
(31) 3 3 3 ← (33) 5 3
(33) 5 1 1 ← (34) 6 1
(37) 1 1 1 ← (38) 2 1

**(40, 5)**

(1) 20 5 7 7
(2) 17 7 7 7
(6) 25 3 3 3 ← (8) 27 3 3
(7) 14 5 7 7
(9) 28 1 1 1 ← (10) 29 1 1
(18) 3 5 7 7
(22) 9 3 3 3 ← (24) 11 3 3
(23) 8 3 3 3 ← (32) 3 3 3
(25) 12 1 1 1 ← (26) 13 1 1
(31) 1 2 3 3 ← (33) 2 3 3
(33) 4 1 1 1 ← (34) 5 1 1

**(40, 6)**

(1) 7 13 5 7 7
(2) 20 9 3 3 3
(3) 14 4 5 7 7
(5) 5 9 7 7 7 ← (9) 13 5 7 7
(7) 11 3 5 7 7 ← (8) 14 5 7 7
(9) 24 4 1 1 1 ← (10) 28 1 1 1
(17) 3 6 6 5 3
(19) 3 5 7 3 3 ← (21) 6 6 5 3
(22) 4 5 3 3 3 ← (27) 6 2 3 3
(23) 3 6 2 3 3 ← (24) 8 3 3 3
(25) 8 4 1 1 1 ← (26) 12 1 1 1
(29) 4 4 1 1 1 ← (32) 1 2 3 3
(31) * 1 ← (34) 4 1 1 1

**(40, 7)**

(2) 3 5 9 7 7 7 ← (8) 11 3 5 7 7
(3) 13 2 3 5 7 7 ← (4) 14 4 5 7 7
(6) 5 7 3 5 7 7 ← (10) 9 3 5 7 7
(9) 22 * 1 ← (10) 24 4 1 1 1
(17) 2 3 5 7 3 3 ← (18) 3 6 6 5 3
(20) 2 4 5 3 3 3 ← (26) 2 4 3 3 3
(23) ..4 3 3 3 ← (24) 3 6 2 3 3
(25) 6 * 1 ← (26) 8 4 1 1 1
(29) 2 * 1 ← (30) 4 4 1 1 1
(30) 1 * 1 ← (32) * 1

**(40, 8)**

(1) 3 5 9 3 5 7 7
(3) 3 5 7 3 5 7 7 ← (5) 5 9 3 5 7 7
(3) 7 12 4 5 3 3 3 ← (4) 13 2 3 5 7 7
(5) 6 5 2 3 5 7 7
(7) 5 5 3 6 6 5 3 ← (9) 9 3 6 6 5 3
(9) 21 1 * 1 ← (10) 22 * 1
(17) 13 1 * 1 ← (25) 1 2 4 3 3 3
(23) 1 1 2 4 3 3 3 ← (24) ..4 3 3 3
(25) 5 1 * 1 ← (26) 6 * 1
(29) 1 1 * 1 ← (30) 2 * 1

(40, 9)

(3) 4 7 3 3 6 6 5 3 ← (8) 5 5 3 6 6 5 3
(3) 5 6 3 3 6 6 5 3 ← (4) 7 12 4 5 3 3 3
(5) 3 6 3 3 6 6 5 3 ← (6) 6 5 2 3 5 7 7
(9) 20 1 1 * 1 ← (10) 21 1 * 1
(11) 3 6 2 4 5 3 3 3 ← (12) 6 2 3 5 7 3 3
(15) 8 1 1 2 4 3 3 3 ← (24) 1 1 2 4 3 3 3
(17) 12 1 1 * 1 ← (18) 13 1 * 1
(23) 1 2 3 4 4 1 1 1 ← (25) 2 3 4 4 1 1 1
(25) 4 1 1 * 1 ← (26) 5 1 * 1

(40, 10)

(1) 2 4 7 3 3 6 6 5 3
(2) 2 3 5 5 3 6 6 5 3 ← (4) 4 7 3 3 6 6 5 3
(3) 3 5 6 2 3 5 7 3 3 ← (4) 5 6 3 3 6 6 5 3
(5) 2 4 3 3 3 6 6 5 3 ← (6) 3 6 3 3 6 6 5 3
(9) 3 6 ..4 5 3 3 3 ← (10) 5 6 2 4 5 3 3 3
(9) 16 4 1 1 * 1 ← (10) 20 1 1 * 1
(11) ....3 5 7 3 3 ← (12) 3 6 2 4 5 3 3 3
(14) ....4 5 3 3 3 ← (19) 6 2 3 4 4 1 1 1
(15) 3 6 2 3 4 4 1 1 1 ← (16) 8 1 1 2 4 3 3 3
(17) 8 4 1 1 * 1 ← (18) 12 1 1 * 1
(21) 4 4 1 1 * 1 ← (24) 1 2 3 4 4 1 1 1
(23) * * 1 ← (26) 4 1 1 * 1

(40, 11)

(3) ..4 3 3 3 6 6 5 3 ← (4) 3 5 6 2 3 5 7 3 3
(6) ....3 3 6 6 5 3
(9) .....3 5 7 3 3 ← (10) 3 6 ..4 5 3 3 3
(9) 14 * * 1 ← (10) 16 4 1 1 * 1
(12) .....4 5 3 3 3 ← (18) * 2 4 3 3 3
(15) 2 * 2 4 3 3 3 ← (16) 3 6 2 3 4 4 1 1 1
(17) 6 * * 1 ← (18) 8 4 1 1 * 1
(21) 2 * * 1 ← (22) 4 4 1 1 * 1
(22) 1 * * 1 ← (24) * * 1

(40, 12)

(3) 6 .....3 5 7 3 3
(9) 13 1 * * 1 ← (10) 14 * * 1
(10) ......4 5 3 3 3 ← (17) 1 * 2 4 3 3 3
(15) 1 1 * 2 4 3 3 3 ← (16) 2 * 2 4 3 3 3
(17) 5 1 * * 1 ← (18) 6 * * 1
(21) 1 1 * * 1 ← (22) 2 * * 1

(40, 13)

(1) 5 6 .....4 5 3 3 3
(3) 3 6 .....4 5 3 3 3 ← (4) 6 .....3 5 7 3 3
(7) 8 1 1 * 2 4 3 3 3 ← (16) 1 1 * 2 4 3 3 3
(9) 12 1 1 * * 1 ← (10) 13 1 * * 1
(15) 1 2 3 4 4 1 1 * 1 ← (17) 2 3 4 4 1 1 * 1
(17) 4 1 1 * * 1 ← (18) 5 1 * * 1

(40, 14)

(1) 3 6 ......4 5 3 3 3 ← (2) 5 6 .....4 5 3 3 3
(3) ........3 5 7 3 3 ← (4) 3 6 .....4 5 3 3 3
(6) ........4 5 3 3 3 ← (11) 6 2 3 4 4 1 1 * 1
(7) 3 6 2 3 4 4 1 1 * 1 ← (8) 8 1 1 * 2 4 3 3 3
(9) 8 4 1 1 * * 1 ← (10) 12 1 1 * * 1
(13) 4 4 1 1 * * 1 ← (16) 1 2 3 4 4 1 1 * 1
(15) * * * 1 ← (18) 4 1 1 * * 1

(40, 15)

(1) .........3 5 7 3 3 ← (2) 3 6 ......4 5 3 3 3
(4) .........4 5 3 3 3 ← (10) * * 2 4 3 3 3
(7) 2 * * 2 4 3 3 3 ← (8) 3 6 2 3 4 4 1 1 * 1
(9) 6 * * * 1 ← (10) 8 4 1 1 * * 1
(13) 2 * * * 1 ← (14) 4 4 1 1 * * 1
(14) 1 * * * 1 ← (16) * * * 1

(40, 16)

(1) 13 1 * * * 1 ← (9) 1 * * 2 4 3 3 3
(7) 1 1 * * 2 4 3 3 3 ← (8) 2 * * 2 4 3 3 3
(9) 5 1 * * * 1 ← (10) 6 * * * 1
(13) 1 1 * * * 1 ← (14) 2 * * * 1

(40, 17)

(1) 12 1 1 * * * 1 ← (2) 13 1 * * * 1
(7) 1 2 3 4 4 1 1 * * 1 ← (9) 2 3 4 4 1 1 * * 1
(9) 4 1 1 * * * 1 ← (10) 5 1 * * * 1

(40, 18)

(1) * * * 2 4 3 3 3
(1) 8 4 1 1 * * * 1 ← (2) 12 1 1 * * * 1
(5) 4 4 1 1 * * * 1 ← (8) 1 2 3 4 4 1 1 * * 1
(7) * * * * 1 ← (10) 4 1 1 * * * 1

(40, 19)

(1) 6 * * * * 1 ← (2) 8 4 1 1 * * * 1
(2) 3 4 4 1 1 * * * 1
(5) 2 * * * * 1 ← (6) 4 4 1 1 * * * 1
(6) 1 * * * * 1 ← (8) * * * * 1

(40, 20)

(1) 5 1 * * * * 1 ← (2) 6 * * * * 1
(5) 1 1 * * * * 1 ← (6) 2 * * * * 1

(40, 21)

(1) 4 1 1 * * * * 1 ← (2) 5 1 * * * * 1

(41, 3)

(3) 23 15
(7) 27 7 ← (11) 31
(11) 15 15
(23) 11 7 ← (27) 15
(27) 7 7 ← (35) 7
(39) 1 1 ← (41) 1

(41, 4)

(2) 21 11 7
(3) 22 13 3 ← (4) 23 15
(4) 23 7 7 ← (10) 29 3
(7) 26 5 3 ← (8) 27 7
(10) 13 11 7
(11) 14 13 3 ← (12) 15 15
(20) 7 7 7 ← (26) 13 3
(22) 5 7 7 ← (34) 5 3
(23) 10 5 3 ← (24) 11 7
(27) 6 5 3 ← (28) 7 7
(38) 1 1 1 ← (40) 1 1

(41, 5)

(1) 11 15 7 7
(1) 19 7 7 7
(2) 20 5 7 7 ← (9) 27 3 3
(3) 17 7 7 7
(3) 21 11 3 3 ← (4) 22 13 3
(7) 25 3 3 3 ← (8) 26 5 3
(11) 13 11 3 3 ← (12) 14 13 3
(18) 4 5 7 7 ← (25) 11 3 3
(19) 3 5 7 7 ← (33) 3 3 3
(23) 5 7 3 3 ← (28) 6 5 3
(23) 9 3 3 3 ← (24) 10 5 3

**(41, 6)**

(1) 7 14 5 7 7 ← (2) 11 15 7 7
(1) 18 3 5 7 7 ← (8) 25 3 3 3
(2) 7 13 5 7 7 ← (4) 17 7 7 7
(3) 20 9 3 3 3 ← (4) 21 11 3 3
(6) 5 9 7 7 7 ← (10) 13 5 7 7
(11) 12 9 3 3 3 ← (12) 13 11 3 3
(17) 2 3 5 7 7 ← (24) 9 3 3 3
(20) 3 5 7 3 3 ← (25) 8 3 3 3
(21) 4 7 3 3 3 ← (22) 6 6 5 3
(23) 4 5 3 3 3 ← (24) 5 7 3 3
(27) 5 1 2 3 3 ← (28) 6 2 3 3

**(41, 7)**

(1) 5 5 9 7 7 7 ← (2) 7 14 5 7 7
(1) 17 3 6 6 5 3
(3) 3 5 9 7 7 7 ← (5) 14 4 5 7 7
(3) 8 12 9 3 3 3
(7) 5 7 3 5 7 7 ← (11) 9 3 5 7 7
(11) 12 4 5 3 3 3
(15) 3 3 6 6 5 3 ← (19) 3 6 6 5 3
(18) 2 3 5 7 3 3 ← (24) 4 5 3 3 3
(21) 2 4 5 3 3 3 ← (22) 4 7 3 3 3
(27) 3 4 4 1 1 1 ← (28) 5 1 2 3 3
(31) 1 * 1 ← (33) * 1

**(41, 8)**

(2) 3 5 9 3 5 7 7
(3) 6 9 3 6 6 5 3 ← (4) 8 12 9 3 3 3
(4) 3 5 7 3 5 7 7 ← (8) 5 7 3 5 7 7
(9) 6 3 3 6 6 5 3 ← (16) 3 3 6 6 5 3
(11) 10 2 4 5 3 3 3 ← (12) 12 4 5 3 3 3
(15) 6 2 4 5 3 3 3 ← (22) 2 4 5 3 3 3
(30) 1 1 * 1 ← (32) 1 * 1

**(41, 9)**

(1) 5 6 5 2 3 5 7 7
(3) 3 6 5 2 3 5 7 7 ← (4) 6 9 3 6 6 5 3
(7) 5 6 2 3 5 7 3 3 ← (13) 6 2 3 5 7 3 3
(9) 3 6 2 3 5 7 3 3 ← (10) 6 3 3 6 6 5 3
(11) 7 13 1 * 1 ← (12) 10 2 4 5 3 3 3
(13) 6 ..4 5 3 3 3 ← (19) 13 1 * 1
(15) 4 ..4 5 3 3 3 ← (16) 6 2 4 5 3 3 3

**(41, 10)**

(2) 2 4 7 3 3 6 6 5 3
(3) 2 3 5 5 3 6 6 5 3 ← (4) 3 6 5 2 3 5 7 7
(6) 2 4 3 3 3 6 6 5 3 ← (11) 5 6 2 4 5 3 3 3
(7) 3 5 6 2 4 5 3 3 3 ← (8) 5 6 2 3 5 7 3 3
(9) ...3 3 6 6 5 3 ← (10) 3 6 2 3 5 7 3 3
(11) 5 8 1 1 2 4 3 3 3 ← (12) 7 13 1 * 1
(12) ....3 5 7 3 3 ← (17) 8 1 1 2 4 3 3 3
(13) 4 ...4 5 3 3 3 ← (14) 6 ..4 5 3 3 3
(15) ....4 5 3 3 3 ← (16) 4 ..4 5 3 3 3
(19) 5 1 2 3 4 4 1 1 1 ← (20) 6 2 3 4 4 1 1 1

**(41, 11)**

(1) 1 2 4 7 3 3 6 6 5 3
(4) ..4 3 3 3 6 6 5 3 ← (10) ...3 3 6 6 5 3
(7) ....3 3 6 6 5 3 ← (8) 3 5 6 2 4 5 3 3 3
(10) .....3 5 7 3 3 ← (16) ....4 5 3 3 3
(11) 4 ....4 5 3 3 3 ← (12) 5 8 1 1 2 4 3 3 3
(13) .....4 5 3 3 3 ← (14) 4 ...4 5 3 3 3
(19) 3 4 4 1 1 * 1 ← (20) 5 1 2 3 4 4 1 1 1
(23) 1 * * 1 ← (25) * * 1

**(41, 12)**

(1) 6 ....3 3 6 6 5 3 ← (8) ....3 3 6 6 5 3
(7) 6 .....4 5 3 3 3 ← (14) .....4 5 3 3 3
(11) ......4 5 3 3 3 ← (12) 4 ....4 5 3 3 3
(22) 1 1 * * 1 ← (24) 1 * * 1

**(41, 13)**

(1) 3 6 .....3 5 7 3 3 ← (2) 6 ....3 3 6 6 5 3
(5) 6 ......4 5 3 3 3 ← (12) ......4 5 3 3 3
(7) 4 ......4 5 3 3 3 ← (8) 6 .....4 5 3 3 3

**(41, 14)**

(1) .......3 3 6 6 5 3 ← (2) 3 6 .....3 5 7 3 3
(4) ........3 5 7 3 3 ← (9) 8 1 1 * 2 4 3 3 3
(5) 4 .......4 5 3 3 3 ← (6) 6 ......4 5 3 3 3
(7) ........4 5 3 3 3 ← (8) 4 ......4 5 3 3 3
(11) 5 1 2 3 4 4 1 1 * 1 ← (12) 6 2 3 4 4 1 1 * 1

**(41, 15)**

(2) .........3 5 7 3 3 ← (8) ........4 5 3 3 3
(5) .........4 5 3 3 3 ← (6) 4 .......4 5 3 3 3
(11) 3 4 4 1 1 * * 1 ← (12) 5 1 2 3 4 4 1 1 * 1
(15) 1 * * * 1 ← (17) * * * 1

**(41, 16)**

(8) 1 1 * * 2 4 3 3 3
(14) 1 1 * * * 1 ← (16) 1 * * * 1

**(41, 17)**

(3) 6 2 3 4 4 1 1 * * 1

**(41, 18)**

(2) * * * 2 4 3 3 3
(3) 5 1 2 3 4 4 1 1 * * 1 ← (4) 6 2 3 4 4 1 1 * * 1

**(41, 19)**

(1) 1 * * * 2 4 3 3 3
(3) 3 4 4 1 1 * * * 1 ← (4) 5 1 2 3 4 4 1 1 * * 1
(7) 1 * * * * 1 ← (9) * * * * 1

**(41, 20)**

(1) 2 3 4 4 1 1 * * * 1
(6) 1 1 * * * * 1 ← (8) 1 * * * * 1

**(41, 21)**

(2) 4 1 1 * * * * 1

**(42, 2)**

(39) 3 ← (43)

**(42, 3)**

(11) 30 1 ← (12) 31
(27) 14 1 ← (28) 15
(35) 6 1 ← (36) 7
(36) 3 3 ← (42) 1
(39) 2 1 ← (40) 3

**(42, 4)**

(1) 11 15 15
(3) 21 11 7 ← (5) 23 15
(5) 23 7 7 ← (9) 27 7
(11) 13 11 7 ← (13) 15 15
(11) 29 1 1 ← (12) 30 1
(21) 7 7 7 ← (25) 11 7
(23) 5 7 7 ← (29) 7 7
(27) 13 1 1 ← (28) 14 1
(34) 2 3 3 ← (41) 1 1
(35) 5 1 1 ← (36) 6 1
(39) 1 1 1 ← (40) 2 1

(42, 5)

(1) 10 13 11 7 ← (2) 11 15 15
(2) 19 7 7 7 ← (4) 21 11 7
(3) 20 5 7 7 ← (6) 23 7 7
(9) 14 5 7 7 ← (12) 13 11 7
(11) 28 1 1 1 ← (12) 29 1 1
(19) 4 5 7 7 ← (22) 7 7 7
(20) 3 5 7 7 ← (24) 5 7 7
(27) 12 1 1 1 ← (28) 13 1 1
(33) 1 2 3 3 ← (40) 1 1 1
(35) 4 1 1 1 ← (36) 5 1 1

(42, 6)

(1) 9 11 7 7 7 ← (2) 10 13 11 7
(2) 18 3 5 7 7 ← (4) 20 5 7 7
(3) 7 13 5 7 7 ← (5) 17 7 7 7
(4) 20 9 3 3 3
(7) 5 9 7 7 7 ← (11) 13 5 7 7
(9) 11 3 5 7 7 ← (10) 14 5 7 7
(11) 24 4 1 1 1 ← (12) 28 1 1 1
(12) 12 9 3 3 3
(18) 2 3 5 7 7 ← (20) 4 5 7 7
(21) 3 5 7 3 3 ← (25) 5 7 3 3
(25) 3 6 2 3 3 ← (26) 8 3 3 3
(27) 2 4 3 3 3 ← (29) 6 2 3 3
(27) 8 4 1 1 1 ← (28) 12 1 1 1
(31) 4 4 1 1 1 ← (36) 4 1 1 1

(42, 7)

(2) 5 5 9 7 7 7 ← (4) 7 13 5 7 7
(2) 17 3 6 6 5 3
(4) 3 5 9 7 7 7 ← (8) 5 9 7 7 7
(5) 13 2 3 5 7 7 ← (6) 14 4 5 7 7
(6) 5 9 3 5 7 7 ← (12) 9 3 5 7 7
(10) 9 3 6 6 5 3
(11) 22 * 1 ← (12) 24 4 1 1 1
(19) 2 3 5 7 3 3 ← (20) 3 6 6 5 3
(25) ..4 3 3 3 ← (26) 3 6 2 3 3
(26) 1 2 4 3 3 3 ← (28) 2 4 3 3 3
(27) 6 * 1 ← (28) 8 4 1 1 1
(28) 3 4 4 1 1 1 ← (34) * 1
(31) 2 * 1 ← (32) 4 4 1 1 1

(42, 8)

(1) 11 12 4 5 3 3 3
(3) 3 5 9 3 5 7 7 ← (5) 8 12 9 3 3 3
(5) 3 5 7 3 5 7 7 ← (9) 5 7 3 5 7 7
(5) 7 12 4 5 3 3 3 ← (6) 13 2 3 5 7 7
(7) 6 5 2 3 5 7 7 ← (13) 12 4 5 3 3 3
(9) 5 5 3 6 6 5 3
(11) 21 1 * 1 ← (12) 22 * 1
(25) 1 1 2 4 3 3 3 ← (26) ..4 3 3 3
(26) 2 3 4 4 1 1 1 ← (33) 1 * 1
(27) 5 1 * 1 ← (28) 6 * 1
(31) 1 1 * 1 ← (32) 2 * 1

(42, 9)

(2) 5 6 5 2 3 5 7 7
(5) 4 7 3 3 6 6 5 3 ← (11) 6 3 3 6 6 5 3
(5) 5 6 3 3 6 6 5 3 ← (6) 7 12 4 5 3 3 3
(7) 3 6 3 3 6 6 5 3 ← (8) 6 5 2 3 5 7 7
(11) 20 1 1 * 1 ← (12) 21 1 * 1
(13) 3 6 2 4 5 3 3 3 ← (14) 6 2 3 5 7 3 3
(19) 12 1 1 * 1 ← (20) 13 1 * 1
(25) 1 2 3 4 4 1 1 1 ← (32) 1 1 * 1
(27) 4 1 1 * 1 ← (28) 5 1 * 1

(42, 10)

(3) 2 4 7 3 3 6 6 5 3 ← (6) 4 7 3 3 6 6 5 3
(4) 2 3 5 5 3 6 6 5 3 ← (9) 5 6 2 3 5 7 3 3
(5) 3 5 6 2 3 5 7 3 3 ← (6) 5 6 3 3 6 6 5 3
(7) 2 4 3 3 3 6 6 5 3 ← (8) 3 6 3 3 6 6 5 3
(11) 3 6 ..4 5 3 3 3 ← (12) 5 6 2 4 5 3 3 3
(11) 16 4 1 1 * 1 ← (12) 20 1 1 * 1
(13) ....3 5 7 3 3 ← (14) 3 6 2 4 5 3 3 3
(17) 3 6 2 3 4 4 1 1 1 ← (18) 8 1 1 2 4 3 3 3
(19) * 2 4 3 3 3 ← (21) 6 2 3 4 4 1 1 1
(19) 8 4 1 1 * 1 ← (20) 12 1 1 * 1
(23) 4 4 1 1 * 1 ← (28) 4 1 1 * 1

(42, 11)

(1) ..4 7 3 3 6 6 5 3 ← (8) 2 4 3 3 3 6 6 5 3
(2) 1 2 4 7 3 3 6 6 5 3 ← (4) 2 4 7 3 3 6 6 5 3
(5) ..4 3 3 3 6 6 5 3 ← (6) 3 5 6 2 3 5 7 3 3
(11) .....3 5 7 3 3 ← (12) 3 6 ..4 5 3 3 3
(11) 14 * * 1 ← (12) 16 4 1 1 * 1
(17) 2 * 2 4 3 3 3 ← (18) 3 6 2 3 4 4 1 1 1
(18) 1 * 2 4 3 3 3 ← (20) * 2 4 3 3 3
(19) 6 * * 1 ← (20) 8 4 1 1 * 1
(20) 3 4 4 1 1 * 1 ← (26) * * 1
(23) 2 * * 1 ← (24) 4 4 1 1 * 1

(42, 12)

(1) 1 1 2 4 7 3 3 6 6 5 3 ← (2) ..4 7 3 3 6 6 5 3
(5) 6 .....3 5 7 3 3
(11) 13 1 * * 1 ← (12) 14 * * 1
(17) 1 1 * 2 4 3 3 3 ← (18) 2 * 2 4 3 3 3
(18) 2 3 4 4 1 1 * 1 ← (25) 1 * * 1
(19) 5 1 * * 1 ← (20) 6 * * 1
(23) 1 1 * * 1 ← (24) 2 * * 1

(42, 13)

(3) 5 6 .....4 5 3 3 3
(5) 3 6 .....4 5 3 3 3 ← (6) 6 .....3 5 7 3 3
(11) 12 1 1 * * 1 ← (12) 13 1 * * 1
(17) 1 2 3 4 4 1 1 * 1 ← (24) 1 1 * * 1
(19) 4 1 1 * * 1 ← (20) 5 1 * * 1

(42, 14)

(2) .....3 3 6 6 5 3
(3) 3 6 .....4 5 3 3 3 ← (4) 5 6 .....4 5 3 3 3
(5) .....3 5 7 3 3 ← (6) 3 6 .....4 5 3 3 3
(9) 3 6 2 3 4 4 1 1 * 1 ← (10) 8 1 1 * 2 4 3 3 3
(11) * * 2 4 3 3 3 ← (13) 6 2 3 4 4 1 1 * 1
(11) 8 4 1 1 * * 1 ← (12) 12 1 1 * * 1
(15) 4 4 1 1 * * 1 ← (20) 4 1 1 * * 1

(42, 15)

(3) .....3 5 7 3 3 ← (4) 3 6 .....4 5 3 3 3
(6) .....4 5 3 3 3
(9) 2 * * 2 4 3 3 3 ← (10) 3 6 2 3 4 4 1 1 * 1
(10) 1 * * 2 4 3 3 3 ← (12) * * 2 4 3 3 3
(11) 6 * * * 1 ← (12) 8 4 1 1 * * 1
(12) 3 4 4 1 1 * * 1 ← (18) * * * 1
(15) 2 * * * 1 ← (16) 4 4 1 1 * * 1

(42, 16)

(3) 13 1 * * * 1
(9) 1 1 * * 2 4 3 3 3 ← (10) 2 * * 2 4 3 3 3
(10) 2 3 4 4 1 1 * * 1 ← (17) 1 * * * 1
(11) 5 1 * * * 1 ← (12) 6 * * * 1
(15) 1 1 * * * 1 ← (16) 2 * * * 1

**(42, 17)**

(1) 8 1 1 * * 2 4 3 3 3
(3) 12 1 1 * * * 1 ← (4) 13 1 * * * 1
(9) 1 2 3 4 4 1 1 * * 1 ← (16) 1 1 * * * 1
(11) 4 1 1 * * * 1 ← (12) 5 1 * * * 1

**(42, 18)**

(1) 3 6 2 3 4 4 1 1 * * 1 ← (2) 8 1 1 * * 2 4 3 3 3
(3) * * * 2 4 3 3 3 ← (5) 6 2 3 4 4 1 1 * * 1
(3) 8 4 1 1 * * * 1 ← (4) 12 1 1 * * * 1
(7) 4 4 1 1 * * * 1 ← (12) 4 1 1 * * * 1

**(42, 19)**

(1) 2 * * * 2 4 3 3 3 ← (2) 3 6 2 3 4 4 1 1 * * 1
(2) 1 * * * 2 4 3 3 3 ← (4) * * * 2 4 3 3 3
(3) 6 * * * * 1 ← (4) 8 4 1 1 * * * 1
(4) 3 4 4 1 1 * * * 1 ← (10) * * * * 1
(7) 2 * * * * 1 ← (8) 4 4 1 1 * * * 1

**(42, 20)**

(1) 1 1 * * * 2 4 3 3 3 ← (2) 2 * * * 2 4 3 3 3
(2) 2 3 4 4 1 1 * * * 1 ← (9) 1 * * * * 1
(3) 5 1 * * * * 1 ← (4) 6 * * * * 1
(7) 1 1 * * * * 1 ← (8) 2 * * * * 1

**(42, 21)**

(1) 1 2 3 4 4 1 1 * * * 1 ← (8) 1 1 * * * * 1
(3) 4 1 1 * * * * 1 ← (4) 5 1 * * * * 1

**(42, 22)**

(1) * * * * * 1

**(43, 3)**

(11) 29 3 ← (13) 31
(27) 13 3 ← (29) 15
(35) 5 3 ← (37) 7
(37) 3 3 ← (41) 3

**(43, 4)**

(5) 22 13 3 ← (6) 23 15
(9) 26 5 3 ← (10) 27 7
(10) 27 3 3 ← (12) 29 3
(13) 14 13 3 ← (14) 15 15
(25) 10 5 3 ← (26) 11 7
(26) 11 3 3 ← (28) 13 3
(29) 6 5 3 ← (30) 7 7
(34) 3 3 3 ← (36) 5 3
(35) 2 3 3 ← (38) 3 3

**(43, 5)**

(3) 11 15 7 7
(3) 19 7 7 7 ← (5) 21 11 7
(5) 21 11 3 3 ← (6) 22 13 3
(9) 25 3 3 3 ← (10) 26 5 3
(13) 13 11 3 3 ← (14) 14 13 3
(21) 3 5 7 7 ← (25) 5 7 7
(23) 6 6 5 3 ← (30) 6 5 3
(25) 9 3 3 3 ← (26) 10 5 3
(34) 1 2 3 3 ← (36) 2 3 3

**(43, 6)**

(2) 9 11 7 7 7 ← (6) 17 7 7 7
(3) 7 14 5 7 7 ← (4) 11 15 7 7
(3) 18 3 5 7 7 ← (5) 20 5 7 7
(5) 20 9 3 3 3 ← (6) 21 11 3 3
(10) 11 3 5 7 7 ← (12) 13 5 7 7
(13) 12 9 3 3 3 ← (14) 13 11 3 3
(19) 2 3 5 7 7 ← (21) 4 5 7 7
(22) 3 5 7 3 3 ← (27) 8 3 3 3
(23) 4 7 3 3 3 ← (24) 6 6 5 3
(25) 4 5 3 3 3 ← (26) 5 7 3 3
(29) 5 1 2 3 3 ← (30) 6 2 3 3

**(43, 7)**

(1) 12 12 9 3 3 3 ← (4) 18 3 5 7 7
(3) 5 5 9 7 7 7 ← (4) 7 14 5 7 7
(3) 17 3 6 6 5 3 ← (6) 20 9 3 3 3
(5) 3 5 9 7 7 7 ← (9) 5 9 7 7 7
(7) 5 9 3 5 7 7 ← (13) 9 3 5 7 7
(11) 9 3 6 6 5 3 ← (14) 12 9 3 3 3
(17) 3 3 6 6 5 3 ← (20) 2 3 5 7 7
(20) 2 3 5 7 3 3 ← (26) 4 5 3 3 3
(23) 2 4 5 3 3 3 ← (24) 4 7 3 3 3
(27) 1 2 4 3 3 3 ← (29) 2 4 3 3 3
(29) 3 4 4 1 1 1 ← (30) 5 1 2 3 3

**(43, 8)**

(1) 10 9 3 6 6 5 3 ← (2) 12 12 9 3 3 3
(2) 11 12 4 5 3 3 3 ← (4) 17 3 6 6 5 3
(4) 3 5 9 3 5 7 7 ← (10) 5 7 3 5 7 7
(5) 6 9 3 6 6 5 3 ← (6) 8 12 9 3 3 3
(6) 3 5 7 3 5 7 7 ← (8) 5 9 3 5 7 7
(10) 5 5 3 6 6 5 3 ← (12) 9 3 6 6 5 3
(13) 10 2 4 5 3 3 3 ← (14) 12 4 5 3 3 3
(17) 6 2 4 5 3 3 3 ← (24) 2 4 5 3 3 3
(26) 1 1 2 4 3 3 3 ← (28) 1 2 4 3 3 3
(27) 2 3 4 4 1 1 1 ← (30) 3 4 4 1 1 1

**(43, 9)**

(1) 9 5 5 3 6 6 5 3 ← (2) 10 9 3 6 6 5 3
(3) 5 6 5 2 3 5 7 7 ← (9) 6 5 2 3 5 7 7
(5) 3 6 5 2 3 5 7 7 ← (6) 6 9 3 6 6 5 3
(11) 3 6 2 3 5 7 3 3 ← (12) 6 3 3 6 6 5 3
(13) 7 13 1 * 1 ← (14) 10 2 4 5 3 3 3
(15) 6 ..4 5 3 3 3 ← (21) 13 1 * 1
(17) 4 ..4 5 3 3 3 ← (18) 6 2 4 5 3 3 3
(26) 1 2 3 4 4 1 1 1 ← (28) 2 3 4 4 1 1 1

**(43, 10)**

(1) 4 5 5 5 3 6 6 5 3 ← (4) 5 6 5 2 3 5 7 7
(5) 2 3 5 5 3 6 6 5 3 ← (6) 3 6 5 2 3 5 7 7
(9) 3 5 6 2 4 5 3 3 3 ← (10) 5 6 2 3 5 7 3 3
(11) ...3 3 6 6 5 3 ← (12) 3 6 2 3 5 7 3 3
(13) 5 8 1 1 2 4 3 3 3 ← (14) 7 13 1 * 1
(14) ....3 5 7 3 3 ← (19) 8 1 1 2 4 3 3 3
(15) 4 ...4 5 3 3 3 ← (16) 6 ..4 5 3 3 3
(17) ....4 5 3 3 3 ← (18) 4 ..4 5 3 3 3
(21) 5 1 2 3 4 4 1 1 1 ← (22) 6 2 3 4 4 1 1 1

**(43, 11)**

(3) 1 2 4 7 3 3 6 6 5 3 ← (5) 2 4 7 3 3 6 6 5 3
(6) ..4 3 3 3 6 6 5 3
(9) ....3 3 6 6 5 3 ← (10) 3 5 6 2 4 5 3 3 3
(12) .....3 5 7 3 3 ← (18) ....4 5 3 3 3
(13) 4 ....4 5 3 3 3 ← (14) 5 8 1 1 2 4 3 3 3
(15) .....4 5 3 3 3 ← (16) 4 ...4 5 3 3 3
(19) 1 * 2 4 3 3 3 ← (21) * 2 4 3 3 3
(21) 3 4 4 1 1 * 1 ← (22) 5 1 2 3 4 4 1 1 1

(43, 12)

(2) 1 1 2 4 7 3 3 6 6 5 3 ← (4) 1 2 4 7 3 3 6 6 5 3
(3) 6 ....3 3 6 6 5 3
(9) 6 .....4 5 3 3 3 ← (16) .....4 5 3 3 3
(13) ......4 5 3 3 3 ← (14) 4 ....4 5 3 3 3
(18) 1 1 * 2 4 3 3 3 ← (20) 1 * 2 4 3 3 3
(19) 2 3 4 4 1 1 * 1 ← (22) 3 4 4 1 1 * 1

(43, 13)

(1) 5 6 .....3 5 7 3 3
(3) 3 6 .....3 5 7 3 3 ← (4) 6 ....3 3 6 6 5 3
(7) 6 ......4 5 3 3 3 ← (14) ......4 5 3 3 3
(9) 4 ......4 5 3 3 3 ← (10) 6 .....4 5 3 3 3
(18) 1 2 3 4 4 1 1 * 1 ← (20) 2 3 4 4 1 1 * 1

(43, 14)

(1) 3 5 6 .....4 5 3 3 3 ← (2) 5 6 .....3 5 7 3 3
(3) .......3 3 6 6 5 3 ← (4) 3 6 .....3 5 7 3 3
(6) ........3 5 7 3 3 ← (11) 8 1 1 * 2 4 3 3 3
(7) 4 .......4 5 3 3 3 ← (8) 6 ......4 5 3 3 3
(9) ........4 5 3 3 3 ← (10) 4 ......4 5 3 3 3
(13) 5 1 2 3 4 4 1 1 * 1 ← (14) 6 2 3 4 4 1 1 * 1

(43, 15)

(1) ........3 3 6 6 5 3 ← (2) 3 5 6 .....4 5 3 3 3
(4) .........3 5 7 3 3 ← (10) ........4 5 3 3 3
(7) .........4 5 3 3 3 ← (8) 4 .......4 5 3 3 3
(11) 1 * * 2 4 3 3 3 ← (13) * * 2 4 3 3 3
(13) 3 4 4 1 1 * * 1 ← (14) 5 1 2 3 4 4 1 1 * 1

(43, 16)

(1) 6 .........4 5 3 3 3 ← (8) .........4 5 3 3 3
(10) 1 1 * * 2 4 3 3 3 ← (12) 1 * * 2 4 3 3 3
(11) 2 3 4 4 1 1 * * 1 ← (14) 3 4 4 1 1 * * 1

(43, 17)

(1) 4 ..........4 5 3 3 3 ← (2) 6 .........4 5 3 3 3
(10) 1 2 3 4 4 1 1 * * 1 ← (12) 2 3 4 4 1 1 * * 1

(43, 18)

(1) ...........4 5 3 3 3 ← (2) 4 ..........4 5 3 3 3
(5) 5 1 2 3 4 4 1 1 * * 1 ← (6) 6 2 3 4 4 1 1 * * 1

(43, 19)

(3) 1 * * * 2 4 3 3 3 ← (5) * * * 2 4 3 3 3
(5) 3 4 4 1 1 * * * 1 ← (6) 5 1 2 3 4 4 1 1 * * 1

(43, 20)

(2) 1 1 * * * 2 4 3 3 3 ← (4) 1 * * * 2 4 3 3 3
(3) 2 3 4 4 1 1 * * * 1 ← (6) 3 4 4 1 1 * * * 1

(43, 21)

(2) 1 2 3 4 4 1 1 * * * 1 ← (4) 2 3 4 4 1 1 * * * 1
(4) 4 1 1 * * * * 1

(43, 22)

(2) * * * * * 1

(43, 23)

(1) 1 * * * * * 1

(44, 2)

(43) 1 ← (45)

(44, 3)

(13) 30 1 ← (14) 31
(29) 14 1 ← (30) 15
(37) 6 1 ← (38) 7
(41) 2 1 ← (42) 3
(42) 1 1 ← (44) 1

(44, 4)

(3) 11 15 15
(7) 23 7 7 ← (11) 27 7
(11) 27 3 3 ← (13) 29 3
(13) 13 11 7
(13) 29 1 1 ← (14) 30 1
(23) 7 7 7 ← (27) 11 7
(27) 11 3 3 ← (29) 13 3
(29) 13 1 1 ← (30) 14 1
(35) 3 3 3 ← (37) 5 3
(37) 5 1 1 ← (38) 6 1
(41) 1 1 1 ← (42) 2 1

(44, 5)

(3) 10 13 11 7 ← (4) 11 15 15
(4) 19 7 7 7 ← (8) 23 7 7
(10) 25 3 3 3 ← (12) 27 3 3
(11) 14 5 7 7
(13) 28 1 1 1 ← (14) 29 1 1
(22) 3 5 7 7 ← (26) 5 7 7
(26) 9 3 3 3 ← (28) 11 3 3
(29) 12 1 1 1 ← (30) 13 1 1
(35) 1 2 3 3 ← (37) 2 3 3
(37) 4 1 1 1 ← (38) 5 1 1

(44, 6)

(3) 9 11 7 7 7 ← (4) 10 13 11 7
(5) 7 13 5 7 7
(7) 14 4 5 7 7
(11) 11 3 5 7 7 ← (12) 14 5 7 7
(13) 24 4 1 1 1 ← (14) 28 1 1 1
(21) 3 6 6 5 3 ← (27) 5 7 3 3
(23) 3 5 7 3 3 ← (25) 6 6 5 3
(27) 3 6 2 3 3 ← (28) 8 3 3 3
(29) 8 4 1 1 1 ← (30) 12 1 1 1
(33) 4 4 1 1 1 ← (36) 1 2 3 3
(35) * 1 ← (38) 4 1 1 1

(44, 7)

(4) 5 5 9 7 7 7
(6) 3 5 9 7 7 7 ← (10) 5 9 7 7 7
(7) 13 2 3 5 7 7 ← (8) 14 4 5 7 7
(13) 22 * 1 ← (14) 24 4 1 1 1
(18) 3 3 6 6 5 3 ← (24) 3 5 7 3 3
(21) 2 3 5 7 3 3 ← (22) 3 6 6 5 3
(27) ..4 3 3 3 ← (28) 3 6 2 3 3
(29) 6 * 1 ← (30) 8 4 1 1 1
(33) 2 * 1 ← (34) 4 4 1 1 1
(34) 1 * 1 ← (36) * 1

(44, 8)

(3) 11 12 4 5 3 3 3 ← (5) 17 3 6 6 5 3
(5) 3 5 9 3 5 7 7 ← (11) 5 7 3 5 7 7
(7) 3 5 7 3 5 7 7 ← (9) 5 9 3 5 7 7
(7) 7 12 4 5 3 3 3 ← (8) 13 2 3 5 7 7
(11) 5 5 3 6 6 5 3 ← (13) 9 3 6 6 5 3
(13) 21 1 * 1 ← (14) 22 * 1
(15) 6 2 3 5 7 3 3 ← (22) 2 3 5 7 3 3
(27) 1 1 2 4 3 3 3 ← (28) ..4 3 3 3
(29) 5 1 * 1 ← (30) 6 * 1
(33) 1 1 * 1 ← (34) 2 * 1

(44, 9)

(2) 9 5 5 3 6 6 5 3 ← (4) 11 12 4 5 3 3 3
(7) 4 7 3 3 6 6 5 3 ← (12) 5 5 3 6 6 5 3
(7) 5 6 3 3 6 6 5 3 ← (8) 7 12 4 5 3 3 3
(9) 3 6 3 3 6 6 5 3 ← (10) 6 5 2 3 5 7 7
(13) 5 6 2 4 5 3 3 3 ← (19) 6 2 4 5 3 3 3
(13) 20 1 1 * 1 ← (14) 21 1 * 1
(15) 3 6 2 4 5 3 3 3 ← (16) 6 2 3 5 7 3 3
(21) 12 1 1 * 1 ← (22) 13 1 * 1
(27) 1 2 3 4 4 1 1 1 ← (29) 2 3 4 4 1 1 1
(29) 4 1 1 * 1 ← (30) 5 1 * 1

(44, 10)

(2) 4 5 5 5 3 6 6 5 3
(6) 2 3 5 5 3 6 6 5 3 ← (8) 4 7 3 3 6 6 5 3
(7) 3 5 6 2 3 5 7 3 3 ← (8) 5 6 3 3 6 6 5 3
(9) 2 4 3 3 3 6 6 5 3 ← (10) 3 6 3 3 6 6 5 3
(12) ...3 3 6 6 5 3 ← (17) 6 ..4 5 3 3 3
(13) 3 6 ..4 5 3 3 3 ← (14) 5 6 2 4 5 3 3 3
(13) 16 4 1 1 * 1 ← (14) 20 1 1 * 1
(15) ....3 5 7 3 3 ← (16) 3 6 2 4 5 3 3 3
(19) 3 6 2 3 4 4 1 1 1 ← (20) 8 1 1 2 4 3 3 3
(21) 8 4 1 1 * 1 ← (22) 12 1 1 * 1
(25) 4 4 1 1 * 1 ← (28) 1 2 3 4 4 1 1 1
(27) * * 1 ← (30) 4 1 1 * 1

(44, 11)

(3) ..4 7 3 3 6 6 5 3 ← (6) 2 4 7 3 3 6 6 5 3
(7) ..4 3 3 3 6 6 5 3 ← (8) 3 5 6 2 3 5 7 3 3
(10) ....3 3 6 6 5 3 ← (16) ....3 5 7 3 3
(13) .....3 5 7 3 3 ← (14) 3 6 ..4 5 3 3 3
(13) 14 * * 1 ← (14) 16 4 1 1 * 1
(19) 2 * 2 4 3 3 3 ← (20) 3 6 2 3 4 4 1 1 1
(21) 6 * * 1 ← (22) 8 4 1 1 * 1
(25) 2 * * 1 ← (26) 4 4 1 1 * 1
(26) 1 * * 1 ← (28) * * 1

(44, 12)

(1) 6 ..4 3 3 3 6 6 5 3 ← (5) 1 2 4 7 3 3 6 6 5 3
(3) 1 1 2 4 7 3 3 6 6 5 3 ← (4) ..4 7 3 3 6 6 5 3
(7) 6 .....3 5 7 3 3 ← (14) .....3 5 7 3 3
(13) 13 1 * * 1 ← (14) 14 * * 1
(19) 1 1 * 2 4 3 3 3 ← (20) 2 * 2 4 3 3 3
(21) 5 1 * * 1 ← (22) 6 * * 1
(25) 1 1 * * 1 ← (26) 2 * * 1

(44, 13)

(1) 3 6 ....3 3 6 6 5 3 ← (2) 6 ..4 3 3 3 6 6 5 3
(5) 5 6 .....4 5 3 3 3 ← (11) 6 .....4 5 3 3 3
(7) 3 6 .....4 5 3 3 3 ← (8) 6 .....3 5 7 3 3
(13) 12 1 1 * * 1 ← (14) 13 1 * * 1
(19) 1 2 3 4 4 1 1 * 1 ← (21) 2 3 4 4 1 1 * 1
(21) 4 1 1 * * 1 ← (22) 5 1 * * 1

(44, 14)

(1) .....4 3 3 3 6 6 5 3 ← (2) 3 6 ....3 3 6 6 5 3
(4) .......3 3 6 6 5 3 ← (9) 6 .....4 5 3 3 3
(5) 3 6 .....4 5 3 3 3 ← (6) 5 6 .....4 5 3 3 3
(7) ........3 5 7 3 3 ← (8) 3 6 .....4 5 3 3 3
(11) 3 6 2 3 4 4 1 1 * 1 ← (12) 8 1 1 * 2 4 3 3 3
(13) 8 4 1 1 * * 1 ← (14) 12 1 1 * * 1
(17) 4 4 1 1 * * 1 ← (20) 1 2 3 4 4 1 1 * 1
(19) * * * 1 ← (22) 4 1 1 * * 1

(44, 15)

(2) ........3 3 6 6 5 3 ← (8) ........3 5 7 3 3
(5) .........3 5 7 3 3 ← (6) 3 6 .....4 5 3 3 3
(11) 2 * * 2 4 3 3 3 ← (12) 3 6 2 3 4 4 1 1 * 1
(13) 6 * * * 1 ← (14) 8 4 1 1 * * 1
(17) 2 * * * 1 ← (18) 4 4 1 1 * * 1
(18) 1 * * * 1 ← (20) * * * 1

(44, 16)

(5) 13 1 * * * 1
(11) 1 1 * * 2 4 3 3 3 ← (12) 2 * * 2 4 3 3 3
(13) 5 1 * * * 1 ← (14) 6 * * * 1
(17) 1 1 * * * 1 ← (18) 2 * * * 1

(44, 17)

(3) 8 1 1 * * 2 4 3 3 3
(5) 12 1 1 * * * 1 ← (6) 13 1 * * * 1
(11) 1 2 3 4 4 1 1 * * 1 ← (13) 2 3 4 4 1 1 * * 1
(13) 4 1 1 * * * 1 ← (14) 5 1 * * * 1

(44, 18)

(2) .....4 5 3 3 3
(3) 3 6 2 3 4 4 1 1 * * 1 ← (4) 8 1 1 * * 2 4 3 3 3
(5) 8 4 1 1 * * * 1 ← (6) 12 1 1 * * * 1
(9) 4 4 1 1 * * * 1 ← (12) 1 2 3 4 4 1 1 * * 1
(11) * * * * 1 ← (14) 4 1 1 * * * 1

(44, 19)

(3) 2 * * * 2 4 3 3 3 ← (4) 3 6 2 3 4 4 1 1 * * 1
(5) 6 * * * * 1 ← (6) 8 4 1 1 * * * 1
(9) 2 * * * * 1 ← (10) 4 4 1 1 * * * 1
(10) 1 * * * * 1 ← (12) * * * * 1

(44, 20)

(3) 1 1 * * * 2 4 3 3 3 ← (4) 2 * * * 2 4 3 3 3
(5) 5 1 * * * * 1 ← (6) 6 * * * * 1
(9) 1 1 * * * * 1 ← (10) 2 * * * * 1

(44, 21)

(3) 1 2 3 4 4 1 1 * * * 1 ← (5) 2 3 4 4 1 1 * * * 1
(5) 4 1 1 * * * * 1 ← (6) 5 1 * * * * 1

(44, 22)

(1) 4 4 1 1 * * * * 1 ← (4) 1 2 3 4 4 1 1 * * * 1
(3) * * * * * 1 ← (6) 4 1 1 * * * * 1

(44, 23)

(1) 2 * * * * * 1 ← (2) 4 4 1 1 * * * * 1
(2) 1 * * * * * 1 ← (4) * * * * * 1

(44, 24)

(1) 1 1 * * * * * 1 ← (2) 2 * * * * * 1

(45, 3)

(7) 23 15
(15) 15 15
(31) 7 7 ← (39) 7
(39) 3 3 ← (43) 3
(43) 1 1 ← (45) 1

(45, 4)

(6) 21 11 7
(7) 22 13 3 ← (8) 23 15
(11) 26 5 3 ← (12) 27 7
(14) 13 11 7
(15) 14 13 3 ← (16) 15 15
(24) 7 7 7 ← (38) 5 3
(27) 10 5 3 ← (28) 11 7
(31) 6 5 3 ← (32) 7 7
(36) 3 3 3 ← (40) 3 3
(42) 1 1 1 ← (44) 1 1

(45, 5)

(1) 13 13 11 7
(5) 11 15 7 7
(5) 19 7 7 7 ← (9) 23 7 7
(6) 20 5 7 7
(7) 17 7 7 7
(7) 21 11 3 3 ← (8) 22 13 3
(11) 25 3 3 3 ← (12) 26 5 3
(13) 13 5 7 7
(15) 13 11 3 3 ← (16) 14 13 3
(22) 4 5 7 7 ← (32) 6 5 3
(23) 3 5 7 7 ← (27) 5 7 7
(27) 9 3 3 3 ← (28) 10 5 3
(31) 6 2 3 3 ← (38) 2 3 3

(45, 6)

(1) 11 14 5 7 7 ← (2) 13 13 11 7
(4) 9 11 7 7 7
(5) 7 14 5 7 7 ← (6) 11 15 7 7
(5) 18 3 5 7 7
(6) 7 13 5 7 7 ← (8) 17 7 7 7
(7) 20 9 3 3 3 ← (8) 21 11 3 3
(12) 11 3 5 7 7
(14) 9 3 5 7 7 ← (24) 3 5 7 7
(15) 12 9 3 3 3 ← (16) 13 11 3 3
(21) 2 3 5 7 7 ← (29) 8 3 3 3
(25) 4 7 3 3 3 ← (26) 6 6 5 3
(27) 4 5 3 3 3 ← (28) 5 7 3 3
(30) 2 4 3 3 3 ← (37) 1 2 3 3
(31) 5 1 2 3 3 ← (32) 6 2 3 3

(45, 7)

(1) 7 14 4 5 7 7 ← (2) 11 14 5 7 7
(3) 12 12 9 3 3 3
(5) 5 5 9 7 7 7 ← (6) 7 14 5 7 7
(7) 3 5 9 7 7 7 ← (9) 14 4 5 7 7
(7) 8 12 9 3 3 3
(15) 12 4 5 3 3 3 ← (28) 4 5 3 3 3
(19) 3 3 6 6 5 3 ← (25) 3 5 7 3 3
(25) 2 4 5 3 3 3 ← (26) 4 7 3 3 3
(29) 1 2 4 3 3 3 ← (35) 4 4 1 1 1
(31) 3 4 4 1 1 1 ← (32) 5 1 2 3 3
(35) 1 * 1 ← (37) * 1

(45, 8)

(3) 10 9 3 6 6 5 3 ← (4) 12 12 9 3 3 3
(6) 3 5 9 3 5 7 7 ← (10) 5 9 3 5 7 7
(7) 6 9 3 6 6 5 3 ← (8) 8 12 9 3 3 3
(8) 3 5 7 3 5 7 7
(13) 6 3 3 6 6 5 3 ← (26) 2 4 5 3 3 3
(15) 10 2 4 5 3 3 3 ← (16) 12 4 5 3 3 3
(28) 1 1 2 4 3 3 3 ← (32) 3 4 4 1 1 1
(34) 1 1 * 1 ← (36) 1 * 1

(45, 9)

(3) 9 5 5 3 6 6 5 3 ← (4) 10 9 3 6 6 5 3
(5) 5 6 5 2 3 5 7 7
(7) 3 6 5 2 3 5 7 7 ← (8) 6 9 3 6 6 5 3
(11) 5 6 2 3 5 7 3 3 ← (23) 13 1 * 1
(13) 3 6 2 3 5 7 3 3 ← (14) 6 3 3 6 6 5 3
(15) 7 13 1 * 1 ← (16) 10 2 4 5 3 3 3
(19) 4 ..4 5 3 3 3 ← (20) 6 2 4 5 3 3 3
(23) 6 2 3 4 4 1 1 1 ← (30) 2 3 4 4 1 1 1

(45, 10)

(3) 4 5 5 5 3 6 6 5 3 ← (6) 5 6 5 2 3 5 7 7
(7) 2 3 5 5 3 6 6 5 3 ← (8) 3 6 5 2 3 5 7 7
(10) 2 4 3 3 3 6 6 5 3 ← (21) 8 1 1 2 4 3 3 3
(11) 3 5 6 2 4 5 3 3 3 ← (12) 5 6 2 3 5 7 3 3
(13) ...3 3 6 6 5 3 ← (14) 3 6 2 3 5 7 3 3
(15) 5 8 1 1 2 4 3 3 3 ← (16) 7 13 1 * 1
(17) 4 ...4 5 3 3 3 ← (18) 6 ..4 5 3 3 3
(19) ....4 5 3 3 3 ← (20) 4 ..4 5 3 3 3
(22) * 2 4 3 3 3 ← (29) 1 2 3 4 4 1 1 1
(23) 5 1 2 3 4 4 1 1 1 ← (24) 6 2 3 4 4 1 1 1

(45, 11)

(1) 2 4 5 5 5 3 6 6 5 3 ← (4) 4 5 5 5 3 6 6 5 3
(8) ..4 3 3 3 6 6 5 3 ← (20) ....4 5 3 3 3
(11) ....3 3 6 6 5 3 ← (12) 3 5 6 2 4 5 3 3 3
(15) 4 ....4 5 3 3 3 ← (16) 5 8 1 1 2 4 3 3 3
(17) .....4 5 3 3 3 ← (18) 4 ...4 5 3 3 3
(21) 1 * 2 4 3 3 3 ← (27) 4 4 1 1 * 1
(23) 3 4 4 1 1 * 1 ← (24) 5 1 2 3 4 4 1 1 1
(27) 1 * * 1 ← (29) * * 1

(45, 12)

(4) 1 1 2 4 7 3 3 6 6 5 3
(5) 6 ....3 3 6 6 5 3 ← (18) .....4 5 3 3 3
(15) ......4 5 3 3 3 ← (16) 4 ....4 5 3 3 3
(20) 1 1 * 2 4 3 3 3 ← (24) 3 4 4 1 1 * 1
(26) 1 1 * * 1 ← (28) 1 * * 1

(45, 13)

(3) 5 6 .....3 5 7 3 3 ← (16) ......4 5 3 3 3
(5) 3 6 .....3 5 7 3 3 ← (6) 6 ....3 3 6 6 5 3
(11) 4 ......4 5 3 3 3 ← (12) 6 .....4 5 3 3 3
(15) 6 2 3 4 4 1 1 * 1 ← (22) 2 3 4 4 1 1 * 1

(45, 14)

(2) .....4 3 3 3 6 6 5 3 ← (13) 8 1 1 * 2 4 3 3 3
(3) 3 5 6 .....4 5 3 3 3 ← (4) 5 6 .....3 5 7 3 3
(5) .......3 3 6 6 5 3 ← (6) 3 6 .....3 5 7 3 3
(9) 4 .......4 5 3 3 3 ← (10) 6 ......4 5 3 3 3
(11) ........4 5 3 3 3 ← (12) 4 ......4 5 3 3 3
(14) * * 2 4 3 3 3 ← (21) 1 2 3 4 4 1 1 * 1
(15) 5 1 2 3 4 4 1 1 * 1 ← (16) 6 2 3 4 4 1 1 * 1

(45, 15)

(3) ........3 3 6 6 5 3 ← (4) 3 5 6 .....4 5 3 3 3
(6) .........3 5 7 3 3
(9) .........4 5 3 3 3 ← (10) 4 .......4 5 3 3 3
(13) 1 * * 2 4 3 3 3 ← (19) 4 4 1 1 * * 1
(15) 3 4 4 1 1 * * 1 ← (16) 5 1 2 3 4 4 1 1 * 1
(19) 1 * * * 1 ← (21) * * * 1

(45, 16)

(3) 6 .........4 5 3 3 3
(12) 1 1 * * 2 4 3 3 3 ← (16) 3 4 4 1 1 * * 1
(18) 1 1 * * * 1 ← (20) 1 * * * 1

(45, 17)

(1) 6 ..........4 5 3 3 3
(3) 4 ..........4 5 3 3 3 ← (4) 6 .........4 5 3 3 3
(7) 6 2 3 4 4 1 1 * * 1 ← (14) 2 3 4 4 1 1 * * 1

(45, 18)

(1) 4 ...........4 5 3 3 3 ← (2) 6 ..........4 5 3 3 3
(3) ............4 5 3 3 3 ← (4) 4 ..........4 5 3 3 3
(6) * * * 2 4 3 3 3 ← (13) 1 2 3 4 4 1 1 * * 1
(7) 5 1 2 3 4 4 1 1 * * 1 ← (8) 6 2 3 4 4 1 1 * * 1

(45, 19)

(1) .....4 5 3 3 3 ← (2) 4 .....4 5 3 3 3
(5) 1 * * * 2 4 3 3 3 ← (11) 4 4 1 1 * * * 1
(7) 3 4 4 1 1 * * * 1 ← (8) 5 1 2 3 4 4 1 1 * * 1
(11) 1 * * * * 1 ← (13) * * * * 1

(45, 20)

(4) 1 1 * * * 2 4 3 3 3 ← (8) 3 4 4 1 1 * * * 1
(10) 1 1 * * * * 1 ← (12) 1 * * * * 1

(45, 23)

(3) 1 * * * * * 1 ← (5) * * * * * 1

(45, 24)

(2) 1 1 * * * * * 1 ← (4) 1 * * * * * 1

(46, 2)

(15) 31
(31) 15 ← (47)

(46, 3)

(14) 29 3
(15) 30 1 ← (16) 31
(30) 13 3 ← (46) 1
(31) 14 1 ← (32) 15
(39) 6 1 ← (40) 7
(43) 2 1 ← (44) 3

(46, 4)

(1) 15 15 15
(5) 11 15 15
(7) 21 11 7 ← (9) 23 15
(13) 27 3 3
(15) 13 11 7 ← (17) 15 15
(15) 29 1 1 ← (16) 30 1
(25) 7 7 7 ← (33) 7 7
(29) 11 3 3 ← (45) 1 1
(31) 13 1 1 ← (32) 14 1
(37) 3 3 3 ← (41) 3 3
(39) 5 1 1 ← (40) 6 1
(43) 1 1 1 ← (44) 2 1

(46, 5)

(1) 14 13 11 7 ← (2) 15 15 15
(5) 10 13 11 7 ← (6) 11 15 15
(6) 19 7 7 7 ← (8) 21 11 7
(7) 20 5 7 7 ← (10) 23 7 7
(12) 25 3 3 3
(13) 14 5 7 7 ← (16) 13 11 7
(14) 13 5 7 7 ← (28) 5 7 7
(15) 28 1 1 1 ← (16) 29 1 1
(23) 4 5 7 7 ← (26) 7 7 7
(28) 9 3 3 3 ← (44) 1 1 1
(31) 12 1 1 1 ← (32) 13 1 1
(39) 4 1 1 1 ← (40) 5 1 1

(46, 6)

(1) 9 15 7 7 7
(1) 13 13 5 7 7
(5) 9 11 7 7 7 ← (6) 10 13 11 7
(6) 18 3 5 7 7 ← (8) 20 5 7 7
(7) 7 13 5 7 7 ← (9) 17 7 7 7
(8) 20 9 3 3 3
(11) 5 9 7 7 7
(13) 11 3 5 7 7 ← (14) 14 5 7 7
(15) 9 3 5 7 7 ← (25) 3 5 7 7
(15) 24 4 1 1 1 ← (16) 28 1 1 1
(16) 12 9 3 3 3 ← (40) 4 1 1 1
(22) 2 3 5 7 7 ← (24) 4 5 7 7
(23) 3 6 6 5 3 ← (27) 6 6 5 3
(29) 3 6 2 3 3 ← (30) 8 3 3 3
(31) 2 4 3 3 3 ← (33) 6 2 3 3
(31) 8 4 1 1 1 ← (32) 12 1 1 1

(46, 7)

(1) 12 11 3 5 7 7 ← (2) 13 13 5 7 7
(2) 7 14 4 5 7 7
(6) 5 5 9 7 7 7 ← (8) 7 13 5 7 7
(6) 17 3 6 6 5 3
(8) 3 5 9 7 7 7
(9) 13 2 3 5 7 7 ← (10) 14 4 5 7 7
(12) 5 7 3 5 7 7 ← (16) 9 3 5 7 7
(14) 9 3 6 6 5 3 ← (38) * 1
(15) 22 * 1 ← (16) 24 4 1 1 1
(20) 3 3 6 6 5 3 ← (26) 3 5 7 3 3
(23) 2 3 5 7 3 3 ← (24) 3 6 6 5 3
(29) ..4 3 3 3 ← (30) 3 6 2 3 3
(30) 1 2 4 3 3 3 ← (32) 2 4 3 3 3
(31) 6 * 1 ← (32) 8 4 1 1 1
(35) 2 * 1 ← (36) 4 4 1 1 1

(46, 8)

(1) 7 8 12 9 3 3 3 ← (2) 12 11 3 5 7 7
(5) 11 12 4 5 3 3 3
(7) 3 5 9 3 5 7 7 ← (9) 8 12 9 3 3 3
(9) 3 5 7 3 5 7 7
(9) 7 12 4 5 3 3 3 ← (10) 13 2 3 5 7 7
(11) 6 5 2 3 5 7 7 ← (37) 1 * 1
(13) 5 5 3 6 6 5 3 ← (17) 12 4 5 3 3 3
(15) 21 1 * 1 ← (16) 22 * 1
(17) 6 2 3 5 7 3 3 ← (24) 2 3 5 7 3 3
(29) 1 1 2 4 3 3 3 ← (30) ..4 3 3 3
(31) 5 1 * 1 ← (32) 6 * 1
(35) 1 1 * 1 ← (36) 2 * 1

(46, 9)

(4) 9 5 5 3 6 6 5 3
(9) 4 7 3 3 6 6 5 3 ← (36) 1 1 * 1
(9) 5 6 3 3 6 6 5 3 ← (10) 7 12 4 5 3 3 3
(11) 3 6 3 3 6 6 5 3 ← (12) 6 5 2 3 5 7 7
(15) 5 6 2 4 5 3 3 3 ← (21) 6 2 4 5 3 3 3
(15) 20 1 1 * 1 ← (16) 21 1 * 1
(17) 3 6 2 4 5 3 3 3 ← (18) 6 2 3 5 7 3 3
(23) 12 1 1 * 1 ← (24) 13 1 * 1
(31) 4 1 1 * 1 ← (32) 5 1 * 1

(46, 10)

(1) 5 5 6 5 2 3 5 7 7
(7) 2 4 7 3 3 6 6 5 3 ← (10) 4 7 3 3 6 6 5 3
(8) 2 3 5 5 3 6 6 5 3 ← (32) 4 1 1 * 1
(9) 3 5 6 2 3 5 7 3 3 ← (10) 5 6 3 3 6 6 5 3
(11) 2 4 3 3 3 6 6 5 3 ← (12) 3 6 3 3 6 6 5 3
(14) ...3 3 6 6 5 3 ← (19) 6 ..4 5 3 3 3
(15) 3 6 ..4 5 3 3 3 ← (16) 5 6 2 4 5 3 3 3
(15) 16 4 1 1 * 1 ← (16) 20 1 1 * 1
(17) ....3 5 7 3 3 ← (18) 3 6 2 4 5 3 3 3
(21) 3 6 2 3 4 4 1 1 1 ← (22) 8 1 1 2 4 3 3 3
(23) * 2 4 3 3 3 ← (25) 6 2 3 4 4 1 1 1
(23) 8 4 1 1 * 1 ← (24) 12 1 1 * 1

(46, 11)

(2) 2 4 5 5 5 3 6 6 5 3
(5) ..4 7 3 3 6 6 5 3 ← (30) * * 1
(6) 1 2 4 7 3 3 6 6 5 3 ← (8) 2 4 7 3 3 6 6 5 3
(9) ..4 3 3 3 6 6 5 3 ← (10) 3 5 6 2 3 5 7 3 3
(12) ....3 3 6 6 5 3 ← (18) ....3 5 7 3 3
(15) .....3 5 7 3 3 ← (16) 3 6 ..4 5 3 3 3
(15) 14 * * 1 ← (16) 16 4 1 1 * 1
(21) 2 * 2 4 3 3 3 ← (22) 3 6 2 3 4 4 1 1 1
(22) 1 * 2 4 3 3 3 ← (24) * 2 4 3 3 3
(23) 6 * * 1 ← (24) 8 4 1 1 * 1
(27) 2 * * 1 ← (28) 4 4 1 1 * 1

(46, 12)

(3) 6 ..4 3 3 3 6 6 5 3 ← (29) 1 * * 1
(5) 1 1 2 4 7 3 3 6 6 5 3 ← (6) ..4 7 3 3 6 6 5 3
(9) 6 .....3 5 7 3 3 ← (16) .....3 5 7 3 3
(15) 13 1 * * 1 ← (16) 14 * * 1
(21) 1 1 * 2 4 3 3 3 ← (22) 2 * 2 4 3 3 3
(23) 5 1 * * 1 ← (24) 6 * * 1
(27) 1 1 * * 1 ← (28) 2 * * 1

(46, 13)

(1) 4 1 1 2 4 7 3 3 6 6 5 3 ← (28) 1 1 * * 1
(3) 3 6 ....3 3 6 6 5 3 ← (4) 6 ..4 3 3 3 6 6 5 3
(7) 5 6 .....4 5 3 3 3 ← (13) 6 .....4 5 3 3 3
(9) 3 6 .....4 5 3 3 3 ← (10) 6 .....3 5 7 3 3
(15) 12 1 1 * * 1 ← (16) 13 1 * * 1
(23) 4 1 1 * * 1 ← (24) 5 1 * * 1

(46, 14)

(3) .....4 3 3 3 6 6 5 3 ← (4) 3 6 ....3 3 6 6 5 3
(6) .....3 3 6 6 5 3 ← (11) 6 .....4 5 3 3 3
(7) 3 6 .....4 5 3 3 3 ← (8) 5 6 .....4 5 3 3 3
(9) .....3 5 7 3 3 ← (10) 3 6 .....4 5 3 3 3
(12) .....4 5 3 3 3
(13) 3 6 2 3 4 4 1 1 * 1 ← (14) 8 1 1 * 2 4 3 3 3
(15) * * 2 4 3 3 3 ← (17) 6 2 3 4 4 1 1 * 1
(15) 8 4 1 1 * * 1 ← (16) 12 1 1 * * 1

(46, 15)

(4) .....3 3 6 6 5 3 ← (10) .....3 5 7 3 3
(7) .....3 5 7 3 3 ← (8) 3 6 .....4 5 3 3 3
(10) .....4 5 3 3 3
(13) 2 * * 2 4 3 3 3 ← (14) 3 6 2 3 4 4 1 1 * 1
(14) 1 * * 2 4 3 3 3 ← (16) * * 2 4 3 3 3
(15) 6 * * * 1 ← (16) 8 4 1 1 * * 1
(19) 2 * * * 1 ← (20) 4 4 1 1 * * 1

(46, 16)

(1) 6 .....3 5 7 3 3 ← (8) .....3 5 7 3 3
(7) 13 1 * * * 1
(13) 1 1 * * 2 4 3 3 3 ← (14) 2 * * 2 4 3 3 3
(15) 5 1 * * * 1 ← (16) 6 * * * 1
(19) 1 1 * * * 1 ← (20) 2 * * * 1

(46, 17)

(1) 3 6 .....4 5 3 3 3 ← (2) 6 .....3 5 7 3 3
(5) 8 1 1 * * 2 4 3 3 3
(7) 12 1 1 * * * 1 ← (8) 13 1 * * * 1
(15) 4 1 1 * * * 1 ← (16) 5 1 * * * 1

(46, 18)

(1) .....3 5 7 3 3 ← (2) 3 6 .....4 5 3 3 3
(4) .....4 5 3 3 3
(5) 3 6 2 3 4 4 1 1 * * 1 ← (6) 8 1 1 * * 2 4 3 3 3
(7) * * * 2 4 3 3 3 ← (9) 6 2 3 4 4 1 1 * * 1
(7) 8 4 1 1 * * * 1 ← (8) 12 1 1 * * * 1

(46, 19)

(2) .....4 5 3 3 3
(5) 2 * * * 2 4 3 3 3 ← (6) 3 6 2 3 4 4 1 1 * * 1
(6) 1 * * * 2 4 3 3 3 ← (8) * * * 2 4 3 3 3
(7) 6 * * * * 1 ← (8) 8 4 1 1 * * * 1
(11) 2 * * * * 1 ← (12) 4 4 1 1 * * * 1

(46, 20)

(5) 1 1 * * * 2 4 3 3 3 ← (6) 2 * * * 2 4 3 3 3
(6) 2 3 4 4 1 1 * * * 1
(7) 5 1 * * * * 1 ← (8) 6 * * * * 1
(11) 1 1 * * * * 1 ← (12) 2 * * * * 1

(46, 21)

(5) 1 2 3 4 4 1 1 * * * 1
(7) 4 1 1 * * * * 1 ← (8) 5 1 * * * * 1

(46, 22)

(3) 4 4 1 1 * * * * 1

(46, 23)

(3) 2 * * * * * 1 ← (4) 4 4 1 1 * * * * 1

(46, 24)

(3) 1 1 * * * * * 1 ← (4) 2 * * * * * 1

(47, 3)

(13) 27 7
(15) 29 3 ← (17) 31
(29) 11 7 ← (45) 3
(31) 13 3 ← (33) 15
(39) 5 3 ← (41) 7

(47, 4)

(9) 22 13 3 ← (10) 23 15
(13) 26 5 3 ← (14) 27 7
(14) 27 3 3 ← (16) 29 3
(17) 14 13 3 ← (18) 15 15
(29) 10 5 3 ← (30) 11 7
(30) 11 3 3 ← (32) 13 3
(33) 6 5 3 ← (34) 7 7
(38) 3 3 3 ← (40) 5 3
(39) 2 3 3 ← (42) 3 3

(47, 5)

(2) 14 13 11 7
(3) 13 13 11 7
(7) 11 15 7 7
(7) 19 7 7 7 ← (9) 21 11 7
(9) 21 11 3 3 ← (10) 22 13 3
(13) 25 3 3 3 ← (14) 26 5 3
(15) 13 5 7 7 ← (29) 5 7 7
(17) 13 11 3 3 ← (18) 14 13 3
(29) 5 7 3 3 ← (34) 6 5 3
(29) 9 3 3 3 ← (30) 10 5 3
(38) 1 2 3 3 ← (40) 2 3 3

(47, 6)

(2) 9 15 7 7 7
(3) 11 14 5 7 7 ← (4) 13 13 11 7
(6) 9 11 7 7 7
(7) 7 14 5 7 7 ← (8) 11 15 7 7
(7) 18 3 5 7 7 ← (9) 20 5 7 7
(9) 20 9 3 3 3 ← (10) 21 11 3 3
(12) 5 9 7 7 7 ← (26) 3 5 7 7
(14) 11 3 5 7 7 ← (16) 13 5 7 7
(17) 12 9 3 3 3 ← (18) 13 11 3 3
(23) 2 3 5 7 7 ← (25) 4 5 7 7
(27) 4 7 3 3 3 ← (28) 6 6 5 3
(29) 4 5 3 3 3 ← (30) 5 7 3 3
(33) 5 1 2 3 3 ← (34) 6 2 3 3

(47, 7)

(1) 11 5 9 7 7 7
(3) 7 14 4 5 7 7 ← (4) 11 14 5 7 7
(5) 12 12 9 3 3 3 ← (8) 18 3 5 7 7
(7) 5 5 9 7 7 7 ← (8) 7 14 5 7 7
(7) 17 3 6 6 5 3 ← (10) 20 9 3 3 3
(9) 3 5 9 7 7 7
(11) 5 9 3 5 7 7 ← (25) 3 6 6 5 3
(13) 5 7 3 5 7 7 ← (17) 9 3 5 7 7
(15) 9 3 6 6 5 3 ← (18) 12 9 3 3 3
(21) 3 3 6 6 5 3 ← (24) 2 3 5 7 7
(27) 2 4 5 3 3 3 ← (28) 4 7 3 3 3
(31) 1 2 4 3 3 3 ← (33) 2 4 3 3 3
(33) 3 4 4 1 1 1 ← (34) 5 1 2 3 3

(47, 8)

(1) 8 3 5 9 7 7 7
(2) 7 8 12 9 3 3 3
(5) 10 9 3 6 6 5 3 ← (6) 12 12 9 3 3 3
(6) 11 12 4 5 3 3 3 ← (8) 17 3 6 6 5 3
(8) 3 5 9 3 5 7 7
(9) 6 9 3 6 6 5 3 ← (10) 8 12 9 3 3 3
(10) 3 5 7 3 5 7 7 ← (12) 5 9 3 5 7 7
(14) 5 5 3 6 6 5 3 ← (16) 9 3 6 6 5 3
(15) 6 3 3 6 6 5 3 ← (22) 3 3 6 6 5 3
(17) 10 2 4 5 3 3 3 ← (18) 12 4 5 3 3 3
(30) 1 1 2 4 3 3 3 ← (32) 1 2 4 3 3 3
(31) 2 3 4 4 1 1 1 ← (34) 3 4 4 1 1 1

(47, 9)

(1) 9 3 5 7 3 5 7 7
(5) 9 5 5 3 6 6 5 3 ← (6) 10 9 3 6 6 5 3
(7) 5 6 5 2 3 5 7 7 ← (13) 6 5 2 3 5 7 7
(9) 3 6 5 2 3 5 7 7 ← (10) 6 9 3 6 6 5 3
(13) 5 6 2 3 5 7 3 3 ← (19) 6 2 3 5 7 3 3
(15) 3 6 2 3 5 7 3 3 ← (16) 6 3 3 6 6 5 3
(17) 7 13 1 * 1 ← (18) 10 2 4 5 3 3 3
(21) 4 ..4 5 3 3 3 ← (22) 6 2 4 5 3 3 3
(30) 1 2 3 4 4 1 1 1 ← (32) 2 3 4 4 1 1 1

(47, 10)

(2) 5 5 6 5 2 3 5 7 7
(5) 4 5 5 5 3 6 6 5 3 ← (8) 5 6 5 2 3 5 7 7
(9) 2 3 5 5 3 6 6 5 3 ← (10) 3 6 5 2 3 5 7 7
(12) 2 4 3 3 3 6 6 5 3 ← (17) 5 6 2 4 5 3 3 3
(13) 3 5 6 2 4 5 3 3 3 ← (14) 5 6 2 3 5 7 3 3
(15) ...3 3 6 6 5 3 ← (16) 3 6 2 3 5 7 3 3
(17) 5 8 1 1 2 4 3 3 3 ← (18) 7 13 1 * 1
(19) 4 ...4 5 3 3 3 ← (20) 6 ..4 5 3 3 3
(21) ....4 5 3 3 3 ← (22) 4 ..4 5 3 3 3
(25) 5 1 2 3 4 4 1 1 1 ← (26) 6 2 3 4 4 1 1 1

(47, 11)

(3) 2 4 5 5 5 3 6 6 5 3 ← (6) 4 5 5 5 3 6 6 5 3
(7) 1 2 4 7 3 3 6 6 5 3 ← (9) 2 4 7 3 3 6 6 5 3
(10) ..4 3 3 3 6 6 5 3 ← (16) ...3 3 6 6 5 3
(13) ....3 3 6 6 5 3 ← (14) 3 5 6 2 4 5 3 3 3
(17) 4 ....4 5 3 3 3 ← (18) 5 8 1 1 2 4 3 3 3
(19) .....4 5 3 3 3 ← (20) 4 ...4 5 3 3 3
(23) 1 * 2 4 3 3 3 ← (25) * 2 4 3 3 3
(25) 3 4 4 1 1 * 1 ← (26) 5 1 2 3 4 4 1 1 1

(47, 12)

(1) ..4 5 5 5 3 6 6 5 3 ← (4) 2 4 5 5 5 3 6 6 5 3
(6) 1 1 2 4 7 3 3 6 6 5 3 ← (8) 1 2 4 7 3 3 6 6 5 3
(7) 6 ....3 3 6 6 5 3 ← (14) ....3 3 6 6 5 3
(17) .....4 5 3 3 3 ← (18) 4 ....4 5 3 3 3
(22) 1 1 * 2 4 3 3 3 ← (24) 1 * 2 4 3 3 3
(23) 2 3 4 4 1 1 * 1 ← (26) 3 4 4 1 1 * 1

(47, 13)

(2) 4 1 1 2 4 7 3 3 6 6 5 3
(5) 5 6 .....3 5 7 3 3 ← (11) 6 .....3 5 7 3 3
(7) 3 6 .....3 5 7 3 3 ← (8) 6 ....3 3 6 6 5 3
(13) 4 .....4 5 3 3 3 ← (14) 6 .....4 5 3 3 3
(22) 1 2 3 4 4 1 1 * 1 ← (24) 2 3 4 4 1 1 * 1
(24) 4 1 1 * * 1

(47, 14)

(4) .....4 3 3 3 6 6 5 3 ← (9) 5 6 .....4 5 3 3 3
(5) 3 5 6 .....4 5 3 3 3 ← (6) 5 6 .....3 5 7 3 3
(7) .....3 3 6 6 5 3 ← (8) 3 6 .....3 5 7 3 3
(11) 4 .....4 5 3 3 3 ← (12) 6 .....4 5 3 3 3
(13) .....4 5 3 3 3 ← (14) 4 .....4 5 3 3 3
(17) 5 1 2 3 4 4 1 1 * 1 ← (18) 6 2 3 4 4 1 1 * 1
(22) * * * 1

(47, 15)

(1) 1.....4 5 3 3 3 ← (8) .....3 3 6 6 5 3
(5) .....3 3 6 6 5 3 ← (6) 3 5 6 .....4 5 3 3 3
(11) .....4 5 3 3 3 ← (12) 4 .....4 5 3 3 3
(15) 1 * * 2 4 3 3 3 ← (17) * * 2 4 3 3 3
(17) 3 4 4 1 1 * * 1 ← (18) 5 1 2 3 4 4 1 1 * 1
(21) 1 * * * 1

(47, 16)

(1) 10 .....4 5 3 3 3 ← (2) 1.....4 5 3 3 3
(5) 6 .....4 5 3 3 3
(14) 1 1 * * 2 4 3 3 3 ← (16) 1 * * 2 4 3 3 3
(15) 2 3 4 4 1 1 * * 1 ← (18) 3 4 4 1 1 * * 1
(20) 1 1 * * * 1

(47, 17)

(1) 7 13 1 * * * 1 ← (2) 10 .....4 5 3 3 3
(3) 6 .....4 5 3 3 3
(5) 4 .....4 5 3 3 3 ← (6) 6 .....4 5 3 3 3
(14) 1 2 3 4 4 1 1 * * 1 ← (16) 2 3 4 4 1 1 * * 1
(16) 4 1 1 * * * 1

(47, 18)

(1) 5 8 1 1 * * 2 4 3 3 3 ← (2) 7 13 1 * * * 1
(2) .....3 5 7 3 3
(3) 4 .....4 5 3 3 3 ← (4) 6 .....4 5 3 3 3
(5) .....4 5 3 3 3 ← (6) 4 .....4 5 3 3 3
(9) 5 1 2 3 4 4 1 1 * * 1 ← (10) 6 2 3 4 4 1 1 * * 1
(14) * * * * 1

(47, 19)

(1) 4 .....4 5 3 3 3 ← (2) 5 8 1 1 * * 2 4 3 3 3
(3) .....4 5 3 3 3 ← (4) 4 .....4 5 3 3 3
(7) 1 * * * 2 4 3 3 3 ← (9) * * * 2 4 3 3 3
(9) 3 4 4 1 1 * * * 1 ← (10) 5 1 2 3 4 4 1 1 * * 1
(13) 1 * * * * 1

(47, 20)

(1) .....4 5 3 3 3 ← (2) 4 .....4 5 3 3 3
(6) 1 1 * * * 2 4 3 3 3 ← (8) 1 * * * 2 4 3 3 3
(7) 2 3 4 4 1 1 * * * 1 ← (10) 3 4 4 1 1 * * * 1
(12) 1 1 * * * * 1

(47, 21)

(1) 6 2 3 4 4 1 1 * * * 1
(6) 1 2 3 4 4 1 1 * * * 1 ← (8) 2 3 4 4 1 1 * * * 1
(8) 4 1 1 * * * * 1

(47, 22)

(1) 5 1 2 3 4 4 1 1 * * * 1 ← (2) 6 2 3 4 4 1 1 * * * 1
(6) * * * * * 1

(47, 23)

(1) 3 4 4 1 1 * * * * 1 ← (2) 5 1 2 3 4 4 1 1 * * * 1
(5) 1 * * * * * 1

(47, 24)

(4) 1 1 * * * * * 1

(48, 2)

(47) 1 ← (49)

(48, 3)

(17) 30 1 ← (18) 31
(33) 14 1 ← (34) 15
(41) 6 1 ← (42) 7
(45) 2 1 ← (46) 3
(46) 1 1 ← (48) 1

(48, 4)

(3) 15 15 15
(7) 11 15 15
(11) 23 7 7
(15) 27 3 3 ← (17) 29 3
(17) 13 11 7 ← (43) 3 3
(17) 29 1 1 ← (18) 30 1
(27) 7 7 7 ← (35) 7 7
(31) 11 3 3 ← (33) 13 3
(33) 13 1 1 ← (34) 14 1
(39) 3 3 3 ← (41) 5 3
(41) 5 1 1 ← (42) 6 1
(45) 1 1 1 ← (46) 2 1

(48, 5)

(3) 14 13 11 7 ← (4) 15 15 15
(7) 10 13 11 7 ← (8) 11 15 15
(8) 19 7 7 7
(10) 17 7 7 7
(14) 25 3 3 3 ← (16) 27 3 3
(15) 14 5 7 7 ← (30) 5 7 7
(17) 28 1 1 1 ← (18) 29 1 1
(30) 9 3 3 3 ← (32) 11 3 3
(31) 8 3 3 3 ← (40) 3 3 3
(33) 12 1 1 1 ← (34) 13 1 1
(39) 1 2 3 3 ← (41) 2 3 3
(41) 4 1 1 1 ← (42) 5 1 1

(48, 6)

(1) 7 11 15 7 7
(3) 9 15 7 7 7 ← (5) 13 13 11 7
(3) 13 13 5 7 7
(7) 9 11 7 7 7 ← (8) 10 13 11 7
(9) 7 13 5 7 7
(11) 14 4 5 7 7 ← (27) 3 5 7 7
(13) 5 9 7 7 7 ← (17) 13 5 7 7
(15) 11 3 5 7 7 ← (16) 14 5 7 7
(17) 24 4 1 1 1 ← (18) 28 1 1 1
(27) 3 5 7 3 3 ← (29) 6 6 5 3
(30) 4 5 3 3 3 ← (35) 6 2 3 3
(31) 3 6 2 3 3 ← (32) 8 3 3 3
(33) 8 4 1 1 1 ← (34) 12 1 1 1
(37) 4 4 1 1 1 ← (40) 1 2 3 3
(39) * 1 ← (42) 4 1 1 1

(48, 7)

(1) 6 9 11 7 7 7 ← (2) 7 11 15 7 7
(2) 11 5 9 7 7 7
(3) 12 11 3 5 7 7 ← (4) 13 13 5 7 7
(4) 7 14 4 5 7 7
(8) 5 5 9 7 7 7
(10) 3 5 9 7 7 7 ← (16) 11 3 5 7 7
(11) 13 2 3 5 7 7 ← (12) 14 4 5 7 7
(14) 5 7 3 5 7 7 ← (18) 9 3 5 7 7
(17) 22 * 1 ← (18) 24 4 1 1 1
(25) 2 3 5 7 3 3 ← (26) 3 6 6 5 3
(28) 2 4 5 3 3 3 ← (34) 2 4 3 3 3
(31) ..4 3 3 3 ← (32) 3 6 2 3 3
(33) 6 * 1 ← (34) 8 4 1 1 1
(37) 2 * 1 ← (38) 4 4 1 1 1
(38) 1 * 1 ← (40) * 1

(48, 8)

(1) 9 3 5 9 7 7 7
(2) 8 3 5 9 7 7 7
(3) 7 8 12 9 3 3 3 ← (4) 12 11 3 5 7 7
(7) 11 12 4 5 3 3 3 ← (9) 17 3 6 6 5 3
(9) 3 5 9 3 5 7 7 ← (19) 12 4 5 3 3 3
(11) 3 5 7 3 5 7 7 ← (13) 5 9 3 5 7 7
(11) 7 12 4 5 3 3 3 ← (12) 13 2 3 5 7 7
(15) 5 5 3 6 6 5 3 ← (17) 9 3 6 6 5 3
(17) 21 1 * 1 ← (18) 22 * 1
(25) 13 1 * 1 ← (33) 1 2 4 3 3 3
(31) 1 1 2 4 3 3 3 ← (32) ..4 3 3 3
(33) 5 1 * 1 ← (34) 6 * 1
(37) 1 1 * 1 ← (38) 2 * 1

(48, 9)

(1) 4 5 3 5 9 7 7 7
(1) 8 3 5 9 3 5 7 7
(2) 9 3 5 7 3 5 7 7
(6) 9 5 5 3 6 6 5 3 ← (8) 11 12 4 5 3 3 3
(11) 4 7 3 3 6 6 5 3 ← (16) 5 5 3 6 6 5 3
(11) 5 6 3 3 6 6 5 3 ← (12) 7 12 4 5 3 3 3
(13) 3 6 3 3 6 6 5 3 ← (14) 6 5 2 3 5 7 7
(17) 20 1 1 * 1 ← (18) 21 1 * 1
(19) 3 6 2 4 5 3 3 3 ← (20) 6 2 3 5 7 3 3
(23) 8 1 1 2 4 3 3 3 ← (32) 1 1 2 4 3 3 3
(25) 12 1 1 * 1 ← (26) 13 1 * 1
(31) 1 2 3 4 4 1 1 1 ← (33) 2 3 4 4 1 1 1
(33) 4 1 1 * 1 ← (34) 5 1 * 1

(48, 10)

(3) 5 5 6 5 2 3 5 7 7 ← (9) 5 6 5 2 3 5 7 7
(10) 2 3 5 5 3 6 6 5 3 ← (12) 4 7 3 3 6 6 5 3
(11) 3 5 6 2 3 5 7 3 3 ← (12) 5 6 3 3 6 6 5 3
(13) 2 4 3 3 3 6 6 5 3 ← (14) 3 6 3 3 6 6 5 3
(17) 3 6 ..4 5 3 3 3 ← (18) 5 6 2 4 5 3 3 3
(17) 16 4 1 1 * 1 ← (18) 20 1 1 * 1
(19) ....3 5 7 3 3 ← (20) 3 6 2 4 5 3 3 3
(22) ....4 5 3 3 3 ← (27) 6 2 3 4 4 1 1 1
(23) 3 6 2 3 4 4 1 1 1 ← (24) 8 1 1 2 4 3 3 3
(25) 8 4 1 1 * 1 ← (26) 12 1 1 * 1
(29) 4 4 1 1 * 1 ← (32) 1 2 3 4 4 1 1 1
(31) * * 1 ← (34) 4 1 1 * 1

(48, 11)

(1) 4 3 5 6 5 2 3 5 7 7 ← (4) 5 5 6 5 2 3 5 7 7
(7) ..4 7 3 3 6 6 5 3 ← (10) 2 4 7 3 3 6 6 5 3
(11) ..4 3 3 3 6 6 5 3 ← (12) 3 5 6 2 3 5 7 3 3
(17) .....3 5 7 3 3 ← (18) 3 6 ..4 5 3 3 3
(17) 14 * * 1 ← (18) 16 4 1 1 * 1
(20) .....4 5 3 3 3 ← (26) * 2 4 3 3 3
(23) 2 * 2 4 3 3 3 ← (24) 3 6 2 3 4 4 1 1 1
(25) 6 * * 1 ← (26) 8 4 1 1 * 1
(29) 2 * * 1 ← (30) 4 4 1 1 * 1
(30) 1 * * 1 ← (32) * * 1

(48, 12)

(2) ..4 5 5 5 3 6 6 5 3
(5) 6 ..4 3 3 3 6 6 5 3 ← (9) 1 2 4 7 3 3 6 6 5 3
(7) 1 1 2 4 7 3 3 6 6 5 3 ← (8) ..4 7 3 3 6 6 5 3
(17) 13 1 * * 1 ← (18) 14 * * 1
(18) ......4 5 3 3 3 ← (25) 1 * 2 4 3 3 3
(23) 1 1 * 2 4 3 3 3 ← (24) 2 * 2 4 3 3 3
(25) 5 1 * * 1 ← (26) 6 * * 1
(29) 1 1 * * 1 ← (30) 2 * * 1

(48, 13)

(3) 4 1 1 2 4 7 3 3 6 6 5 3 ← (8) 1 1 2 4 7 3 3 6 6 5 3
(5) 3 6 ....3 3 6 6 5 3 ← (6) 6 ..4 3 3 3 6 6 5 3
(11) 3 6 .....4 5 3 3 3 ← (12) 6 .....3 5 7 3 3
(15) 8 1 1 * 2 4 3 3 3 ← (24) 1 1 * 2 4 3 3 3
(17) 12 1 1 * * 1 ← (18) 13 1 * * 1
(23) 1 2 3 4 4 1 1 * 1 ← (25) 2 3 4 4 1 1 * 1
(25) 4 1 1 * * 1 ← (26) 5 1 * * 1

(48, 14)

(1) * 2 4 7 3 3 6 6 5 3
(1) 24 4 1 1 * * 1 ← (4) 4 1 1 2 4 7 3 3 6 6 5 3
(5) .....4 3 3 3 6 6 5 3 ← (6) 3 6 ....3 3 6 6 5 3
(9) 3 6 ......4 5 3 3 3 ← (10) 5 6 .....4 5 3 3 3
(11) ........3 5 7 3 3 ← (12) 3 6 .....4 5 3 3 3
(14) ........4 5 3 3 3 ← (19) 6 2 3 4 4 1 1 * 1
(15) 3 6 2 3 4 4 1 1 * 1 ← (16) 8 1 1 * 2 4 3 3 3
(17) 8 4 1 1 * * 1 ← (18) 12 1 1 * * 1
(21) 4 4 1 1 * * 1 ← (24) 1 2 3 4 4 1 1 * 1
(23) * * * 1 ← (26) 4 1 1 * * 1

(48, 15)

(1) 22 * * * 1 ← (2) 24 4 1 1 * * 1
(6) ........3 3 6 6 5 3
(9) ..........3 5 7 3 3 ← (10) 3 6 ......4 5 3 3 3
(12) ..........4 5 3 3 3 ← (18) * * 2 4 3 3 3
(15) 2 * * 2 4 3 3 3 ← (16) 3 6 2 3 4 4 1 1 * 1
(17) 6 * * * 1 ← (18) 8 4 1 1 * * 1
(21) 2 * * * 1 ← (22) 4 4 1 1 * * 1
(22) 1 * * * 1 ← (24) * * * 1

(48, 16)

(1) 21 1 * * * 1 ← (2) 22 * * * 1
(3) 6 .........3 5 7 3 3
(9) 13 1 * * * 1 ← (17) 1 * * 2 4 3 3 3
(15) 1 1 * * 2 4 3 3 3 ← (16) 2 * * 2 4 3 3 3
(17) 5 1 * * * 1 ← (18) 6 * * * 1
(21) 1 1 * * * 1 ← (22) 2 * * * 1

(48, 17)

(1) 5 6 .........4 5 3 3 3
(1) 20 1 1 * * * 1 ← (2) 21 1 * * * 1
(3) 3 6 .........4 5 3 3 3 ← (4) 6 .........3 5 7 3 3
(7) 8 1 1 * * 2 4 3 3 3 ← (16) 1 1 * * 2 4 3 3 3
(9) 12 1 1 * * * 1 ← (10) 13 1 * * * 1
(15) 1 2 3 4 4 1 1 * * 1 ← (17) 2 3 4 4 1 1 * * 1
(17) 4 1 1 * * * 1 ← (18) 5 1 * * * 1

(48, 18)

(1) 3 6 ..........4 5 3 3 3 ← (2) 5 6 .........4 5 3 3 3
(1) 16 4 1 1 * * * 1 ← (2) 20 1 1 * * * 1
(3) ............3 5 7 3 3 ← (4) 3 6 .........4 5 3 3 3
(6) ............4 5 3 3 3 ← (11) 6 2 3 4 4 1 1 * * 1
(7) 3 6 2 3 4 4 1 1 * * 1 ← (8) 8 1 1 * * 2 4 3 3 3
(9) 8 4 1 1 * * * 1 ← (10) 12 1 1 * * * 1
(13) 4 4 1 1 * * * 1 ← (16) 1 2 3 4 4 1 1 * * 1
(15) * * * * 1 ← (18) 4 1 1 * * * 1

(48, 19)

(1) ..............3 5 7 3 3 ← (2) 3 6 ..........4 5 3 3 3
(1) 14 * * * * 1 ← (2) 16 4 1 1 * * * 1
(4) ..............4 5 3 3 3 ← (10) * * * 2 4 3 3 3
(7) 2 * * * 2 4 3 3 3 ← (8) 3 6 2 3 4 4 1 1 * * 1
(9) 6 * * * * 1 ← (10) 8 4 1 1 * * * 1
(13) 2 * * * * 1 ← (14) 4 4 1 1 * * * 1
(14) 1 * * * * 1 ← (16) * * * * 1

(48, 20)

(1) 13 1 * * * * 1 ← (2) 14 * * * * 1
(2) ..............4 5 3 3 3 ← (9) 1 * * * 2 4 3 3 3
(7) 1 1 * * * 2 4 3 3 3 ← (8) 2 * * * 2 4 3 3 3
(9) 5 1 * * * * 1 ← (10) 6 * * * * 1
(13) 1 1 * * * * 1 ← (14) 2 * * * * 1

(48, 21)

(1) 12 1 1 * * * * 1 ← (2) 13 1 * * * * 1
(7) 1 2 3 4 4 1 1 * * * 1 ← (9) 2 3 4 4 1 1 * * * 1
(9) 4 1 1 * * * * 1 ← (10) 5 1 * * * * 1

(48, 22)

(1) * * * * 2 4 3 3 3
(1) 8 4 1 1 * * * * 1 ← (2) 12 1 1 * * * * 1
(5) 4 4 1 1 * * * * 1 ← (8) 1 2 3 4 4 1 1 * * * 1
(7) * * * * * 1 ← (10) 4 1 1 * * * * 1

(48, 23)

(1) 6 * * * * * 1 ← (2) 8 4 1 1 * * * * 1
(2) 3 4 4 1 1 * * * * 1
(5) 2 * * * * * 1 ← (6) 4 4 1 1 * * * * 1
(6) 1 * * * * * 1 ← (8) * * * * * 1

(48, 24)

(1) 5 1 * * * * * 1 ← (2) 6 * * * * * 1
(5) 1 1 * * * * * 1 ← (6) 2 * * * * * 1

(48, 25)

(1) 4 1 1 * * * * * 1 ← (2) 5 1 * * * * * 1

(49, 3)

(11) 23 15
(15) 27 7 ← (19) 31
(19) 15 15 ← (43) 7
(31) 11 7 ← (35) 15
(47) 1 1 ← (49) 1

(49, 4)

(10) 21 11 7
(11) 22 13 3 ← (12) 23 15
(12) 23 7 7 ← (18) 29 3
(15) 26 5 3 ← (16) 27 7
(18) 13 11 7 ← (42) 5 3
(19) 14 13 3 ← (20) 15 15
(28) 7 7 7 ← (34) 13 3
(31) 10 5 3 ← (32) 11 7
(35) 6 5 3 ← (36) 7 7
(46) 1 1 1 ← (48) 1 1

(49, 5)

(1) 7 11 15 15
(4) 14 13 11 7
(9) 11 15 7 7
(9) 19 7 7 7
(10) 20 5 7 7 ← (17) 27 3 3
(11) 17 7 7 7 ← (41) 3 3 3
(11) 21 11 3 3 ← (12) 22 13 3
(15) 25 3 3 3 ← (16) 26 5 3
(19) 13 11 3 3 ← (20) 14 13 3
(26) 4 5 7 7 ← (33) 11 3 3
(31) 5 7 3 3 ← (36) 6 5 3
(31) 9 3 3 3 ← (32) 10 5 3

(49, 6)

(1) 10 17 7 7 7
(4) 9 15 7 7 7
(5) 11 14 5 7 7 ← (6) 13 13 11 7
(8) 9 11 7 7 7
(9) 7 14 5 7 7 ← (10) 11 15 7 7
(9) 18 3 5 7 7 ← (16) 25 3 3 3
(10) 7 13 5 7 7 ← (12) 17 7 7 7
(11) 20 9 3 3 3 ← (12) 21 11 3 3
(14) 5 9 7 7 7 ← (18) 13 5 7 7
(19) 12 9 3 3 3 ← (20) 13 11 3 3
(25) 2 3 5 7 7 ← (32) 9 3 3 3
(28) 3 5 7 3 3 ← (33) 8 3 3 3
(29) 4 7 3 3 3 ← (30) 6 6 5 3
(31) 4 5 3 3 3 ← (32) 5 7 3 3
(35) 5 1 2 3 3 ← (36) 6 2 3 3

(49, 7)

(1) 9 7 13 5 7 7 ← (2) 10 17 7 7 7
(2) 6 9 11 7 7 7
(3) 11 5 9 7 7 7 ← (5) 13 13 5 7 7
(5) 7 14 4 5 7 7 ← (6) 11 14 5 7 7
(7) 12 12 9 3 3 3 ← (12) 20 9 3 3 3
(9) 5 5 9 7 7 7 ← (10) 7 14 5 7 7
(11) 3 5 9 7 7 7 ← (13) 14 4 5 7 7
(11) 8 12 9 3 3 3 ← (20) 12 9 3 3 3
(15) 5 7 3 5 7 7 ← (19) 9 3 5 7 7
(23) 3 3 6 6 5 3 ← (27) 3 6 6 5 3
(26) 2 3 5 7 3 3 ← (32) 4 5 3 3 3
(29) 2 4 5 3 3 3 ← (30) 4 7 3 3 3
(35) 3 4 4 1 1 1 ← (36) 5 1 2 3 3
(39) 1 * 1 ← (41) * 1

(49, 8)

(1) 5 10 11 3 5 7 7
(1) 8 5 5 9 7 7 7 ← (2) 9 7 13 5 7 7
(2) 9 3 5 9 7 7 7 ← (4) 11 5 9 7 7 7
(3) 8 3 5 9 7 7 7 ← (6) 7 14 4 5 7 7
(4) 7 8 12 9 3 3 3 ← (10) 17 3 6 6 5 3
(7) 10 9 3 6 6 5 3 ← (8) 12 12 9 3 3 3
(10) 3 5 9 3 5 7 7 ← (18) 9 3 6 6 5 3
(11) 6 9 3 6 6 5 3 ← (12) 8 12 9 3 3 3
(12) 3 5 7 3 5 7 7 ← (16) 5 7 3 5 7 7
(17) 6 3 3 6 6 5 3 ← (24) 3 3 6 6 5 3
(19) 10 2 4 5 3 3 3 ← (20) 12 4 5 3 3 3
(23) 6 2 4 5 3 3 3 ← (30) 2 4 5 3 3 3
(38) 1 1 * 1 ← (40) 1 * 1

(49, 9)

(1) 4 6 3 5 9 7 7 7 ← (2) 5 10 11 3 5 7 7
(2) 4 5 3 5 9 7 7 7 ← (4) 8 3 5 9 7 7 7
(2) 8 3 5 9 3 5 7 7 ← (9) 11 12 4 5 3 3 3
(3) 9 3 5 7 3 5 7 7 ← (17) 5 5 3 6 6 5 3
(7) 9 5 5 3 6 6 5 3 ← (8) 10 9 3 6 6 5 3
(11) 3 6 5 2 3 5 7 7 ← (12) 6 9 3 6 6 5 3
(15) 5 6 2 3 5 7 3 3 ← (21) 6 2 3 5 7 3 3
(17) 3 6 2 3 5 7 3 3 ← (18) 6 3 3 6 6 5 3
(19) 7 13 1 * 1 ← (20) 10 2 4 5 3 3 3
(21) 6 ..4 5 3 3 3 ← (27) 13 1 * 1
(23) 4 ..4 5 3 3 3 ← (24) 6 2 4 5 3 3 3

(49, 10)

(1) 2 3 5 3 5 9 7 7 7 ← (2) 4 6 3 5 9 7 7 7
(1) 4 5 3 5 9 3 5 7 7 ← (8) 9 5 5 3 6 6 5 3
(7) 4 5 5 5 3 6 6 5 3 ← (10) 5 6 5 2 3 5 7 7
(11) 2 3 5 5 3 6 6 5 3 ← (12) 3 6 5 2 3 5 7 7
(14) 2 4 3 3 3 6 6 5 3 ← (19) 5 6 2 4 5 3 3 3
(15) 3 5 6 2 4 5 3 3 3 ← (16) 5 6 2 3 5 7 3 3
(17) ...3 3 6 6 5 3 ← (18) 3 6 2 3 5 7 3 3
(19) 5 8 1 1 2 4 3 3 3 ← (20) 7 13 1 * 1
(20) ....3 5 7 3 3 ← (25) 8 1 1 2 4 3 3 3
(21) 4 ...4 5 3 3 3 ← (22) 6 ..4 5 3 3 3
(23) ....4 5 3 3 3 ← (24) 4 ..4 5 3 3 3
(27) 5 1 2 3 4 4 1 1 1 ← (28) 6 2 3 4 4 1 1 1

(49, 11)

(2) 4 3 5 6 5 2 3 5 7 7
(5) 2 4 5 5 5 3 6 6 5 3 ← (8) 4 5 5 5 3 6 6 5 3
(12) ..4 3 3 3 6 6 5 3 ← (18) ...3 3 6 6 5 3
(15) ....3 3 6 6 5 3 ← (16) 3 5 6 2 4 5 3 3 3
(18) .....3 5 7 3 3 ← (24) ....4 5 3 3 3
(19) 4 ....4 5 3 3 3 ← (20) 5 8 1 1 2 4 3 3 3
(21) .....4 5 3 3 3 ← (22) 4 ...4 5 3 3 3
(27) 3 4 4 1 1 * 1 ← (28) 5 1 2 3 4 4 1 1 1
(31) 1 * * 1 ← (33) * * 1

(49, 12)

(3) ..4 5 5 5 3 6 6 5 3 ← (6) 2 4 5 5 5 3 6 6 5 3
(9) 6 ....3 3 6 6 5 3 ← (16) ....3 3 6 6 5 3
(15) 6 .....4 5 3 3 3 ← (22) .....4 5 3 3 3
(19) .....4 5 3 3 3 ← (20) 4 ....4 5 3 3 3
(30) 1 1 * * 1 ← (32) 1 * * 1

(49, 13)

(1) ...4 5 5 5 3 6 6 5 3 ← (4) ..4 5 5 5 3 6 6 5 3
(7) 5 6 .....3 5 7 3 3 ← (13) 6 .....3 5 7 3 3
(9) 3 6 .....3 5 7 3 3 ← (10) 6 ....3 3 6 6 5 3
(13) 6 .....4 5 3 3 3 ← (20) .....4 5 3 3 3
(15) 4 .....4 5 3 3 3 ← (16) 6 .....4 5 3 3 3

**(49, 14)**

(2) * 2 4 7 3 3 6 6 5 3
(6) .....4 3 3 3 6 6 5 3 ← (11) 5 6 .....4 5 3 3 3
(7) 3 5 6 .....4 5 3 3 3 ← (8) 5 6 .....3 5 7 3 3
(9) .....3 3 6 6 5 3 ← (10) 3 6 .....3 5 7 3 3
(12) .....3 5 7 3 3 ← (17) 8 1 1 * 2 4 3 3 3
(13) 4 .....4 5 3 3 3 ← (14) 6 .....4 5 3 3 3
(15) .....4 5 3 3 3 ← (16) 4 .....4 5 3 3 3
(19) 5 1 2 3 4 4 1 1 * 1 ← (20) 6 2 3 4 4 1 1 * 1

**(49, 15)**

(1) 1 * 2 4 7 3 3 6 6 5 3
(3) 1.....4 5 3 3 3 ← (10) .....3 3 6 6 5 3
(7) .....3 3 6 6 5 3 ← (8) 3 5 6 .....4 5 3 3 3
(10) .....3 5 7 3 3 ← (16) .....4 5 3 3 3
(13) .....4 5 3 3 3 ← (14) 4 .....4 5 3 3 3
(19) 3 4 4 1 1 * * 1 ← (20) 5 1 2 3 4 4 1 1 * 1
(23) 1 * * * 1 ← (25) * * * 1

**(49, 16)**

(1) 6 .....3 3 6 6 5 3 ← (8) .....3 3 6 6 5 3
(3) 10 .....4 5 3 3 3 ← (4) 1.....4 5 3 3 3
(7) 6 .....4 5 3 3 3 ← (14) .....4 5 3 3 3
(22) 1 1 * * * 1 ← (24) 1 * * * 1

**(49, 17)**

(1) 3 6 .....3 5 7 3 3 ← (2) 6 .....3 3 6 6 5 3
(3) 7 13 1 * * * 1 ← (4) 10 .....4 5 3 3 3
(5) 6 .....4 5 3 3 3 ← (11) 13 1 * * * 1
(7) 4 .....4 5 3 3 3 ← (8) 6 .....4 5 3 3 3

**(49, 18)**

(1) .....3 3 6 6 5 3 ← (2) 3 6 .....3 5 7 3 3
(3) 5 8 1 1 * * 2 4 3 3 3 ← (4) 7 13 1 * * * 1
(4) .....3 5 7 3 3 ← (9) 8 1 1 * * 2 4 3 3 3
(5) 4 .....4 5 3 3 3 ← (6) 6 .....4 5 3 3 3
(7) .....4 5 3 3 3 ← (8) 4 .....4 5 3 3 3
(11) 5 1 2 3 4 4 1 1 * * 1 ← (12) 6 2 3 4 4 1 1 * * 1

**(49, 19)**

(2) .....3 5 7 3 3 ← (8) .....4 5 3 3 3
(3) 4 .....4 5 3 3 3 ← (4) 5 8 1 1 * * 2 4 3 3 3
(5) .....4 5 3 3 3 ← (6) 4 .....4 5 3 3 3
(11) 3 4 4 1 1 * * * 1 ← (12) 5 1 2 3 4 4 1 1 * * 1
(15) 1 * * * * 1 ← (17) * * * * 1

**(49, 20)**

(3) .....4 5 3 3 3 ← (4) 4 .....4 5 3 3 3
(8) 1 1 * * * 2 4 3 3 3
(14) 1 1 * * * * 1 ← (16) 1 * * * * 1

**(49, 21)**

(3) 6 2 3 4 4 1 1 * * * 1

**(49, 22)**

(2) * * * * 2 4 3 3 3
(3) 5 1 2 3 4 4 1 1 * * * 1 ← (4) 6 2 3 4 4 1 1 * * * 1

**(49, 23)**

(1) 1 * * * * 2 4 3 3 3
(3) 3 4 4 1 1 * * * * 1 ← (4) 5 1 2 3 4 4 1 1 * * * 1
(7) 1 * * * * * 1 ← (9) * * * * * 1

**(49, 24)**

(1) 2 3 4 4 1 1 * * * * 1
(6) 1 1 * * * * * 1 ← (8) 1 * * * * * 1

**(49, 25)**

(2) 4 1 1 * * * * * 1

**(50, 2)**

(47) 3 ← (51)

**(50, 3)**

(19) 30 1 ← (20) 31
(35) 14 1 ← (36) 15
(43) 6 1 ← (44) 7
(44) 3 3 ← (50) 1
(47) 2 1 ← (48) 3

**(50, 4)**

(5) 15 15 15
(9) 11 15 15
(11) 21 11 7 ← (13) 23 15
(13) 23 7 7 ← (17) 27 7
(19) 13 11 7 ← (21) 15 15
(19) 29 1 1 ← (20) 30 1
(29) 7 7 7 ← (33) 11 7
(31) 5 7 7 ← (37) 7 7
(35) 13 1 1 ← (36) 14 1
(42) 2 3 3 ← (49) 1 1
(43) 5 1 1 ← (44) 6 1
(47) 1 1 1 ← (48) 2 1

**(50, 5)**

(2) 7 11 15 15
(5) 14 13 11 7 ← (6) 15 15 15
(9) 10 13 11 7 ← (10) 11 15 15
(10) 19 7 7 7 ← (12) 21 11 7
(11) 20 5 7 7 ← (14) 23 7 7
(17) 14 5 7 7 ← (20) 13 11 7
(19) 28 1 1 1 ← (20) 29 1 1
(27) 4 5 7 7 ← (30) 7 7 7
(28) 3 5 7 7 ← (32) 5 7 7
(35) 12 1 1 1 ← (36) 13 1 1
(41) 1 2 3 3 ← (48) 1 1 1
(43) 4 1 1 1 ← (44) 5 1 1

**(50, 6)**

(1) 9 11 15 7 7
(3) 7 11 15 7 7
(5) 9 15 7 7 7
(9) 9 11 7 7 7 ← (10) 10 13 11 7
(10) 18 3 5 7 7 ← (12) 20 5 7 7
(11) 7 13 5 7 7 ← (13) 17 7 7 7
(15) 5 9 7 7 7 ← (19) 13 5 7 7
(17) 11 3 5 7 7 ← (18) 14 5 7 7
(19) 24 4 1 1 1 ← (20) 28 1 1 1
(26) 2 3 5 7 7 ← (28) 4 5 7 7
(29) 3 5 7 3 3 ← (33) 5 7 3 3
(33) 3 6 2 3 3 ← (34) 8 3 3 3
(35) 2 4 3 3 3 ← (37) 6 2 3 3
(35) 8 4 1 1 1 ← (36) 12 1 1 1
(39) 4 4 1 1 1 ← (44) 4 1 1 1

(50, 7)

(1) 8 9 11 7 7 7 ← (2) 9 11 15 7 7
(3) 6 9 11 7 7 7 ← (4) 7 11 15 7 7
(5) 12 11 3 5 7 7 ← (6) 13 13 5 7 7
(10) 5 5 9 7 7 7 ← (12) 7 13 5 7 7
(12) 3 5 9 7 7 7 ← (16) 5 9 7 7 7
(13) 13 2 3 5 7 7 ← (14) 14 4 5 7 7
(14) 5 9 3 5 7 7 ← (20) 9 3 5 7 7
(19) 22 * 1 ← (20) 24 4 1 1 1
(27) 2 3 5 7 3 3 ← (28) 3 6 6 5 3
(33) ..4 3 3 3 ← (34) 3 6 2 3 3
(34) 1 2 4 3 3 3 ← (36) 2 4 3 3 3
(35) 6 * 1 ← (36) 8 4 1 1 1
(36) 3 4 4 1 1 1 ← (42) * 1
(39) 2 * 1 ← (40) 4 4 1 1 1

(50, 8)

(2) 8 5 5 9 7 7 7
(3) 9 3 5 9 7 7 7 ← (5) 11 5 9 7 7 7
(5) 7 8 12 9 3 3 3 ← (6) 12 11 3 5 7 7
(11) 3 5 9 3 5 7 7 ← (13) 8 12 9 3 3 3
(13) 3 5 7 3 5 7 7 ← (17) 5 7 3 5 7 7
(13) 7 12 4 5 3 3 3 ← (14) 13 2 3 5 7 7
(15) 6 5 2 3 5 7 7 ← (21) 12 4 5 3 3 3
(19) 21 1 * 1 ← (20) 22 * 1
(33) 1 1 2 4 3 3 3 ← (34) ..4 3 3 3
(34) 2 3 4 4 1 1 1 ← (41) 1 * 1
(35) 5 1 * 1 ← (36) 6 * 1
(39) 1 1 * 1 ← (40) 2 * 1

(50, 9)

(3) 4 5 3 5 9 7 7 7 ← (5) 8 3 5 9 7 7 7
(3) 8 3 5 9 3 5 7 7 ← (6) 7 8 12 9 3 3 3
(4) 9 3 5 7 3 5 7 7
(13) 4 7 3 3 6 6 5 3 ← (19) 6 3 3 6 6 5 3
(13) 5 6 3 3 6 6 5 3 ← (14) 7 12 4 5 3 3 3
(15) 3 6 3 3 6 6 5 3 ← (16) 6 5 2 3 5 7 7
(19) 20 1 1 * 1 ← (20) 21 1 * 1
(21) 3 6 2 4 5 3 3 3 ← (22) 6 2 3 5 7 3 3
(27) 12 1 1 * 1 ← (28) 13 1 * 1
(33) 1 2 3 4 4 1 1 1 ← (40) 1 1 * 1
(35) 4 1 1 * 1 ← (36) 5 1 * 1

(50, 10)

(2) 2 3 5 3 5 9 7 7 7 ← (4) 4 5 3 5 9 7 7 7
(2) 4 5 3 5 9 3 5 7 7 ← (4) 8 3 5 9 3 5 7 7
(5) 5 5 6 5 2 3 5 7 7
(11) 2 4 7 3 3 6 6 5 3 ← (14) 4 7 3 3 6 6 5 3
(12) 2 3 5 5 3 6 6 5 3 ← (17) 5 6 2 3 5 7 3 3
(13) 3 5 6 2 3 5 7 3 3 ← (14) 5 6 3 3 6 6 5 3
(15) 2 4 3 3 3 6 6 5 3 ← (16) 3 6 3 3 6 6 5 3
(19) 3 6 ..4 5 3 3 3 ← (20) 5 6 2 4 5 3 3 3
(19) 16 4 1 1 * 1 ← (20) 20 1 1 * 1
(21) ....3 5 7 3 3 ← (22) 3 6 2 4 5 3 3 3
(25) 3 6 2 3 4 4 1 1 1 ← (26) 8 1 1 2 4 3 3 3
(27) * 2 4 3 3 3 ← (29) 6 2 3 4 4 1 1 1
(27) 8 4 1 1 * 1 ← (28) 12 1 1 * 1
(31) 4 4 1 1 * 1 ← (36) 4 1 1 * 1

(50, 11)

(3) 4 3 5 6 5 2 3 5 7 7 ← (6) 5 5 6 5 2 3 5 7 7
(9) ..4 7 3 3 6 6 5 3 ← (16) 2 4 3 3 3 6 6 5 3
(10) 1 2 4 7 3 3 6 6 5 3 ← (12) 2 4 7 3 3 6 6 5 3
(13) ..4 3 3 3 6 6 5 3 ← (14) 3 5 6 2 3 5 7 3 3
(19) .....3 5 7 3 3 ← (20) 3 6 ..4 5 3 3 3
(19) 14 * * 1 ← (20) 16 4 1 1 * 1
(25) 2 * 2 4 3 3 3 ← (26) 3 6 2 3 4 4 1 1 1
(26) 1 * 2 4 3 3 3 ← (28) * 2 4 3 3 3
(27) 6 * * 1 ← (28) 8 4 1 1 * 1
(28) 3 4 4 1 1 * 1 ← (34) * * 1
(31) 2 * * 1 ← (32) 4 4 1 1 * 1

(50, 12)

(1) 2 4 3 5 6 5 2 3 5 7 7 ← (4) 4 3 5 6 5 2 3 5 7 7
(7) 6 ..4 3 3 3 6 6 5 3 ← (14) ..4 3 3 3 6 6 5 3
(9) 1 1 2 4 7 3 3 6 6 5 3 ← (10) ..4 7 3 3 6 6 5 3
(19) 13 1 * * 1 ← (20) 14 * * 1
(25) 1 1 * 2 4 3 3 3 ← (26) 2 * 2 4 3 3 3
(26) 2 3 4 4 1 1 * 1 ← (33) 1 * * 1
(27) 5 1 * * 1 ← (28) 6 * * 1
(31) 1 1 * * 1 ← (32) 2 * * 1

(50, 13)

(2) ...4 5 5 5 3 6 6 5 3
(5) 4 1 1 2 4 7 3 3 6 6 5 3 ← (11) 6 ....3 3 6 6 5 3
(7) 3 6 ....3 3 6 6 5 3 ← (8) 6 ..4 3 3 3 6 6 5 3
(13) 3 6 .....4 5 3 3 3 ← (14) 6 .....3 5 7 3 3
(19) 12 1 1 * * 1 ← (20) 13 1 * * 1
(25) 1 2 3 4 4 1 1 * 1 ← (32) 1 1 * * 1
(27) 4 1 1 * * 1 ← (28) 5 1 * * 1

(50, 14)

(3) * 2 4 7 3 3 6 6 5 3 ← (6) 4 1 1 2 4 7 3 3 6 6 5 3
(3) 24 4 1 1 * * 1 ← (9) 5 6 .....3 5 7 3 3
(7) .....4 3 3 3 6 6 5 3 ← (8) 3 6 ....3 3 6 6 5 3
(11) 3 6 ......4 5 3 3 3 ← (12) 5 6 .....4 5 3 3 3
(13) ........3 5 7 3 3 ← (14) 3 6 .....4 5 3 3 3
(17) 3 6 2 3 4 4 1 1 * 1 ← (18) 8 1 1 * 2 4 3 3 3
(19) * * 2 4 3 3 3 ← (21) 6 2 3 4 4 1 1 * 1
(19) 8 4 1 1 * * 1 ← (20) 12 1 1 * * 1
(23) 4 4 1 1 * * 1 ← (28) 4 1 1 * * 1

(50, 15)

(1) 2 * 2 4 7 3 3 6 6 5 3 ← (8) .....4 3 3 3 6 6 5 3
(2) 1 * 2 4 7 3 3 6 6 5 3 ← (4) * 2 4 7 3 3 6 6 5 3
(3) 22 * * * 1 ← (4) 24 4 1 1 * * 1
(11) .........3 5 7 3 3 ← (12) 3 6 ......4 5 3 3 3
(17) 2 * * 2 4 3 3 3 ← (18) 3 6 2 3 4 4 1 1 * 1
(18) 1 * * 2 4 3 3 3 ← (20) * * 2 4 3 3 3
(19) 6 * * * 1 ← (20) 8 4 1 1 * * 1
(20) 3 4 4 1 1 * * 1 ← (26) * * * 1
(23) 2 * * * 1 ← (24) 4 4 1 1 * * 1

(50, 16)

(1) 1 1 * 2 4 7 3 3 6 6 5 3 ← (2) 2 * 2 4 7 3 3 6 6 5 3
(3) 21 1 * * * 1 ← (4) 22 * * * 1
(5) 6 .........3 5 7 3 3
(17) 1 1 * * 2 4 3 3 3 ← (18) 2 * * 2 4 3 3 3
(18) 2 3 4 4 1 1 * * 1 ← (25) 1 * * * 1
(19) 5 1 * * * 1 ← (20) 6 * * * 1
(23) 1 1 * * * 1 ← (24) 2 * * * 1

(50, 17)

(3) 5 6 .........4 5 3 3 3
(3) 20 1 1 * * * 1 ← (4) 21 1 * * * 1
(5) 3 6 .........4 5 3 3 3 ← (6) 6 .........3 5 7 3 3
(11) 12 1 1 * * * 1 ← (12) 13 1 * * * 1
(17) 1 2 3 4 4 1 1 * * 1 ← (24) 1 1 * * * 1
(19) 4 1 1 * * * 1 ← (20) 5 1 * * * 1

(50, 18)

(2) ...........3 3 6 6 5 3
(3) 3 6 ..........4 5 3 3 3 ← (4) 5 6 .........4 5 3 3 3
(3) 16 4 1 1 * * * 1 ← (4) 20 1 1 * * * 1
(5) ............3 5 7 3 3 ← (6) 3 6 .........4 5 3 3 3
(9) 3 6 2 3 4 4 1 1 * * 1 ← (10) 8 1 1 * * 2 4 3 3 3
(11) * * * 2 4 3 3 3 ← (13) 6 2 3 4 4 1 1 * * 1
(11) 8 4 1 1 * * * 1 ← (12) 12 1 1 * * * 1
(15) 4 4 1 1 * * * 1 ← (20) 4 1 1 * * * 1

(50, 19)

(3) .....3 5 7 3 3 ← (4) 3 6 .....4 5 3 3 3
(3) 14 * * * * 1 ← (4) 16 4 1 1 * * * 1
(6) .....4 5 3 3 3
(9) 2 * * * 2 4 3 3 3 ← (10) 3 6 2 3 4 4 1 1 * * 1
(10) 1 * * * 2 4 3 3 3 ← (12) * * * 2 4 3 3 3
(11) 6 * * * * 1 ← (12) 8 4 1 1 * * * 1
(12) 3 4 4 1 1 * * * 1 ← (18) * * * * 1
(15) 2 * * * * 1 ← (16) 4 4 1 1 * * * 1

(50, 20)

(3) 13 1 * * * * 1 ← (4) 14 * * * * 1
(4) .....4 5 3 3 3
(9) 1 1 * * * 2 4 3 3 3 ← (10) 2 * * * 2 4 3 3 3
(10) 2 3 4 4 1 1 * * * 1 ← (17) 1 * * * * 1
(11) 5 1 * * * * 1 ← (12) 6 * * * * 1
(15) 1 1 * * * * 1 ← (16) 2 * * * * 1

(50, 21)

(1) 8 1 1 * * * 2 4 3 3 3
(3) 12 1 1 * * * * 1 ← (4) 13 1 * * * * 1
(9) 1 2 3 4 4 1 1 * * * 1 ← (16) 1 1 * * * * 1
(11) 4 1 1 * * * * 1 ← (12) 5 1 * * * * 1

(50, 22)

(1) 3 6 2 3 4 4 1 1 * * * 1 ← (2) 8 1 1 * * * 2 4 3 3 3
(3) * * * * 2 4 3 3 3 ← (5) 6 2 3 4 4 1 1 * * * 1
(3) 8 4 1 1 * * * * 1 ← (4) 12 1 1 * * * * 1
(7) 4 4 1 1 * * * * 1 ← (12) 4 1 1 * * * * 1

(50, 23)

(1) 2 * * * * 2 4 3 3 3 ← (2) 3 6 2 3 4 4 1 1 * * * 1
(2) 1 * * * * 2 4 3 3 3 ← (4) * * * * 2 4 3 3 3
(3) 6 * * * * * 1 ← (4) 8 4 1 1 * * * * 1
(4) 3 4 4 1 1 * * * * 1 ← (10) * * * * * 1
(7) 2 * * * * * 1 ← (8) 4 4 1 1 * * * * 1

(50, 24)

(1) 1 1 * * * * 2 4 3 3 3 ← (2) 2 * * * * 2 4 3 3 3
(2) 2 3 4 4 1 1 * * * * 1 ← (9) 1 * * * * * 1
(3) 5 1 * * * * * 1 ← (4) 6 * * * * * 1
(7) 1 1 * * * * * 1 ← (8) 2 * * * * * 1

(51, 3)

(19) 29 3 ← (21) 31
(35) 13 3 ← (37) 15
(43) 5 3 ← (45) 7
(45) 3 3 ← (49) 3

(51, 4)

(13) 22 13 3 ← (14) 23 15
(17) 26 5 3 ← (18) 27 7
(18) 27 3 3 ← (20) 29 3
(21) 14 13 3 ← (22) 15 15
(33) 10 5 3 ← (34) 11 7
(34) 11 3 3 ← (36) 13 3
(37) 6 5 3 ← (38) 7 7
(42) 3 3 3 ← (44) 5 3
(43) 2 3 3 ← (46) 3 3

(51, 5)

(1) 9 11 15 15
(3) 7 11 15 15
(6) 14 13 11 7
(7) 13 13 11 7
(11) 11 15 7 7 ← (21) 13 11 7
(11) 19 7 7 7 ← (13) 21 11 7
(13) 21 11 3 3 ← (14) 22 13 3
(17) 25 3 3 3 ← (18) 26 5 3
(21) 13 11 3 3 ← (22) 14 13 3
(29) 3 5 7 7 ← (33) 5 7 7
(31) 6 6 5 3 ← (38) 6 5 3
(33) 9 3 3 3 ← (34) 10 5 3
(42) 1 2 3 3 ← (44) 2 3 3

(51, 6)

(3) 10 17 7 7 7
(6) 9 15 7 7 7
(7) 11 14 5 7 7 ← (8) 13 13 11 7
(10) 9 11 7 7 7 ← (14) 17 7 7 7
(11) 7 14 5 7 7 ← (12) 11 15 7 7
(11) 18 3 5 7 7 ← (13) 20 5 7 7
(13) 20 9 3 3 3 ← (14) 21 11 3 3
(18) 11 3 5 7 7 ← (20) 13 5 7 7
(21) 12 9 3 3 3 ← (22) 13 11 3 3
(27) 2 3 5 7 7 ← (29) 4 5 7 7
(30) 3 5 7 3 3 ← (35) 8 3 3 3
(31) 4 7 3 3 3 ← (32) 6 6 5 3
(33) 4 5 3 3 3 ← (34) 5 7 3 3
(37) 5 1 2 3 3 ← (38) 6 2 3 3

(51, 7)

(1) 5 9 15 7 7 7
(2) 8 9 11 7 7 7
(3) 9 7 13 5 7 7 ← (4) 10 17 7 7 7
(4) 6 9 11 7 7 7
(7) 7 14 4 5 7 7 ← (8) 11 14 5 7 7
(9) 12 12 9 3 3 3 ← (12) 18 3 5 7 7
(11) 5 5 9 7 7 7 ← (12) 7 14 5 7 7
(11) 17 3 6 6 5 3 ← (14) 20 9 3 3 3
(13) 3 5 9 7 7 7 ← (17) 5 9 7 7 7
(15) 5 9 3 5 7 7 ← (21) 9 3 5 7 7
(19) 9 3 6 6 5 3 ← (22) 12 9 3 3 3
(25) 3 3 6 6 5 3 ← (28) 2 3 5 7 7
(28) 2 3 5 7 3 3 ← (34) 4 5 3 3 3
(31) 2 4 5 3 3 3 ← (32) 4 7 3 3 3
(35) 1 2 4 3 3 3 ← (37) 2 4 3 3 3
(37) 3 4 4 1 1 1 ← (38) 5 1 2 3 3

(51, 8)

(3) 5 10 11 3 5 7 7
(3) 8 5 5 9 7 7 7 ← (4) 9 7 13 5 7 7
(4) 9 3 5 9 7 7 7
(9) 10 9 3 6 6 5 3 ← (10) 12 12 9 3 3 3
(10) 11 12 4 5 3 3 3 ← (12) 17 3 6 6 5 3
(12) 3 5 9 3 5 7 7 ← (18) 5 7 3 5 7 7
(13) 6 9 3 6 6 5 3 ← (14) 8 12 9 3 3 3
(14) 3 5 7 3 5 7 7 ← (16) 5 9 3 5 7 7
(18) 5 5 3 6 6 5 3 ← (20) 9 3 6 6 5 3
(21) 10 2 4 5 3 3 3 ← (22) 12 4 5 3 3 3
(25) 6 2 4 5 3 3 3 ← (32) 2 4 5 3 3 3
(34) 1 1 2 4 3 3 3 ← (36) 1 2 4 3 3 3
(35) 2 3 4 4 1 1 1 ← (38) 3 4 4 1 1 1

(51, 9)

(3) 4 6 3 5 9 7 7 7 ← (4) 5 10 11 3 5 7 7
(5) 9 3 5 7 3 5 7 7
(9) 9 5 5 3 6 6 5 3 ← (10) 10 9 3 6 6 5 3
(11) 5 6 5 2 3 5 7 7 ← (17) 6 5 2 3 5 7 7
(13) 3 6 5 2 3 5 7 7 ← (14) 6 9 3 6 6 5 3
(19) 3 6 2 3 5 7 3 3 ← (20) 6 3 3 6 6 5 3
(21) 7 13 1 * 1 ← (22) 10 2 4 5 3 3 3
(23) 6 ..4 5 3 3 3 ← (29) 13 1 * 1
(25) 4 ..4 5 3 3 3 ← (26) 6 2 4 5 3 3 3
(34) 1 2 3 4 4 1 1 1 ← (36) 2 3 4 4 1 1 1

(51, 10)

(3) 2 3 5 3 5 9 7 7 7 ← (4) 4 6 3 5 9 7 7 7
(3) 4 5 3 5 9 3 5 7 7 ← (5) 8 3 5 9 3 5 7 7
(9) 4 5 5 5 3 6 6 5 3 ← (12) 5 6 5 2 3 5 7 7
(13) 2 3 5 5 3 6 6 5 3 ← (14) 3 6 5 2 3 5 7 7
(17) 3 5 6 2 4 5 3 3 3 ← (18) 5 6 2 3 5 7 3 3
(19) ...3 3 6 6 5 3 ← (20) 3 6 2 3 5 7 3 3
(21) 5 8 1 1 2 4 3 3 3 ← (22) 7 13 1 * 1
(22) ....3 5 7 3 3 ← (27) 8 1 1 2 4 3 3 3
(23) 4 ...4 5 3 3 3 ← (24) 6 ..4 5 3 3 3
(25) ....4 5 3 3 3 ← (26) 4 ..4 5 3 3 3
(29) 5 1 2 3 4 4 1 1 1 ← (30) 6 2 3 4 4 1 1 1

(51, 11)

(1) 5 5 5 6 5 2 3 5 7 7
(7) 2 4 5 5 5 3 6 6 5 3 ← (10) 4 5 5 5 3 6 6 5 3
(11) 1 2 4 7 3 3 6 6 5 3 ← (13) 2 4 7 3 3 6 6 5 3
(17) ....3 3 6 6 5 3 ← (18) 3 5 6 2 4 5 3 3 3
(20) .....3 5 7 3 3 ← (26) ....4 5 3 3 3
(21) 4 ....4 5 3 3 3 ← (22) 5 8 1 1 2 4 3 3 3
(23) .....4 5 3 3 3 ← (24) 4 ...4 5 3 3 3
(27) 1 * 2 4 3 3 3 ← (29) * 2 4 3 3 3
(29) 3 4 4 1 1 * 1 ← (30) 5 1 2 3 4 4 1 1 1

(51, 12)

(2) 2 4 3 5 6 5 2 3 5 7 7
(5) ..4 5 5 5 3 6 6 5 3 ← (8) 2 4 5 5 5 3 6 6 5 3
(10) 1 1 2 4 7 3 3 6 6 5 3 ← (12) 1 2 4 7 3 3 6 6 5 3
(17) 6 .....4 5 3 3 3 ← (24) .....4 5 3 3 3
(21) ......4 5 3 3 3 ← (22) 4 ....4 5 3 3 3
(26) 1 1 * 2 4 3 3 3 ← (28) 1 * 2 4 3 3 3
(27) 2 3 4 4 1 1 * 1 ← (30) 3 4 4 1 1 * 1

(51, 13)

(3) ...4 5 5 5 3 6 6 5 3 ← (6) ..4 5 5 5 3 6 6 5 3
(11) 3 6 .....3 5 7 3 3 ← (12) 6 ....3 3 6 6 5 3
(15) 6 ......4 5 3 3 3 ← (22) ......4 5 3 3 3
(17) 4 ......4 5 3 3 3 ← (18) 6 .....4 5 3 3 3
(26) 1 2 3 4 4 1 1 * 1 ← (28) 2 3 4 4 1 1 * 1

(51, 14)

(1) ....4 5 5 5 3 6 6 5 3 ← (4) ...4 5 5 5 3 6 6 5 3
(9) 3 5 6 .....4 5 3 3 3 ← (10) 5 6 .....3 5 7 3 3
(11) .......3 3 6 6 5 3 ← (12) 3 6 .....3 5 7 3 3
(14) ........3 5 7 3 3 ← (19) 8 1 1 * 2 4 3 3 3
(15) 4 .......4 5 3 3 3 ← (16) 6 ......4 5 3 3 3
(17) ........4 5 3 3 3 ← (18) 4 ......4 5 3 3 3
(21) 5 1 2 3 4 4 1 1 * 1 ← (22) 6 2 3 4 4 1 1 * 1

(51, 15)

(3) 1 * 2 4 7 3 3 6 6 5 3 ← (5) * 2 4 7 3 3 6 6 5 3
(5) 1.........4 5 3 3 3
(9) ........3 3 6 6 5 3 ← (10) 3 5 6 .....4 5 3 3 3
(12) .........3 5 7 3 3 ← (18) ........4 5 3 3 3
(15) .........4 5 3 3 3 ← (16) 4 .......4 5 3 3 3
(19) 1 * * 2 4 3 3 3 ← (21) * * 2 4 3 3 3
(21) 3 4 4 1 1 * * 1 ← (22) 5 1 2 3 4 4 1 1 * 1

(51, 16)

(2) 1 1 * 2 4 7 3 3 6 6 5 3 ← (4) 1 * 2 4 7 3 3 6 6 5 3
(3) 6 ........3 3 6 6 5 3
(5) 10 .........4 5 3 3 3 ← (6) 1.........4 5 3 3 3
(9) 6 .........4 5 3 3 3 ← (16) .........4 5 3 3 3
(18) 1 1 * * 2 4 3 3 3 ← (20) 1 * * 2 4 3 3 3
(19) 2 3 4 4 1 1 * * 1 ← (22) 3 4 4 1 1 * * 1

(51, 17)

(1) 5 6 .........3 5 7 3 3
(3) 3 6 .........3 5 7 3 3 ← (4) 6 ........3 3 6 6 5 3
(5) 7 13 1 * * * 1 ← (6) 10 .........4 5 3 3 3
(7) 6 ..........4 5 3 3 3 ← (13) 13 1 * * * 1
(9) 4 ..........4 5 3 3 3 ← (10) 6 .........4 5 3 3 3
(18) 1 2 3 4 4 1 1 * * 1 ← (20) 2 3 4 4 1 1 * * 1

(51, 18)

(1) 3 5 6 .........4 5 3 3 3 ← (2) 5 6 .........3 5 7 3 3
(3) ...........3 3 6 6 5 3 ← (4) 3 6 .........3 5 7 3 3
(5) 5 8 1 1 * * 2 4 3 3 3 ← (6) 7 13 1 * * * 1
(6) ...........3 5 7 3 3 ← (11) 8 1 1 * * 2 4 3 3 3
(7) 4 ...........4 5 3 3 3 ← (8) 6 ..........4 5 3 3 3
(9) ...........4 5 3 3 3 ← (10) 4 ..........4 5 3 3 3
(13) 5 1 2 3 4 4 1 1 * * 1 ← (14) 6 2 3 4 4 1 1 * * 1

(51, 19)

(1) ...........3 3 6 6 5 3 ← (2) 3 5 6 .........4 5 3 3 3
(4) ............3 5 7 3 3 ← (10) ...........4 5 3 3 3
(5) 4 ...........4 5 3 3 3 ← (6) 5 8 1 1 * * 2 4 3 3 3
(7) ............4 5 3 3 3 ← (8) 4 ...........4 5 3 3 3
(11) 1 * * * 2 4 3 3 3 ← (13) * * * 2 4 3 3 3
(13) 3 4 4 1 1 * * * 1 ← (14) 5 1 2 3 4 4 1 1 * * 1

(51, 20)

(1) 6 ............4 5 3 3 3 ← (8) ............4 5 3 3 3
(5) ............4 5 3 3 3 ← (6) 4 ...........4 5 3 3 3
(10) 1 1 * * * 2 4 3 3 3 ← (12) 1 * * * 2 4 3 3 3
(11) 2 3 4 4 1 1 * * * 1 ← (14) 3 4 4 1 1 * * * 1

(51, 21)

(1) 4 ............4 5 3 3 3 ← (2) 6 ............4 5 3 3 3
(10) 1 2 3 4 4 1 1 * * * 1 ← (12) 2 3 4 4 1 1 * * * 1

(51, 22)

(1) .............4 5 3 3 3 ← (2) 4 ............4 5 3 3 3
(5) 5 1 2 3 4 4 1 1 * * * 1 ← (6) 6 2 3 4 4 1 1 * * * 1

(51, 23)

(3) 1 * * * * 2 4 3 3 3 ← (5) * * * * 2 4 3 3 3
(5) 3 4 4 1 1 * * * * 1 ← (6) 5 1 2 3 4 4 1 1 * * * 1

(52, 2)

(51) 1 ← (53)

(52, 3)

(21) 30 1 ← (22) 31
(37) 14 1 ← (38) 15
(45) 6 1 ← (46) 7
(49) 2 1 ← (50) 3
(50) 1 1 ← (52) 1

(52, 4)

(7) 15 15 15
(11) 11 15 15 ← (39) 7 7
(15) 23 7 7 ← (19) 27 7
(19) 27 3 3 ← (21) 29 3
(21) 29 1 1 ← (22) 30 1
(31) 7 7 7 ← (35) 11 7
(35) 11 3 3 ← (37) 13 3
(37) 13 1 1 ← (38) 14 1
(43) 3 3 3 ← (45) 5 3
(45) 5 1 1 ← (46) 6 1
(49) 1 1 1 ← (50) 2 1

(52, 5)

(2) 9 11 15 15
(4) 7 11 15 15
(7) 14 13 11 7 ← (8) 15 15 15
(11) 10 13 11 7 ← (12) 11 15 15
(12) 19 7 7 7 ← (16) 23 7 7
(18) 25 3 3 3 ← (20) 27 3 3
(19) 14 5 7 7 ← (32) 7 7 7
(21) 28 1 1 1 ← (22) 29 1 1
(30) 3 5 7 7 ← (34) 5 7 7
(34) 9 3 3 3 ← (36) 11 3 3
(37) 12 1 1 1 ← (38) 13 1 1
(43) 1 2 3 3 ← (45) 2 3 3
(45) 4 1 1 1 ← (46) 5 1 1

(52, 6)

(1) 7 13 13 11 7
(3) 9 11 15 7 7
(5) 7 11 15 7 7
(7) 9 15 7 7 7 ← (9) 13 13 11 7
(7) 13 13 5 7 7 ← (14) 20 5 7 7
(11) 9 11 7 7 7 ← (12) 10 13 11 7
(13) 7 13 5 7 7 ← (21) 13 5 7 7
(15) 14 4 5 7 7 ← (30) 4 5 7 7
(19) 11 3 5 7 7 ← (20) 14 5 7 7
(21) 24 4 1 1 1 ← (22) 28 1 1 1
(29) 3 6 6 5 3 ← (35) 5 7 3 3
(31) 3 5 7 3 3 ← (33) 6 6 5 3
(35) 3 6 2 3 3 ← (36) 8 3 3 3
(37) 8 4 1 1 1 ← (38) 12 1 1 1
(41) 4 4 1 1 1 ← (44) 1 2 3 3
(43) * 1 ← (46) 4 1 1 1

(52, 7)

(1) 6 9 15 7 7 7 ← (2) 7 13 13 11 7
(2) 5 9 15 7 7 7
(3) 8 9 11 7 7 7 ← (4) 9 11 15 7 7
(5) 6 9 11 7 7 7 ← (6) 7 11 15 7 7
(6) 11 5 9 7 7 7 ← (13) 18 3 5 7 7
(7) 12 11 3 5 7 7 ← (8) 13 13 5 7 7
(8) 7 14 4 5 7 7 ← (29) 2 3 5 7 7
(12) 5 5 9 7 7 7 ← (20) 11 3 5 7 7
(14) 3 5 9 7 7 7 ← (18) 5 9 7 7 7
(15) 13 2 3 5 7 7 ← (16) 14 4 5 7 7
(21) 22 * 1 ← (22) 24 4 1 1 1
(26) 3 3 6 6 5 3 ← (32) 3 5 7 3 3
(29) 2 3 5 7 3 3 ← (30) 3 6 6 5 3
(35) ..4 3 3 3 ← (36) 3 6 2 3 3
(37) 6 * 1 ← (38) 8 4 1 1 1
(41) 2 * 1 ← (42) 4 4 1 1 1
(42) 1 * 1 ← (44) * 1

(52, 8)

(1) 4 6 9 11 7 7 7 ← (2) 6 9 15 7 7 7
(4) 8 5 5 9 7 7 7
(5) 9 3 5 9 7 7 7 ← (11) 12 12 9 3 3 3
(6) 8 3 5 9 7 7 7 ← (23) 12 4 5 3 3 3
(7) 7 8 12 9 3 3 3 ← (8) 12 11 3 5 7 7
(11) 11 12 4 5 3 3 3 ← (13) 17 3 6 6 5 3
(13) 3 5 9 3 5 7 7 ← (19) 5 7 3 5 7 7
(15) 3 5 7 3 5 7 7 ← (17) 5 9 3 5 7 7
(15) 7 12 4 5 3 3 3 ← (16) 13 2 3 5 7 7
(19) 5 5 3 6 6 5 3 ← (21) 9 3 6 6 5 3
(21) 21 1 * 1 ← (22) 22 * 1
(23) 6 2 3 5 7 3 3 ← (30) 2 3 5 7 3 3
(35) 1 1 2 4 3 3 3 ← (36) ..4 3 3 3
(37) 5 1 * 1 ← (38) 6 * 1
(41) 1 1 * 1 ← (42) 2 * 1

(52, 9)

(1) 3 5 10 11 3 5 7 7
(5) 4 5 3 5 9 7 7 7 ← (21) 6 3 3 6 6 5 3
(6) 9 3 5 7 3 5 7 7 ← (16) 3 5 7 3 5 7 7
(10) 9 5 5 3 6 6 5 3 ← (12) 11 12 4 5 3 3 3
(15) 4 7 3 3 6 6 5 3 ← (20) 5 5 3 6 6 5 3
(15) 5 6 3 3 6 6 5 3 ← (16) 7 12 4 5 3 3 3
(17) 3 6 3 3 6 6 5 3 ← (18) 6 5 2 3 5 7 7
(21) 5 6 2 4 5 3 3 3 ← (27) 6 2 4 5 3 3 3
(21) 20 1 1 * 1 ← (22) 21 1 * 1
(23) 3 6 2 4 5 3 3 3 ← (24) 6 2 3 5 7 3 3
(29) 12 1 1 * 1 ← (30) 13 1 * 1
(35) 1 2 3 4 4 1 1 1 ← (37) 2 3 4 4 1 1 1
(37) 4 1 1 * 1 ← (38) 5 1 * 1

(52, 10)

(1) 5 9 3 5 7 3 5 7 7
(4) 2 3 5 3 5 9 7 7 7 ← (19) 5 6 2 3 5 7 3 3
(4) 4 5 3 5 9 3 5 7 7
(7) 5 5 6 5 2 3 5 7 7 ← (13) 5 6 5 2 3 5 7 7
(14) 2 3 5 5 3 6 6 5 3 ← (16) 4 7 3 3 6 6 5 3
(15) 3 5 6 2 3 5 7 3 3 ← (16) 5 6 3 3 6 6 5 3
(17) 2 4 3 3 3 6 6 5 3 ← (18) 3 6 3 3 6 6 5 3
(20) ...3 3 6 6 5 3 ← (25) 6 ..4 5 3 3 3
(21) 3 6 ..4 5 3 3 3 ← (22) 5 6 2 4 5 3 3 3
(21) 16 4 1 1 * 1 ← (22) 20 1 1 * 1
(23) ....3 5 7 3 3 ← (24) 3 6 2 4 5 3 3 3
(27) 3 6 2 3 4 4 1 1 1 ← (28) 8 1 1 2 4 3 3 3
(29) 8 4 1 1 * 1 ← (30) 12 1 1 * 1
(33) 4 4 1 1 * 1 ← (36) 1 2 3 4 4 1 1 1
(35) * * 1 ← (38) 4 1 1 * 1

(52, 11)

(2) 5 5 5 6 5 2 3 5 7 7
(5) 4 3 5 6 5 2 3 5 7 7 ← (8) 5 5 6 5 2 3 5 7 7
(11) ..4 7 3 3 6 6 5 3 ← (14) 2 4 7 3 3 6 6 5 3
(15) ..4 3 3 3 6 6 5 3 ← (16) 3 5 6 2 3 5 7 3 3
(18) ....3 3 6 6 5 3 ← (24) ....3 5 7 3 3
(21) .....3 5 7 3 3 ← (22) 3 6 ..4 5 3 3 3
(21) 14 * * 1 ← (22) 16 4 1 1 * 1
(27) 2 * 2 4 3 3 3 ← (28) 3 6 2 3 4 4 1 1 1
(29) 6 * * 1 ← (30) 8 4 1 1 * 1
(33) 2 * * 1 ← (34) 4 4 1 1 * 1
(34) 1 * * 1 ← (36) * * 1

(52, 12)

(3) 2 4 3 5 6 5 2 3 5 7 7 ← (6) 4 3 5 6 5 2 3 5 7 7
(9) 6 ..4 3 3 3 6 6 5 3 ← (13) 1 2 4 7 3 3 6 6 5 3
(11) 1 1 2 4 7 3 3 6 6 5 3 ← (12) ..4 7 3 3 6 6 5 3
(15) 6 .....3 5 7 3 3 ← (22) .....3 5 7 3 3
(21) 13 1 * * 1 ← (22) 14 * * 1
(27) 1 1 * 2 4 3 3 3 ← (28) 2 * 2 4 3 3 3
(29) 5 1 * * 1 ← (30) 6 * * 1
(33) 1 1 * * 1 ← (34) 2 * * 1

(52, 13)

(1) ..4 3 5 6 5 2 3 5 7 7 ← (4) 2 4 3 5 6 5 2 3 5 7 7
(7) 4 1 1 2 4 7 3 3 6 6 5 3 ← (12) 1 1 2 4 7 3 3 6 6 5 3
(9) 3 6 ....3 3 6 6 5 3 ← (10) 6 ..4 3 3 3 6 6 5 3
(13) 5 6 .....4 5 3 3 3 ← (19) 6 .....4 5 3 3 3
(15) 3 6 .....4 5 3 3 3 ← (16) 6 .....3 5 7 3 3
(21) 12 1 1 * * 1 ← (22) 13 1 * * 1
(27) 1 2 3 4 4 1 1 * 1 ← (29) 2 3 4 4 1 1 * 1
(29) 4 1 1 * * 1 ← (30) 5 1 * * 1

(52, 14)

(2) ....4 5 5 5 3 6 6 5 3
(5) 24 4 1 1 * * 1 ← (8) 4 1 1 2 4 7 3 3 6 6 5 3
(9) .....4 3 3 3 6 6 5 3 ← (10) 3 6 ....3 3 6 6 5 3
(12) .....3 3 6 6 5 3 ← (17) 6 .....4 5 3 3 3
(13) 3 6 .....4 5 3 3 3 ← (14) 5 6 .....4 5 3 3 3
(15) .....3 5 7 3 3 ← (16) 3 6 .....4 5 3 3 3
(19) 3 6 2 3 4 4 1 1 * 1 ← (20) 8 1 1 * 2 4 3 3 3
(21) 8 4 1 1 * * 1 ← (22) 12 1 1 * * 1
(25) 4 4 1 1 * * 1 ← (28) 1 2 3 4 4 1 1 * 1
(27) * * * 1 ← (30) 4 1 1 * * 1

(52, 15)

(3) 2 * 2 4 7 3 3 6 6 5 3 ← (6) * 2 4 7 3 3 6 6 5 3
(5) 22 * * * 1 ← (6) 24 4 1 1 * * 1
(10) .....3 3 6 6 5 3 ← (16) .....3 5 7 3 3
(13) .....3 5 7 3 3 ← (14) 3 6 .....4 5 3 3 3
(19) 2 * * 2 4 3 3 3 ← (20) 3 6 2 3 4 4 1 1 * 1
(21) 6 * * * 1 ← (22) 8 4 1 1 * * 1
(25) 2 * * * 1 ← (26) 4 4 1 1 * * 1
(26) 1 * * * 1 ← (28) * * * 1

(52, 16)

(1) 6 .....4 3 3 3 6 6 5 3 ← (5) 1 * 2 4 7 3 3 6 6 5 3
(3) 1 1 * 2 4 7 3 3 6 6 5 3 ← (4) 2 * 2 4 7 3 3 6 6 5 3
(5) 21 1 * * * 1 ← (6) 22 * * * 1
(7) 6 .....3 5 7 3 3 ← (14) .....3 5 7 3 3
(19) 1 1 * * 2 4 3 3 3 ← (20) 2 * * 2 4 3 3 3
(21) 5 1 * * * 1 ← (22) 6 * * * 1
(25) 1 1 * * * 1 ← (26) 2 * * * 1

(52, 17)

(1) 3 6 .....3 3 6 6 5 3 ← (2) 6 .....4 3 3 3 6 6 5 3
(5) 5 6 .....4 5 3 3 3 ← (11) 6 .....4 5 3 3 3
(5) 20 1 1 * * * 1 ← (6) 21 1 * * * 1
(7) 3 6 .....4 5 3 3 3 ← (8) 6 .....3 5 7 3 3
(13) 12 1 1 * * * 1 ← (14) 13 1 * * * 1
(19) 1 2 3 4 4 1 1 * * 1 ← (21) 2 3 4 4 1 1 * * 1
(21) 4 1 1 * * * 1 ← (22) 5 1 * * * 1

(52, 18)

(1) .....4 3 3 3 6 6 5 3 ← (2) 3 6 .....3 3 6 6 5 3
(4) .....3 3 6 6 5 3 ← (9) 6 .....4 5 3 3 3
(5) 3 6 .....4 5 3 3 3 ← (6) 5 6 .....4 5 3 3 3
(5) 16 4 1 1 * * * 1 ← (6) 20 1 1 * * * 1
(7) .....3 5 7 3 3 ← (8) 3 6 .....4 5 3 3 3
(11) 3 6 2 3 4 4 1 1 * * 1 ← (12) 8 1 1 * * 2 4 3 3 3
(13) 8 4 1 1 * * * 1 ← (14) 12 1 1 * * * 1
(17) 4 4 1 1 * * * 1 ← (20) 1 2 3 4 4 1 1 * * 1
(19) * * * * 1 ← (22) 4 1 1 * * * 1

(52, 19)

(2) .....3 3 6 6 5 3 ← (8) .....3 5 7 3 3
(5) .....3 5 7 3 3 ← (6) 3 6 .....4 5 3 3 3
(5) 14 * * * * 1 ← (6) 16 4 1 1 * * * 1
(11) 2 * * * 2 4 3 3 3 ← (12) 3 6 2 3 4 4 1 1 * * 1
(13) 6 * * * * 1 ← (14) 8 4 1 1 * * * 1
(17) 2 * * * * 1 ← (18) 4 4 1 1 * * * 1
(18) 1 * * * * 1 ← (20) * * * * 1

(52, 20)

(5) 13 1 * * * * 1 ← (6) 14 * * * * 1
(6) .....4 5 3 3 3
(11) 1 1 * * * 2 4 3 3 3 ← (12) 2 * * * 2 4 3 3 3
(13) 5 1 * * * * 1 ← (14) 6 * * * * 1
(17) 1 1 * * * * 1 ← (18) 2 * * * * 1

(52, 21)

(3) 8 1 1 * * * 2 4 3 3 3
(5) 12 1 1 * * * * 1 ← (6) 13 1 * * * * 1
(11) 1 2 3 4 4 1 1 * * * 1 ← (13) 2 3 4 4 1 1 * * * 1
(13) 4 1 1 * * * * 1 ← (14) 5 1 * * * * 1

(52, 22)

(2) .....4 5 3 3 3
(3) 3 6 2 3 4 4 1 1 * * * 1 ← (4) 8 1 1 * * * 2 4 3 3 3
(5) 8 4 1 1 * * * * 1 ← (6) 12 1 1 * * * * 1
(9) 4 4 1 1 * * * * 1 ← (12) 1 2 3 4 4 1 1 * * * 1
(11) * * * * * 1 ← (14) 4 1 1 * * * * 1

(53, 3)

(15) 23 15 ← (23) 31
(23) 15 15 ← (39) 15
(47) 3 3 ← (51) 3
(51) 1 1 ← (53) 1

(53, 4)

(14) 21 11 7 ← (22) 29 3
(15) 22 13 3 ← (16) 23 15
(19) 26 5 3 ← (20) 27 7
(22) 13 11 7 ← (38) 13 3
(23) 14 13 3 ← (24) 15 15
(35) 10 5 3 ← (36) 11 7
(39) 6 5 3 ← (40) 7 7
(44) 3 3 3 ← (48) 3 3
(50) 1 1 1 ← (52) 1 1

(53, 5)

(3) 9 11 15 15
(5) 7 11 15 15
(8) 14 13 11 7 ← (21) 27 3 3
(13) 11 15 7 7 ← (37) 11 3 3
(13) 19 7 7 7 ← (17) 23 7 7
(15) 17 7 7 7 ← (33) 7 7 7
(15) 21 11 3 3 ← (16) 22 13 3
(19) 25 3 3 3 ← (20) 26 5 3
(23) 13 11 3 3 ← (24) 14 13 3
(31) 3 5 7 7 ← (35) 5 7 7
(35) 9 3 3 3 ← (36) 10 5 3
(39) 6 2 3 3 ← (46) 2 3 3

(53, 6)

(1) 4 7 11 15 15
(5) 10 17 7 7 7 ← (20) 25 3 3 3
(8) 9 15 7 7 7 ← (36) 9 3 3 3
(9) 11 14 5 7 7 ← (10) 13 13 11 7
(12) 9 11 7 7 7 ← (22) 13 5 7 7
(13) 7 14 5 7 7 ← (14) 11 15 7 7
(14) 7 13 5 7 7 ← (16) 17 7 7 7
(15) 20 9 3 3 3 ← (16) 21 11 3 3
(22) 9 3 5 7 7 ← (32) 3 5 7 7
(23) 12 9 3 3 3 ← (24) 13 11 3 3
(33) 4 7 3 3 3 ← (34) 6 6 5 3
(35) 4 5 3 3 3 ← (36) 5 7 3 3
(38) 2 4 3 3 3 ← (45) 1 2 3 3
(39) 5 1 2 3 3 ← (40) 6 2 3 3

(53, 7)

(1) 5 7 11 15 7 7
(3) 5 9 15 7 7 7
(4) 8 9 11 7 7 7 ← (16) 20 9 3 3 3
(5) 9 7 13 5 7 7 ← (6) 10 17 7 7 7
(6) 6 9 11 7 7 7 ← (19) 5 9 7 7 7
(7) 11 5 9 7 7 7 ← (9) 13 13 5 7 7
(9) 7 14 4 5 7 7 ← (10) 11 14 5 7 7
(13) 5 5 9 7 7 7 ← (14) 7 14 5 7 7
(15) 3 5 9 7 7 7 ← (17) 14 4 5 7 7
(15) 8 12 9 3 3 3 ← (24) 12 9 3 3 3
(27) 3 3 6 6 5 3 ← (33) 3 5 7 3 3
(33) 2 4 5 3 3 3 ← (34) 4 7 3 3 3
(37) 1 2 4 3 3 3 ← (43) 4 4 1 1 1
(39) 3 4 4 1 1 1 ← (40) 5 1 2 3 3
(43) 1 * 1 ← (45) * 1

(53, 8)

(2) 4 6 9 11 7 7 7 ← (14) 17 3 6 6 5 3
(5) 5 10 11 3 5 7 7 ← (16) 3 5 9 7 7 7
(5) 8 5 5 9 7 7 7 ← (6) 9 7 13 5 7 7
(6) 9 3 5 9 7 7 7 ← (8) 11 5 9 7 7 7
(7) 8 3 5 9 7 7 7 ← (10) 7 14 4 5 7 7
(8) 7 8 12 9 3 3 3 ← (22) 9 3 6 6 5 3
(11) 10 9 3 6 6 5 3 ← (12) 12 12 9 3 3 3
(14) 3 5 9 3 5 7 7 ← (18) 5 9 3 5 7 7
(15) 6 9 3 6 6 5 3 ← (16) 8 12 9 3 3 3
(23) 10 2 4 5 3 3 3 ← (24) 12 4 5 3 3 3
(36) 1 1 2 4 3 3 3 ← (40) 3 4 4 1 1 1
(42) 1 1 * 1 ← (44) 1 * 1

(53, 9)

(1) 4 8 5 5 9 7 7 7
(2) 3 5 10 11 3 5 7 7
(5) 4 6 3 5 9 7 7 7 ← (6) 5 10 11 3 5 7 7
(6) 4 5 3 5 9 7 7 7 ← (8) 8 3 5 9 7 7 7
(6) 8 3 5 9 3 5 7 7 ← (19) 6 5 2 3 5 7 7
(7) 9 3 5 7 3 5 7 7 ← (17) 3 5 7 3 5 7 7
(11) 9 5 5 3 6 6 5 3 ← (12) 10 9 3 6 6 5 3
(15) 3 6 5 2 3 5 7 7 ← (16) 6 9 3 6 6 5 3
(21) 3 6 2 3 5 7 3 3 ← (22) 6 3 3 6 6 5 3
(23) 7 13 1 * 1 ← (24) 10 2 4 5 3 3 3
(27) 4 ..4 5 3 3 3 ← (28) 6 2 4 5 3 3 3
(31) 6 2 3 4 4 1 1 1 ← (38) 2 3 4 4 1 1 1

(53, 10)

(2) 5 9 3 5 7 3 5 7 7 ← (8) 9 3 5 7 3 5 7 7
(5) 2 3 5 3 5 9 7 7 7 ← (6) 4 6 3 5 9 7 7 7
(5) 4 5 3 5 9 3 5 7 7 ← (17) 4 7 3 3 6 6 5 3
(11) 4 5 5 5 3 6 6 5 3 ← (14) 5 6 5 2 3 5 7 7
(15) 2 3 5 5 3 6 6 5 3 ← (16) 3 6 5 2 3 5 7 7
(18) 2 4 3 3 3 6 6 5 3
(19) 3 5 6 2 4 5 3 3 3 ← (20) 5 6 2 3 5 7 3 3
(21) ...3 3 6 6 5 3 ← (22) 3 6 2 3 5 7 3 3
(23) 5 8 1 1 2 4 3 3 3 ← (24) 7 13 1 * 1
(25) 4 ...4 5 3 3 3 ← (26) 6 ..4 5 3 3 3
(27) ....4 5 3 3 3 ← (28) 4 ..4 5 3 3 3
(30) * 2 4 3 3 3 ← (37) 1 2 3 4 4 1 1 1
(31) 5 1 2 3 4 4 1 1 1 ← (32) 6 2 3 4 4 1 1 1

(53, 11)

(3) 5 5 5 6 5 2 3 5 7 7 ← (9) 5 5 6 5 2 3 5 7 7
(9) 2 4 5 5 5 3 6 6 5 3 ← (12) 4 5 5 5 3 6 6 5 3
(16) ..4 3 3 3 6 6 5 3
(19) ....3 3 6 6 5 3 ← (20) 3 5 6 2 4 5 3 3 3
(23) 4 ....4 5 3 3 3 ← (24) 5 8 1 1 2 4 3 3 3
(25) .....4 5 3 3 3 ← (26) 4 ...4 5 3 3 3
(29) 1 * 2 4 3 3 3 ← (35) 4 4 1 1 * 1
(31) 3 4 4 1 1 * 1 ← (32) 5 1 2 3 4 4 1 1 1
(35) 1 * * 1 ← (37) * * 1

(53, 12)

(1) 4 3 5 5 6 5 2 3 5 7 7 ← (4) 5 5 5 6 5 2 3 5 7 7
(7) ..4 5 5 5 3 6 6 5 3 ← (10) 2 4 5 5 5 3 6 6 5 3
(13) 6 ....3 3 6 6 5 3
(23) ......4 5 3 3 3 ← (24) 4 ....4 5 3 3 3
(28) 1 1 * 2 4 3 3 3 ← (32) 3 4 4 1 1 * 1
(34) 1 1 * * 1 ← (36) 1 * * 1

(53, 13)

(2) ..4 3 5 6 5 2 3 5 7 7
(5) ...4 5 5 5 3 6 6 5 3 ← (8) ..4 5 5 5 3 6 6 5 3
(11) 5 6 .....3 5 7 3 3
(13) 3 6 .....3 5 7 3 3 ← (14) 6 ....3 3 6 6 5 3
(19) 4 ......4 5 3 3 3 ← (20) 6 .....4 5 3 3 3
(23) 6 2 3 4 4 1 1 * 1 ← (30) 2 3 4 4 1 1 * 1

(53, 14)

(3) ....4 5 5 5 3 6 6 5 3 ← (6) ...4 5 5 5 3 6 6 5 3
(10) .....4 3 3 3 6 6 5 3
(11) 3 5 6 .....4 5 3 3 3 ← (12) 5 6 .....3 5 7 3 3
(13) .......3 3 6 6 5 3 ← (14) 3 6 .....3 5 7 3 3
(17) 4 .......4 5 3 3 3 ← (18) 6 ......4 5 3 3 3
(19) ........4 5 3 3 3 ← (20) 4 ......4 5 3 3 3
(22) * * 2 4 3 3 3 ← (29) 1 2 3 4 4 1 1 * 1
(23) 5 1 2 3 4 4 1 1 * 1 ← (24) 6 2 3 4 4 1 1 * 1

(53, 15)

(1) .....4 5 5 5 3 6 6 5 3 ← (4) ....4 5 5 5 3 6 6 5 3
(7) 1.........4 5 3 3 3
(11) ........3 3 6 6 5 3 ← (12) 3 5 6 .....4 5 3 3 3
(17) .........4 5 3 3 3 ← (18) 4 .......4 5 3 3 3
(21) 1 * * 2 4 3 3 3 ← (27) 4 4 1 1 * * 1
(23) 3 4 4 1 1 * * 1 ← (24) 5 1 2 3 4 4 1 1 * 1
(27) 1 * * * 1 ← (29) * * * 1

(53, 16)

(4) 1 1 * 2 4 7 3 3 6 6 5 3
(5) 6 ........3 3 6 6 5 3
(7) 10 .........4 5 3 3 3 ← (8) 1.........4 5 3 3 3
(20) 1 1 * * 2 4 3 3 3 ← (24) 3 4 4 1 1 * * 1
(26) 1 1 * * * 1 ← (28) 1 * * * 1

(53, 17)

(3) 5 6 .........3 5 7 3 3
(5) 3 6 .........3 5 7 3 3 ← (6) 6 ........3 3 6 6 5 3
(7) 7 13 1 * * * 1 ← (8) 10 .........4 5 3 3 3
(11) 4 ..........4 5 3 3 3 ← (12) 6 .........4 5 3 3 3
(15) 6 2 3 4 4 1 1 * * 1 ← (22) 2 3 4 4 1 1 * * 1

(53, 18)

(2) .........4 3 3 3 6 6 5 3
(3) 3 5 6 .........4 5 3 3 3 ← (4) 5 6 .........3 5 7 3 3
(5) ...........3 3 6 6 5 3 ← (6) 3 6 .........3 5 7 3 3
(7) 5 8 1 1 * * 2 4 3 3 3 ← (8) 7 13 1 * * * 1
(9) 4 ...........4 5 3 3 3 ← (10) 6 ..........4 5 3 3 3
(11) ............4 5 3 3 3 ← (12) 4 ..........4 5 3 3 3
(14) * * * 2 4 3 3 3 ← (21) 1 2 3 4 4 1 1 * * 1
(15) 5 1 2 3 4 4 1 1 * * 1 ← (16) 6 2 3 4 4 1 1 * * 1

(53, 19)

(3) ............3 3 6 6 5 3 ← (4) 3 5 6 .........4 5 3 3 3
(6) ............3 5 7 3 3
(7) 4 ............4 5 3 3 3 ← (8) 5 8 1 1 * * 2 4 3 3 3
(9) ............4 5 3 3 3 ← (10) 4 ...........4 5 3 3 3
(13) 1 * * * 2 4 3 3 3 ← (19) 4 4 1 1 * * * 1
(15) 3 4 4 1 1 * * * 1 ← (16) 5 1 2 3 4 4 1 1 * * 1
(19) 1 * * * * 1 ← (21) * * * * 1

(53, 20)

(3) 6 .....4 5 3 3 3
(7) .....4 5 3 3 3 ← (8) 4 .....4 5 3 3 3
(12) 1 1 * * * 2 4 3 3 3 ← (16) 3 4 4 1 1 * * * 1
(18) 1 1 * * * * 1 ← (20) 1 * * * * 1

(53, 21)

(1) 6 .....4 5 3 3 3
(3) 4 .....4 5 3 3 3 ← (4) 6 .....4 5 3 3 3
(7) 6 2 3 4 4 1 1 * * * 1 ← (14) 2 3 4 4 1 1 * * * 1

(54, 2)

(47) 7 ← (55)

(54, 3)

(23) 30 1 ← (24) 31
(39) 14 1 ← (40) 15
(46) 5 3 ← (54) 1
(47) 6 1 ← (48) 7
(51) 2 1 ← (52) 3

(54, 4)

(9) 15 15 15 ← (21) 27 7
(13) 11 15 15 ← (37) 11 7
(15) 21 11 7 ← (17) 23 15
(23) 13 11 7 ← (25) 15 15
(23) 29 1 1 ← (24) 30 1
(39) 13 1 1 ← (40) 14 1
(40) 6 5 3 ← (53) 1 1
(45) 3 3 3 ← (49) 3 3
(47) 5 1 1 ← (48) 6 1
(51) 1 1 1 ← (52) 2 1

(54, 5)

(4) 9 11 15 15
(6) 7 11 15 15 ← (36) 5 7 7
(9) 14 13 11 7 ← (10) 15 15 15
(13) 10 13 11 7 ← (14) 11 15 15
(14) 19 7 7 7 ← (16) 21 11 7
(15) 20 5 7 7 ← (18) 23 7 7
(21) 14 5 7 7 ← (24) 13 11 7
(23) 28 1 1 1 ← (24) 29 1 1
(31) 4 5 7 7 ← (34) 7 7 7
(37) 8 3 3 3 ← (52) 1 1 1
(39) 12 1 1 1 ← (40) 13 1 1
(47) 4 1 1 1 ← (48) 5 1 1

(54, 6)

(1) 5 7 11 15 15
(2) 4 7 11 15 15
(3) 7 13 13 11 7
(5) 9 11 15 7 7 ← (10) 14 13 11 7
(7) 7 11 15 7 7 ← (11) 13 13 11 7
(9) 9 15 7 7 7 ← (23) 13 5 7 7
(13) 9 11 7 7 7 ← (14) 10 13 11 7
(14) 18 3 5 7 7 ← (16) 20 5 7 7
(15) 7 13 5 7 7 ← (17) 17 7 7 7
(21) 11 3 5 7 7 ← (22) 14 5 7 7
(23) 9 3 5 7 7 ← (33) 3 5 7 7
(23) 24 4 1 1 1 ← (24) 28 1 1 1
(30) 2 3 5 7 7 ← (32) 4 5 7 7
(31) 3 6 6 5 3 ← (35) 6 6 5 3
(36) 4 5 3 3 3 ← (48) 4 1 1 1
(37) 3 6 2 3 3 ← (38) 8 3 3 3
(39) 2 4 3 3 3 ← (41) 6 2 3 3
(39) 8 4 1 1 1 ← (40) 12 1 1 1

(54, 7)

(2) 5 7 11 15 7 7
(3) 6 9 15 7 7 7 ← (4) 7 13 13 11 7
(4) 5 9 15 7 7 7 ← (20) 5 9 7 7 7
(5) 8 9 11 7 7 7 ← (6) 9 11 15 7 7
(7) 6 9 11 7 7 7 ← (8) 7 11 15 7 7
(9) 12 11 3 5 7 7 ← (10) 13 13 5 7 7
(14) 5 5 9 7 7 7 ← (16) 7 13 5 7 7
(17) 13 2 3 5 7 7 ← (18) 14 4 5 7 7
(20) 5 7 3 5 7 7 ← (24) 9 3 5 7 7
(23) 22 * 1 ← (24) 24 4 1 1 1
(28) 3 3 6 6 5 3 ← (34) 3 5 7 3 3
(31) 2 3 5 7 3 3 ← (32) 3 6 6 5 3
(34) 2 4 5 3 3 3 ← (46) * 1
(37) ..4 3 3 3 ← (38) 3 6 2 3 3
(38) 1 2 4 3 3 3 ← (40) 2 4 3 3 3
(39) 6 * 1 ← (40) 8 4 1 1 1
(43) 2 * 1 ← (44) 4 4 1 1 1

(54, 8)

(1) 3 5 9 15 7 7 7
(3) 4 6 9 11 7 7 7 ← (4) 6 9 15 7 7 7
(6) 8 5 5 9 7 7 7 ← (19) 5 9 3 5 7 7
(7) 9 3 5 9 7 7 7 ← (9) 11 5 9 7 7 7
(9) 7 8 12 9 3 3 3 ← (10) 12 11 3 5 7 7
(13) 11 12 4 5 3 3 3
(15) 3 5 9 3 5 7 7 ← (17) 8 12 9 3 3 3
(17) 7 12 4 5 3 3 3 ← (18) 13 2 3 5 7 7
(21) 5 5 3 6 6 5 3 ← (25) 12 4 5 3 3 3
(23) 21 1 * 1 ← (24) 22 * 1
(25) 6 2 3 5 7 3 3 ← (32) 2 3 5 7 3 3
(31) 13 1 * 1 ← (45) 1 * 1
(37) 1 1 2 4 3 3 3 ← (38) ..4 3 3 3
(39) 5 1 * 1 ← (40) 6 * 1
(43) 1 1 * 1 ← (44) 2 * 1

(54, 9)

(2) 4 8 5 5 9 7 7 7 ← (16) 3 5 9 3 5 7 7
(3) 3 5 10 11 3 5 7 7 ← (8) 9 3 5 9 7 7 7
(7) 4 5 3 5 9 7 7 7 ← (9) 8 3 5 9 7 7 7
(7) 8 3 5 9 3 5 7 7 ← (10) 7 8 12 9 3 3 3
(12) 9 5 5 3 6 6 5 3
(17) 5 6 3 3 6 6 5 3 ← (18) 7 12 4 5 3 3 3
(19) 3 6 3 3 6 6 5 3 ← (20) 6 5 2 3 5 7 7
(23) 5 6 2 4 5 3 3 3 ← (29) 6 2 4 5 3 3 3
(23) 20 1 1 * 1 ← (24) 21 1 * 1
(25) 3 6 2 4 5 3 3 3 ← (26) 6 2 3 5 7 3 3
(29) 8 1 1 2 4 3 3 3 ← (44) 1 1 * 1
(31) 12 1 1 * 1 ← (32) 13 1 * 1
(39) 4 1 1 * 1 ← (40) 5 1 * 1

(54, 10)

(1) 2 3 5 10 11 3 5 7 7
(3) 5 9 3 5 7 3 5 7 7 ← (9) 9 3 5 7 3 5 7 7
(6) 2 3 5 3 5 9 7 7 7 ← (8) 4 5 3 5 9 7 7 7
(6) 4 5 3 5 9 3 5 7 7 ← (8) 8 3 5 9 3 5 7 7
(15) 2 4 7 3 3 6 6 5 3 ← (18) 4 7 3 3 6 6 5 3
(16) 2 3 5 5 3 6 6 5 3
(17) 3 5 6 2 3 5 7 3 3 ← (18) 5 6 3 3 6 6 5 3
(19) 2 4 3 3 3 6 6 5 3 ← (20) 3 6 3 3 6 6 5 3
(22) ...3 3 6 6 5 3 ← (27) 6 ..4 5 3 3 3
(23) 3 6 ..4 5 3 3 3 ← (24) 5 6 2 4 5 3 3 3
(23) 16 4 1 1 * 1 ← (24) 20 1 1 * 1
(25) ....3 5 7 3 3 ← (26) 3 6 2 4 5 3 3 3
(28) ....4 5 3 3 3 ← (40) 4 1 1 * 1
(29) 3 6 2 3 4 4 1 1 1 ← (30) 8 1 1 2 4 3 3 3
(31) * 2 4 3 3 3 ← (33) 6 2 3 4 4 1 1 1
(31) 8 4 1 1 * 1 ← (32) 12 1 1 * 1

(54, 11)

(1) 18 2 4 3 3 3 6 6 5 3
(7) 4 3 5 6 5 2 3 5 7 7 ← (10) 5 5 6 5 2 3 5 7 7
(13) ..4 7 3 3 6 6 5 3
(14) 1 2 4 7 3 3 6 6 5 3 ← (16) 2 4 7 3 3 6 6 5 3
(17) ..4 3 3 3 6 6 5 3 ← (18) 3 5 6 2 3 5 7 3 3
(20) ....3 3 6 6 5 3 ← (26) ....3 5 7 3 3
(23) .....3 5 7 3 3 ← (24) 3 6 ..4 5 3 3 3
(23) 14 * * 1 ← (24) 16 4 1 1 * 1
(26) .....4 5 3 3 3 ← (38) * * 1
(29) 2 * 2 4 3 3 3 ← (30) 3 6 2 3 4 4 1 1 1
(30) 1 * 2 4 3 3 3 ← (32) * 2 4 3 3 3
(31) 6 * * 1 ← (32) 8 4 1 1 * 1
(35) 2 * * 1 ← (36) 4 4 1 1 * 1

(54, 12)

(1) 16 ..4 3 3 3 6 6 5 3 ← (2) 18 2 4 3 3 3 6 6 5 3
(2) 4 3 5 5 6 5 2 3 5 7 7
(5) 2 4 3 5 6 5 2 3 5 7 7 ← (8) 4 3 5 6 5 2 3 5 7 7
(11) 6 ..4 3 3 3 6 6 5 3
(13) 1 1 2 4 7 3 3 6 6 5 3 ← (14) ..4 7 3 3 6 6 5 3
(17) 6 .....3 5 7 3 3 ← (24) .....3 5 7 3 3
(23) 13 1 * * 1 ← (24) 14 * * 1
(24) .....4 5 3 3 3 ← (37) 1 * * 1
(29) 1 1 * 2 4 3 3 3 ← (30) 2 * 2 4 3 3 3
(31) 5 1 * * 1 ← (32) 6 * * 1
(35) 1 1 * * 1 ← (36) 2 * * 1

(54, 13)

(1) 13 6 ....3 3 6 6 5 3 ← (2) 16 ..4 3 3 3 6 6 5 3
(3) ..4 3 5 6 5 2 3 5 7 7 ← (6) 2 4 3 5 6 5 2 3 5 7 7
(9) 4 1 1 2 4 7 3 3 6 6 5 3
(11) 3 6 ....3 3 6 6 5 3 ← (12) 6 ..4 3 3 3 6 6 5 3
(15) 5 6 .....4 5 3 3 3 ← (21) 6 .....4 5 3 3 3
(17) 3 6 .....4 5 3 3 3 ← (18) 6 .....3 5 7 3 3
(21) 8 1 1 * 2 4 3 3 3 ← (36) 1 1 * * 1
(23) 12 1 1 * * 1 ← (24) 13 1 * * 1
(31) 4 1 1 * * 1 ← (32) 5 1 * * 1

(54, 14)

(1) ...4 3 5 6 5 2 3 5 7 7 ← (4) ..4 3 5 6 5 2 3 5 7 7
(1) 11 5 6 .....3 5 7 3 3 ← (2) 13 6 ....3 3 6 6 5 3
(7) * 2 4 7 3 3 6 6 5 3 ← (10) 4 1 1 2 4 7 3 3 6 6 5 3
(7) 24 4 1 1 * * 1
(11) .....4 3 3 3 6 6 5 3 ← (12) 3 6 ....3 3 6 6 5 3
(14) .....3 3 6 6 5 3 ← (19) 6 .....4 5 3 3 3
(15) 3 6 .....4 5 3 3 3 ← (16) 5 6 ....4 5 3 3 3
(17) .....3 5 7 3 3 ← (18) 3 6 .....4 5 3 3 3
(20) .....4 5 3 3 3 ← (32) 4 1 1 * * 1
(21) 3 6 2 3 4 4 1 1 * 1 ← (22) 8 1 1 * 2 4 3 3 3
(23) * * 2 4 3 3 3 ← (25) 6 2 3 4 4 1 1 * 1
(23) 8 4 1 1 * * 1 ← (24) 12 1 1 * * 1

(54, 15)

(1) 10 .....4 3 3 3 6 6 5 3 ← (2) 11 5 6 .....3 5 7 3 3
(2) .....4 5 5 5 3 6 6 5 3
(5) 2 * 2 4 7 3 3 6 6 5 3
(6) 1 * 2 4 7 3 3 6 6 5 3 ← (8) * 2 4 7 3 3 6 6 5 3
(7) 22 * * * 1 ← (8) 24 4 1 1 * * 1
(12) .....3 3 6 6 5 3 ← (18) .....3 5 7 3 3
(15) .....3 5 7 3 3 ← (16) 3 6 .....4 5 3 3 3
(18) .....4 5 3 3 3 ← (30) * * * 1
(21) 2 * * 2 4 3 3 3 ← (22) 3 6 2 3 4 4 1 1 * 1
(22) 1 * * 2 4 3 3 3 ← (24) * * 2 4 3 3 3
(23) 6 * * * 1 ← (24) 8 4 1 1 * * 1
(27) 2 * * * 1 ← (28) 4 4 1 1 * * 1

(54, 16)

(1) 7 1.....4 5 3 3 3 ← (2) 10 .....4 3 3 3 6 6 5 3
(3) 6 .....4 3 3 3 6 6 5 3
(5) 1 1 * 2 4 7 3 3 6 6 5 3 ← (6) 2 * 2 4 7 3 3 6 6 5 3
(7) 21 1 * * * 1 ← (8) 22 * * * 1
(9) 6 .....3 5 7 3 3 ← (16) .....3 5 7 3 3
(15) 13 1 * * * 1 ← (29) 1 * * * 1
(21) 1 1 * * 2 4 3 3 3 ← (22) 2 * * 2 4 3 3 3
(23) 5 1 * * * 1 ← (24) 6 * * * 1
(27) 1 1 * * * 1 ← (28) 2 * * * 1

(54, 17)

(1) 4 1 1 * 2 4 7 3 3 6 6 5 3
(1) 5 6 .....3 3 6 6 5 3 ← (2) 7 1.....4 5 3 3 3
(3) 3 6 .....3 3 6 6 5 3 ← (4) 6 .....4 3 3 3 6 6 5 3
(7) 5 6 .....4 5 3 3 3 ← (13) 6 .....4 5 3 3 3
(7) 20 1 1 * * * 1 ← (8) 21 1 * * * 1
(9) 3 6 .....4 5 3 3 3 ← (10) 6 .....3 5 7 3 3
(13) 8 1 1 * * 2 4 3 3 3 ← (28) 1 1 * * * 1
(15) 12 1 1 * * * 1 ← (16) 13 1 * * * 1
(23) 4 1 1 * * * 1 ← (24) 5 1 * * * 1

(54, 18)

(1) 3 5 6 .....3 5 7 3 3 ← (2) 5 6 .....3 3 6 6 5 3
(3) .....4 3 3 3 6 6 5 3 ← (4) 3 6 .....3 3 6 6 5 3
(6) .....3 3 6 6 5 3 ← (11) 6 .....4 5 3 3 3
(7) 3 6 .....4 5 3 3 3 ← (8) 5 6 .....4 5 3 3 3
(7) 16 4 1 1 * * * 1 ← (8) 20 1 1 * * * 1
(9) .....3 5 7 3 3 ← (10) 3 6 .....4 5 3 3 3
(12) .....4 5 3 3 3 ← (24) 4 1 1 * * * 1
(13) 3 6 2 3 4 4 1 1 * * 1 ← (14) 8 1 1 * * 2 4 3 3 3
(15) * * * 2 4 3 3 3 ← (17) 6 2 3 4 4 1 1 * * 1
(15) 8 4 1 1 * * * 1 ← (16) 12 1 1 * * * 1

(54, 19)

(1) .....4 3 3 3 6 6 5 3 ← (2) 3 5 6 .....3 5 7 3 3
(4) .....3 3 6 6 5 3 ← (10) .....3 5 7 3 3
(7) .....3 5 7 3 3 ← (8) 3 6 .....4 5 3 3 3
(7) 14 * * * * 1 ← (8) 16 4 1 1 * * * 1
(10) .....4 5 3 3 3 ← (22) * * * * 1
(13) 2 * * * 2 4 3 3 3 ← (14) 3 6 2 3 4 4 1 1 * * 1
(14) 1 * * * 2 4 3 3 3 ← (16) * * * 2 4 3 3 3
(15) 6 * * * * 1 ← (16) 8 4 1 1 * * * 1
(19) 2 * * * * 1 ← (20) 4 4 1 1 * * * 1

(54, 20)

(1) 6 .....3 5 7 3 3 ← (8) .....3 5 7 3 3
(7) 13 1 * * * * 1 ← (8) 14 * * * * 1
(8) .....4 5 3 3 3 ← (21) 1 * * * * 1
(13) 1 1 * * * 2 4 3 3 3 ← (14) 2 * * * 2 4 3 3 3
(15) 5 1 * * * * 1 ← (16) 6 * * * * 1
(19) 1 1 * * * * 1 ← (20) 2 * * * * 1

(55, 3)

(23) 29 3 ← (25) 31
(39) 13 3 ← (41) 15
(41) 7 7 ← (53) 3
(47) 5 3 ← (49) 7

(55, 4)

(17) 22 13 3 ← (18) 23 15
(21) 26 5 3 ← (22) 27 7
(22) 27 3 3 ← (24) 29 3
(25) 14 13 3 ← (26) 15 15
(37) 10 5 3 ← (38) 11 7
(38) 11 3 3 ← (40) 13 3
(41) 6 5 3 ← (42) 7 7
(46) 3 3 3 ← (48) 5 3
(47) 2 3 3 ← (50) 3 3

(55, 5)

(5) 9 11 15 15 ← (19) 23 7 7
(7) 7 11 15 15 ← (35) 7 7 7
(15) 11 15 7 7 ← (25) 13 11 7
(15) 19 7 7 7 ← (17) 21 11 7
(17) 21 11 3 3 ← (18) 22 13 3
(21) 25 3 3 3 ← (22) 26 5 3
(25) 13 11 3 3 ← (26) 14 13 3
(37) 5 7 3 3 ← (42) 6 5 3
(37) 9 3 3 3 ← (38) 10 5 3
(46) 1 2 3 3 ← (48) 2 3 3

(55, 6)

(2) 5 7 11 15 15
(3) 4 7 11 15 15 ← (34) 3 5 7 7
(7) 10 17 7 7 7 ← (16) 19 7 7 7
(10) 9 15 7 7 7 ← (18) 17 7 7 7
(11) 11 14 5 7 7 ← (12) 13 13 11 7
(14) 9 11 7 7 7 ← (23) 14 5 7 7
(15) 7 14 5 7 7 ← (16) 11 15 7 7
(15) 18 3 5 7 7 ← (17) 20 5 7 7
(17) 20 9 3 3 3 ← (18) 21 11 3 3
(22) 11 3 5 7 7 ← (24) 13 5 7 7
(25) 12 9 3 3 3 ← (26) 13 11 3 3
(31) 2 3 5 7 7 ← (33) 4 5 7 7
(35) 4 7 3 3 3 ← (36) 6 6 5 3
(37) 4 5 3 3 3 ← (38) 5 7 3 3
(41) 5 1 2 3 3 ← (42) 6 2 3 3

(55, 7)

(1) 2 4 7 11 15 15
(3) 5 7 11 15 7 7 ← (5) 7 13 13 11 7
(5) 5 9 15 7 7 7 ← (19) 14 4 5 7 7
(6) 8 9 11 7 7 7 ← (11) 13 13 5 7 7
(7) 9 7 13 5 7 7 ← (8) 10 17 7 7 7
(8) 6 9 11 7 7 7 ← (17) 7 13 5 7 7
(11) 7 14 4 5 7 7 ← (12) 11 14 5 7 7
(13) 12 12 9 3 3 3 ← (16) 18 3 5 7 7
(15) 5 5 9 7 7 7 ← (16) 7 14 5 7 7
(15) 17 3 6 6 5 3 ← (18) 20 9 3 3 3
(17) 3 5 9 7 7 7 ← (33) 3 6 6 5 3
(21) 5 7 3 5 7 7 ← (25) 9 3 5 7 7
(23) 9 3 6 6 5 3 ← (26) 12 9 3 3 3
(29) 3 3 6 6 5 3 ← (32) 2 3 5 7 7
(35) 2 4 5 3 3 3 ← (36) 4 7 3 3 3
(39) 1 2 4 3 3 3 ← (41) 2 4 3 3 3
(41) 3 4 4 1 1 1 ← (42) 5 1 2 3 3

(55, 8)

(2) 3 5 9 15 7 7 7 ← (16) 5 5 9 7 7 7
(4) 4 6 9 11 7 7 7 ← (10) 11 5 9 7 7 7
(7) 5 10 11 3 5 7 7 ← (12) 7 14 4 5 7 7
(7) 8 5 5 9 7 7 7 ← (8) 9 7 13 5 7 7
(13) 10 9 3 6 6 5 3 ← (14) 12 12 9 3 3 3
(14) 11 12 4 5 3 3 3 ← (16) 17 3 6 6 5 3
(17) 6 9 3 6 6 5 3 ← (18) 8 12 9 3 3 3
(18) 3 5 7 3 5 7 7 ← (20) 5 9 3 5 7 7
(22) 5 5 3 6 6 5 3 ← (24) 9 3 6 6 5 3
(23) 6 3 3 6 6 5 3 ← (30) 3 3 6 6 5 3
(25) 10 2 4 5 3 3 3 ← (26) 12 4 5 3 3 3
(38) 1 1 2 4 3 3 3 ← (40) 1 2 4 3 3 3
(39) 2 3 4 4 1 1 1 ← (42) 3 4 4 1 1 1

(55, 9)

(1) 13 11 12 4 5 3 3 3 ← (8) 8 5 5 9 7 7 7
(3) 4 8 5 5 9 7 7 7 ← (17) 3 5 9 3 5 7 7
(4) 3 5 10 11 3 5 7 7 ← (10) 8 3 5 9 7 7 7
(7) 4 6 3 5 9 7 7 7 ← (8) 5 10 11 3 5 7 7
(13) 9 5 5 3 6 6 5 3 ← (14) 10 9 3 6 6 5 3
(15) 5 6 5 2 3 5 7 7 ← (21) 6 5 2 3 5 7 7
(17) 3 6 5 2 3 5 7 7 ← (18) 6 9 3 6 6 5 3
(21) 5 6 2 3 5 7 3 3 ← (27) 6 2 3 5 7 3 3
(23) 3 6 2 3 5 7 3 3 ← (24) 6 3 3 6 6 5 3
(25) 7 13 1 * 1 ← (26) 10 2 4 5 3 3 3
(29) 4 ..4 5 3 3 3 ← (30) 6 2 4 5 3 3 3
(38) 1 2 3 4 4 1 1 1 ← (40) 2 3 4 4 1 1 1

(55, 10)

(1) 12 9 5 5 3 6 6 5 3 ← (2) 13 11 12 4 5 3 3 3
(2) 2 3 5 10 11 3 5 7 7 ← (9) 4 5 3 5 9 7 7 7
(4) 5 9 3 5 7 3 5 7 7
(7) 2 3 5 3 5 9 7 7 7 ← (8) 4 6 3 5 9 7 7 7
(7) 4 5 3 5 9 3 5 7 7 ← (9) 8 3 5 9 3 5 7 7
(13) 4 5 5 5 3 6 6 5 3 ← (16) 5 6 5 2 3 5 7 7
(17) 2 3 5 5 3 6 6 5 3 ← (18) 3 6 5 2 3 5 7 7
(20) 2 4 3 3 3 6 6 5 3 ← (25) 5 6 2 4 5 3 3 3
(21) 3 5 6 2 4 5 3 3 3 ← (22) 5 6 2 3 5 7 3 3
(23) ...3 3 6 6 5 3 ← (24) 3 6 2 3 5 7 3 3
(25) 5 8 1 1 2 4 3 3 3 ← (26) 7 13 1 * 1
(27) 4 ...4 5 3 3 3 ← (28) 6 ..4 5 3 3 3
(29) ....4 5 3 3 3 ← (30) 4 ..4 5 3 3 3
(33) 5 1 2 3 4 4 1 1 1 ← (34) 6 2 3 4 4 1 1 1

(55, 11)

(1) 1 2 3 5 10 11 3 5 7 7 ← (2) 12 9 5 5 3 6 6 5 3
(1) 16 2 3 5 5 3 6 6 5 3
(5) 5 5 5 6 5 2 3 5 7 7
(11) 2 4 5 5 5 3 6 6 5 3 ← (14) 4 5 5 5 3 6 6 5 3
(15) 1 2 4 7 3 3 6 6 5 3 ← (17) 2 4 7 3 3 6 6 5 3
(18) ..4 3 3 3 6 6 5 3 ← (24) ...3 3 6 6 5 3
(21) ....3 3 6 6 5 3 ← (22) 3 5 6 2 4 5 3 3 3
(25) 4 ....4 5 3 3 3 ← (26) 5 8 1 1 2 4 3 3 3
(27) .....4 5 3 3 3 ← (28) 4 ...4 5 3 3 3
(31) 1 * 2 4 3 3 3 ← (33) * 2 4 3 3 3
(33) 3 4 4 1 1 * 1 ← (34) 5 1 2 3 4 4 1 1 1

(55, 12)

(1) 2 4 2 3 5 3 5 9 7 7 7
(1) 13 ..4 7 3 3 6 6 5 3 ← (2) 16 2 3 5 5 3 6 6 5 3
(3) 4 3 5 5 6 5 2 3 5 7 7 ← (6) 5 5 5 6 5 2 3 5 7 7
(9) ..4 5 5 5 3 6 6 5 3 ← (12) 2 4 5 5 5 3 6 6 5 3
(14) 1 1 2 4 7 3 3 6 6 5 3 ← (16) 1 2 4 7 3 3 6 6 5 3
(15) 6 ....3 3 6 6 5 3 ← (22) ....3 3 6 6 5 3
(25) .....4 5 3 3 3 ← (26) 4 ....4 5 3 3 3
(30) 1 1 * 2 4 3 3 3 ← (32) 1 * 2 4 3 3 3
(31) 2 3 4 4 1 1 * 1 ← (34) 3 4 4 1 1 * 1

(55, 13)

(1) 2 4 3 5 5 6 5 2 3 5 7 7 ← (4) 4 3 5 5 6 5 2 3 5 7 7
(1) 11 6 ..4 3 3 3 6 6 5 3 ← (2) 13 ..4 7 3 3 6 6 5 3
(7) ...4 5 5 5 3 6 6 5 3 ← (10) ..4 5 5 5 3 6 6 5 3
(13) 5 6 .....3 5 7 3 3 ← (19) 6 .....3 5 7 3 3
(15) 3 6 .....3 5 7 3 3 ← (16) 6 ....3 3 6 6 5 3
(21) 4 .....4 5 3 3 3 ← (22) 6 .....4 5 3 3 3
(30) 1 2 3 4 4 1 1 * 1 ← (32) 2 3 4 4 1 1 * 1

(55, 14)

(1) 9 4 1 1 2 4 7 3 3 6 6 5 3 ← (2) 11 6 ..4 3 3 3 6 6 5 3
(2) ...4 3 5 6 5 2 3 5 7 7
(5) ....4 5 5 5 3 6 6 5 3 ← (8) ...4 5 5 5 3 6 6 5 3
(12) .....4 3 3 3 6 6 5 3 ← (17) 5 6 .....4 5 3 3 3
(13) 3 5 6 .....4 5 3 3 3 ← (14) 5 6 .....3 5 7 3 3
(15) .....3 3 6 6 5 3 ← (16) 3 6 .....3 5 7 3 3
(19) 4 .....4 5 3 3 3 ← (20) 6 .....4 5 3 3 3
(21) .....4 5 3 3 3 ← (22) 4 .....4 5 3 3 3
(25) 5 1 2 3 4 4 1 1 * 1 ← (26) 6 2 3 4 4 1 1 * 1

(55, 15)

(1) 8 ..1 ..4 7 3 3 6 6 5 3 ← (2) 9 4 1 1 2 4 7 3 3 6 6 5 3
(3) .....4 5 5 5 3 6 6 5 3 ← (6) ....4 5 5 5 3 6 6 5 3
(7) 1 * 2 4 7 3 3 6 6 5 3 ← (9) * 2 4 7 3 3 6 6 5 3
(9) 1.....4 5 3 3 3 ← (16) .....3 3 6 6 5 3
(13) .....3 3 6 6 5 3 ← (14) 3 5 6 .....4 5 3 3 3
(19) .....4 5 3 3 3 ← (20) 4 .....4 5 3 3 3
(23) 1 * * 2 4 3 3 3 ← (25) * * 2 4 3 3 3
(25) 3 4 4 1 1 * * 1 ← (26) 5 1 2 3 4 4 1 1 * 1

(55, 16)

(1) .....4 5 5 5 3 6 6 5 3 ← (4) .....4 5 5 5 3 6 6 5 3
(1) 5 2 * 2 4 7 3 3 6 6 5 3 ← (2) 8 ..1 ..4 7 3 3 6 6 5 3
(6) 1 1 * 2 4 7 3 3 6 6 5 3 ← (8) 1 * 2 4 7 3 3 6 6 5 3
(7) 6 .....3 3 6 6 5 3 ← (14) .....3 3 6 6 5 3
(9) 10 .....4 5 3 3 3 ← (10) 1.....4 5 3 3 3
(22) 1 1 * * 2 4 3 3 3 ← (24) 1 * * 2 4 3 3 3
(23) 2 3 4 4 1 1 * * 1 ← (26) 3 4 4 1 1 * * 1

(55, 17)

(1) 3 6 .....4 3 3 3 6 6 5 3 ← (2) 5 2 * 2 4 7 3 3 6 6 5 3
(2) 4 1 1 * 2 4 7 3 3 6 6 5 3
(5) 5 6 .....3 5 7 3 3 ← (11) 6 .....3 5 7 3 3
(7) 3 6 .....3 5 7 3 3 ← (8) 6 .....3 3 6 6 5 3
(9) 7 13 1 * * * 1 ← (10) 10 .....4 5 3 3 3
(13) 4 .....4 5 3 3 3 ← (14) 6 .....4 5 3 3 3
(22) 1 2 3 4 4 1 1 * * 1 ← (24) 2 3 4 4 1 1 * * 1

(55, 18)

(1) ..1 2 * 2 4 7 3 3 6 6 5 3 ← (2) 3 6 .....4 3 3 3 6 6 5 3
(4) .....4 3 3 3 6 6 5 3 ← (9) 5 6 .....4 5 3 3 3
(5) 3 5 6 .....4 5 3 3 3 ← (6) 5 6 .....3 5 7 3 3
(7) .....3 3 6 6 5 3 ← (8) 3 6 .....3 5 7 3 3
(9) 5 8 1 1 * * 2 4 3 3 3 ← (10) 7 13 1 * * * 1
(11) 4 .....4 5 3 3 3 ← (12) 6 .....4 5 3 3 3
(13) .....4 5 3 3 3 ← (14) 4 .....4 5 3 3 3
(17) 5 1 2 3 4 4 1 1 * * 1 ← (18) 6 2 3 4 4 1 1 * * 1

(55, 19)

(2) .....4 3 3 3 6 6 5 3 ← (8) .....3 3 6 6 5 3
(5) .....3 3 6 6 5 3 ← (6) 3 5 6 .....4 5 3 3 3
(9) 4 .....4 5 3 3 3 ← (10) 5 8 1 1 * * 2 4 3 3 3
(11) .....4 5 3 3 3 ← (12) 4 .....4 5 3 3 3
(15) 1 * * * 2 4 3 3 3 ← (17) * * * 2 4 3 3 3
(17) 3 4 4 1 1 * * * 1 ← (18) 5 1 2 3 4 4 1 1 * * 1

(56, 2)

(55) 1 ← (57)

(56, 3)

(25) 30 1 ← (26) 31
(41) 14 1 ← (42) 15
(49) 6 1 ← (50) 7
(53) 2 1 ← (54) 3
(54) 1 1 ← (56) 1

(56, 4)

(11) 15 15 15 ← (19) 23 15
(15) 11 15 15 ← (27) 15 15
(23) 27 3 3 ← (25) 29 3
(25) 29 1 1 ← (26) 30 1
(37) 5 7 7 ← (51) 3 3
(39) 11 3 3 ← (41) 13 3
(41) 13 1 1 ← (42) 14 1
(47) 3 3 3 ← (49) 5 3
(49) 5 1 1 ← (50) 6 1
(53) 1 1 1 ← (54) 2 1

(56, 5)

(6) 9 11 15 15 ← (18) 21 11 7
(8) 7 11 15 15 ← (26) 13 11 7
(11) 14 13 11 7 ← (12) 15 15 15
(15) 10 13 11 7 ← (16) 11 15 15
(22) 25 3 3 3 ← (24) 27 3 3
(25) 28 1 1 1 ← (26) 29 1 1
(38) 9 3 3 3 ← (40) 11 3 3
(39) 8 3 3 3 ← (48) 3 3 3
(41) 12 1 1 1 ← (42) 13 1 1
(47) 1 2 3 3 ← (49) 2 3 3
(49) 4 1 1 1 ← (50) 5 1 1

(56, 6)

(3) 5 7 11 15 15 ← (17) 19 7 7 7
(4) 4 7 11 15 15 ← (19) 17 7 7 7
(7) 9 11 15 7 7 ← (12) 14 13 11 7
(9) 7 11 15 7 7 ← (17) 11 15 7 7
(11) 9 15 7 7 7 ← (13) 13 13 11 7
(15) 9 11 7 7 7 ← (16) 10 13 11 7
(21) 5 9 7 7 7 ← (25) 13 5 7 7
(23) 11 3 5 7 7 ← (24) 14 5 7 7
(25) 24 4 1 1 1 ← (26) 28 1 1 1
(35) 3 5 7 3 3 ← (37) 6 6 5 3
(38) 4 5 3 3 3 ← (43) 6 2 3 3
(39) 3 6 2 3 3 ← (40) 8 3 3 3
(41) 8 4 1 1 1 ← (42) 12 1 1 1
(45) 4 4 1 1 1 ← (48) 1 2 3 3
(47) * 1 ← (50) 4 1 1 1

(56, 7)

(2) 2 4 7 11 15 15 ← (16) 9 11 7 7 7
(4) 5 7 11 15 7 7 ← (9) 10 17 7 7 7
(5) 6 9 15 7 7 7 ← (6) 7 13 13 11 7
(6) 5 9 15 7 7 7 ← (12) 9 15 7 7 7
(7) 8 9 11 7 7 7 ← (8) 9 11 15 7 7
(9) 6 9 11 7 7 7 ← (10) 7 11 15 7 7
(11) 12 11 3 5 7 7 ← (12) 13 13 5 7 7
(18) 3 5 9 7 7 7 ← (24) 11 3 5 7 7
(19) 13 2 3 5 7 7 ← (20) 14 4 5 7 7
(22) 5 7 3 5 7 7 ← (26) 9 3 5 7 7
(25) 22 * 1 ← (26) 24 4 1 1 1
(33) 2 3 5 7 3 3 ← (34) 3 6 6 5 3
(36) 2 4 5 3 3 3 ← (42) 2 4 3 3 3
(39) ..4 3 3 3 ← (40) 3 6 2 3 3
(41) 6 * 1 ← (42) 8 4 1 1 1
(45) 2 * 1 ← (46) 4 4 1 1 1
(46) 1 * 1 ← (48) * 1

(56, 8)

(1) 1 2 4 7 11 15 15 ← (8) 8 9 11 7 7 7
(3) 3 5 9 15 7 7 7 ← (10) 6 9 11 7 7 7
(5) 4 6 9 11 7 7 7 ← (6) 6 9 15 7 7 7
(9) 9 3 5 9 7 7 7 ← (19) 8 12 9 3 3 3
(11) 7 8 12 9 3 3 3 ← (12) 12 11 3 5 7 7
(15) 11 12 4 5 3 3 3 ← (17) 17 3 6 6 5 3
(19) 3 5 7 3 5 7 7 ← (21) 5 9 3 5 7 7
(19) 7 12 4 5 3 3 3 ← (20) 13 2 3 5 7 7
(23) 5 5 3 6 6 5 3 ← (25) 9 3 6 6 5 3
(25) 21 1 * 1 ← (26) 22 * 1
(33) 13 1 * 1 ← (41) 1 2 4 3 3 3
(39) 1 1 2 4 3 3 3 ← (40) ..4 3 3 3
(41) 5 1 * 1 ← (42) 6 * 1
(45) 1 1 * 1 ← (46) 2 * 1

(56, 9)

(4) 4 8 5 5 9 7 7 7
(5) 3 5 10 11 3 5 7 7 ← (9) 5 10 11 3 5 7 7
(10) 9 3 5 7 3 5 7 7
(14) 9 5 5 3 6 6 5 3 ← (16) 11 12 4 5 3 3 3
(19) 4 7 3 3 6 6 5 3 ← (24) 5 5 3 6 6 5 3
(19) 5 6 3 3 6 6 5 3 ← (20) 7 12 4 5 3 3 3
(21) 3 6 3 3 6 6 5 3 ← (22) 6 5 2 3 5 7 7
(25) 20 1 1 * 1 ← (26) 21 1 * 1
(27) 3 6 2 4 5 3 3 3 ← (28) 6 2 3 5 7 3 3
(31) 8 1 1 2 4 3 3 3 ← (40) 1 1 2 4 3 3 3
(33) 12 1 1 * 1 ← (34) 13 1 * 1
(39) 1 2 3 4 4 1 1 1 ← (41) 2 3 4 4 1 1 1
(41) 4 1 1 * 1 ← (42) 5 1 * 1

(56, 10)

(3) 2 3 5 10 11 3 5 7 7 ← (6) 3 5 10 11 3 5 7 7
(5) 5 9 3 5 7 3 5 7 7
(8) 2 3 5 3 5 9 7 7 7
(8) 4 5 3 5 9 3 5 7 7
(11) 5 5 6 5 2 3 5 7 7 ← (17) 5 6 5 2 3 5 7 7
(18) 2 3 5 5 3 6 6 5 3 ← (20) 4 7 3 3 6 6 5 3
(19) 3 5 6 2 3 5 7 3 3 ← (20) 5 6 3 3 6 6 5 3
(21) 2 4 3 3 3 6 6 5 3 ← (22) 3 6 3 3 6 6 5 3
(25) 3 6 ..4 5 3 3 3 ← (26) 5 6 2 4 5 3 3 3
(25) 16 4 1 1 * 1 ← (26) 20 1 1 * 1
(27) ....3 5 7 3 3 ← (28) 3 6 2 4 5 3 3 3
(30) ....4 5 3 3 3 ← (35) 6 2 3 4 4 1 1 1
(31) 3 6 2 3 4 4 1 1 1 ← (32) 8 1 1 2 4 3 3 3
(33) 8 4 1 1 * 1 ← (34) 12 1 1 * 1
(37) 4 4 1 1 * 1 ← (40) 1 2 3 4 4 1 1 1
(39) * * 1 ← (42) 4 1 1 * 1

(56, 11)

(2) 1 2 3 5 10 11 3 5 7 7 ← (4) 2 3 5 10 11 3 5 7 7
(3) 18 2 4 3 3 3 6 6 5 3
(9) 4 3 5 6 5 2 3 5 7 7 ← (12) 5 5 6 5 2 3 5 7 7
(15) ..4 7 3 3 6 6 5 3 ← (18) 2 4 7 3 3 6 6 5 3
(19) ..4 3 3 3 6 6 5 3 ← (20) 3 5 6 2 3 5 7 3 3
(25) .....3 5 7 3 3 ← (26) 3 6 ..4 5 3 3 3
(25) 14 * * 1 ← (26) 16 4 1 1 * 1
(28) .....4 5 3 3 3 ← (34) * 2 4 3 3 3
(31) 2 * 2 4 3 3 3 ← (32) 3 6 2 3 4 4 1 1 1
(33) 6 * * 1 ← (34) 8 4 1 1 * 1
(37) 2 * * 1 ← (38) 4 4 1 1 * 1
(38) 1 * * 1 ← (40) * * 1

(56, 12)

(1) 5 5 5 5 6 5 2 3 5 7 7
(2) 2 4 2 3 5 3 5 9 7 7 7
(3) 16 ..4 3 3 3 6 6 5 3 ← (4) 18 2 4 3 3 3 6 6 5 3
(7) 2 4 3 5 6 5 2 3 5 7 7 ← (10) 4 3 5 6 5 2 3 5 7 7
(13) 6 ..4 3 3 3 6 6 5 3 ← (17) 1 2 4 7 3 3 6 6 5 3
(15) 1 1 2 4 7 3 3 6 6 5 3 ← (16) ..4 7 3 3 6 6 5 3
(25) 13 1 * * 1 ← (26) 14 * * 1
(26) ......4 5 3 3 3 ← (33) 1 * 2 4 3 3 3
(31) 1 1 * 2 4 3 3 3 ← (32) 2 * 2 4 3 3 3
(33) 5 1 * * 1 ← (34) 6 * * 1
(37) 1 1 * * 1 ← (38) 2 * * 1

(56, 13)

(1) 1 2 4 2 3 5 3 5 9 7 7 7
(2) 2 4 3 5 5 6 5 2 3 5 7 7
(3) 13 6 ....3 3 6 6 5 3 ← (4) 16 ..4 3 3 3 6 6 5 3
(5) ..4 3 5 6 5 2 3 5 7 7 ← (8) 2 4 3 5 6 5 2 3 5 7 7
(11) 4 1 1 2 4 7 3 3 6 6 5 3 ← (16) 1 1 2 4 7 3 3 6 6 5 3
(13) 3 6 ....3 3 6 6 5 3 ← (14) 6 ..4 3 3 3 6 6 5 3
(19) 3 6 .....4 5 3 3 3 ← (20) 6 .....3 5 7 3 3
(23) 8 1 1 * 2 4 3 3 3 ← (32) 1 1 * 2 4 3 3 3
(25) 12 1 1 * * 1 ← (26) 13 1 * * 1
(31) 1 2 3 4 4 1 1 * 1 ← (33) 2 3 4 4 1 1 * 1
(33) 4 1 1 * * 1 ← (34) 5 1 * * 1

(56, 14)

(3) ...4 3 5 6 5 2 3 5 7 7 ← (6) ..4 3 5 6 5 2 3 5 7 7
(3) 11 5 6 .....3 5 7 3 3 ← (4) 13 6 ....3 3 6 6 5 3
(9) 24 4 1 1 * * 1 ← (12) 4 1 1 2 4 7 3 3 6 6 5 3
(13) .....4 3 3 3 6 6 5 3 ← (14) 3 6 ....3 3 6 6 5 3
(17) 3 6 ......4 5 3 3 3 ← (18) 5 6 .....4 5 3 3 3
(19) ........3 5 7 3 3 ← (20) 3 6 .....4 5 3 3 3
(22) ........4 5 3 3 3 ← (27) 6 2 3 4 4 1 1 * 1
(23) 3 6 2 3 4 4 1 1 * 1 ← (24) 8 1 1 * 2 4 3 3 3
(25) 8 4 1 1 * * 1 ← (26) 12 1 1 * * 1
(29) 4 4 1 1 * * 1 ← (32) 1 2 3 4 4 1 1 * 1
(31) * * * 1 ← (34) 4 1 1 * * 1

(56, 15)

(1) ....4 3 5 6 5 2 3 5 7 7 ← (4) ...4 3 5 6 5 2 3 5 7 7
(3) 10 .....4 3 3 3 6 6 5 3 ← (4) 11 5 6 .....3 5 7 3 3
(7) 2 * 2 4 7 3 3 6 6 5 3 ← (10) * 2 4 7 3 3 6 6 5 3
(9) 22 * * * 1 ← (10) 24 4 1 1 * * 1
(17) .........3 5 7 3 3 ← (18) 3 6 ......4 5 3 3 3
(20) .........4 5 3 3 3 ← (26) * * 2 4 3 3 3
(23) 2 * * 2 4 3 3 3 ← (24) 3 6 2 3 4 4 1 1 * 1
(25) 6 * * * 1 ← (26) 8 4 1 1 * * 1
(29) 2 * * * 1 ← (30) 4 4 1 1 * * 1
(30) 1 * * * 1 ← (32) * * * 1

(56, 16)

(2) ......4 5 5 5 3 6 6 5 3
(3) 7 1.........4 5 3 3 3 ← (4) 10 .....4 3 3 3 6 6 5 3
(5) 6 ......4 3 3 3 6 6 5 3 ← (9) 1 * 2 4 7 3 3 6 6 5 3
(7) 1 1 * 2 4 7 3 3 6 6 5 3 ← (8) 2 * 2 4 7 3 3 6 6 5 3
(9) 21 1 * * * 1 ← (10) 22 * * * 1
(17) 13 1 * * * 1 ← (25) 1 * * 2 4 3 3 3
(23) 1 1 * * 2 4 3 3 3 ← (24) 2 * * 2 4 3 3 3
(25) 5 1 * * * 1 ← (26) 6 * * * 1
(29) 1 1 * * * 1 ← (30) 2 * * * 1

(56, 17)

(3) 4 1 1 * 2 4 7 3 3 6 6 5 3 ← (8) 1 1 * 2 4 7 3 3 6 6 5 3
(3) 5 6 ........3 3 6 6 5 3 ← (4) 7 1.........4 5 3 3 3
(5) 3 6 ........3 3 6 6 5 3 ← (6) 6 ......4 3 3 3 6 6 5 3
(9) 20 1 1 * * * 1 ← (10) 21 1 * * * 1
(11) 3 6 .........4 5 3 3 3 ← (12) 6 .........3 5 7 3 3
(15) 8 1 1 * * 2 4 3 3 3 ← (24) 1 1 * * 2 4 3 3 3
(17) 12 1 1 * * * 1 ← (18) 13 1 * * * 1
(23) 1 2 3 4 4 1 1 * * 1 ← (25) 2 3 4 4 1 1 * * 1
(25) 4 1 1 * * * 1 ← (26) 5 1 * * * 1

(56, 18)

(1) * * 2 4 7 3 3 6 6 5 3
(2) ..1 2 * 2 4 7 3 3 6 6 5 3 ← (4) 4 1 1 * 2 4 7 3 3 6 6 5 3
(3) 3 5 6 .........3 5 7 3 3 ← (4) 5 6 ........3 3 6 6 5 3
(5) .........4 3 3 3 6 6 5 3 ← (6) 3 6 ........3 3 6 6 5 3
(9) 3 6 ..........4 5 3 3 3 ← (10) 5 6 .........4 5 3 3 3
(9) 16 4 1 1 * * * 1 ← (10) 20 1 1 * * * 1
(11) ............3 5 7 3 3 ← (12) 3 6 .........4 5 3 3 3
(14) ............4 5 3 3 3 ← (19) 6 2 3 4 4 1 1 * * 1
(15) 3 6 2 3 4 4 1 1 * * 1 ← (16) 8 1 1 * * 2 4 3 3 3
(17) 8 4 1 1 * * * 1 ← (18) 12 1 1 * * * 1
(21) 4 4 1 1 * * * 1 ← (24) 1 2 3 4 4 1 1 * * 1
(23) * * * * 1 ← (26) 4 1 1 * * * 1

(57, 3)

(23) 27 7 ← (27) 31
(39) 11 7 ← (43) 15
(43) 7 7 ← (51) 7
(55) 1 1 ← (57) 1

(57, 4)

(19) 22 13 3 ← (20) 23 15
(20) 23 7 7 ← (26) 29 3
(23) 26 5 3 ← (24) 27 7
(27) 14 13 3 ← (28) 15 15
(36) 7 7 7 ← (42) 13 3
(38) 5 7 7 ← (50) 5 3
(39) 10 5 3 ← (40) 11 7
(43) 6 5 3 ← (44) 7 7
(54) 1 1 1 ← (56) 1 1

(57, 5)

(7) 9 11 15 15 ← (13) 15 15 15
(9) 7 11 15 15 ← (17) 11 15 15
(18) 20 5 7 7 ← (25) 27 3 3
(19) 21 11 3 3 ← (20) 22 13 3
(23) 25 3 3 3 ← (24) 26 5 3
(27) 13 11 3 3 ← (28) 14 13 3
(34) 4 5 7 7 ← (41) 11 3 3
(35) 3 5 7 7 ← (49) 3 3 3
(39) 5 7 3 3 ← (44) 6 5 3
(39) 9 3 3 3 ← (40) 10 5 3

(57, 6)

(4) 5 7 11 15 15 ← (8) 9 11 15 15
(5) 4 7 11 15 15 ← (10) 7 11 15 15
(13) 11 14 5 7 7 ← (14) 13 13 11 7
(17) 7 14 5 7 7 ← (18) 11 15 7 7
(17) 18 3 5 7 7 ← (24) 25 3 3 3
(18) 7 13 5 7 7 ← (20) 17 7 7 7
(19) 20 9 3 3 3 ← (20) 21 11 3 3
(22) 5 9 7 7 7 ← (26) 13 5 7 7
(27) 12 9 3 3 3 ← (28) 13 11 3 3
(33) 2 3 5 7 7 ← (40) 9 3 3 3
(36) 3 5 7 3 3 ← (41) 8 3 3 3
(37) 4 7 3 3 3 ← (38) 6 6 5 3
(39) 4 5 3 3 3 ← (40) 5 7 3 3
(43) 5 1 2 3 3 ← (44) 6 2 3 3

(57, 7)

(3) 2 4 7 11 15 15 ← (6) 4 7 11 15 15
(5) 5 7 11 15 7 7 ← (9) 9 11 15 7 7
(7) 5 9 15 7 7 7 ← (13) 9 15 7 7 7
(9) 9 7 13 5 7 7 ← (10) 10 17 7 7 7
(11) 11 5 9 7 7 7 ← (13) 13 13 5 7 7
(13) 7 14 4 5 7 7 ← (14) 11 14 5 7 7
(15) 12 12 9 3 3 3 ← (20) 20 9 3 3 3
(17) 5 5 9 7 7 7 ← (18) 7 14 5 7 7
(19) 3 5 9 7 7 7 ← (21) 14 4 5 7 7
(23) 5 7 3 5 7 7 ← (27) 9 3 5 7 7
(27) 12 4 5 3 3 3
(31) 3 3 6 6 5 3 ← (35) 3 6 6 5 3
(34) 2 3 5 7 3 3 ← (40) 4 5 3 3 3
(37) 2 4 5 3 3 3 ← (38) 4 7 3 3 3
(43) 3 4 4 1 1 1 ← (44) 5 1 2 3 3
(47) 1 * 1 ← (49) * 1

(57, 8)

(2) 1 2 4 7 11 15 15 ← (4) 2 4 7 11 15 15
(4) 3 5 9 15 7 7 7 ← (8) 5 9 15 7 7 7
(6) 4 6 9 11 7 7 7
(9) 8 5 5 9 7 7 7 ← (10) 9 7 13 5 7 7
(10) 9 3 5 9 7 7 7 ← (12) 11 5 9 7 7 7
(11) 8 3 5 9 7 7 7 ← (14) 7 14 4 5 7 7
(12) 7 8 12 9 3 3 3 ← (18) 17 3 6 6 5 3
(15) 10 9 3 6 6 5 3 ← (16) 12 12 9 3 3 3
(18) 3 5 9 3 5 7 7
(19) 6 9 3 6 6 5 3 ← (20) 8 12 9 3 3 3
(20) 3 5 7 3 5 7 7 ← (24) 5 7 3 5 7 7
(25) 6 3 3 6 6 5 3 ← (32) 3 3 6 6 5 3
(27) 10 2 4 5 3 3 3 ← (28) 12 4 5 3 3 3
(31) 6 2 4 5 3 3 3 ← (38) 2 4 5 3 3 3
(46) 1 1 * 1 ← (48) 1 * 1

(57, 9)

(3) 13 11 12 4 5 3 3 3
(5) 4 8 5 5 9 7 7 7 ← (10) 8 5 5 9 7 7 7
(9) 4 6 3 5 9 7 7 7 ← (10) 5 10 11 3 5 7 7
(10) 4 5 3 5 9 7 7 7 ← (12) 8 3 5 9 7 7 7
(10) 8 3 5 9 3 5 7 7 ← (17) 11 12 4 5 3 3 3
(11) 9 3 5 7 3 5 7 7
(15) 9 5 5 3 6 6 5 3 ← (16) 10 9 3 6 6 5 3
(19) 3 6 5 2 3 5 7 7 ← (20) 6 9 3 6 6 5 3
(23) 5 6 2 3 5 7 3 3 ← (29) 6 2 3 5 7 3 3
(25) 3 6 2 3 5 7 3 3 ← (26) 6 3 3 6 6 5 3
(27) 7 13 1 * 1 ← (28) 10 2 4 5 3 3 3
(29) 6 ..4 5 3 3 3 ← (35) 13 1 * 1
(31) 4 ..4 5 3 3 3 ← (32) 6 2 4 5 3 3 3

(57, 10)

(1) 4 4 8 5 5 9 7 7 7
(3) 12 9 5 5 3 6 6 5 3 ← (4) 13 11 12 4 5 3 3 3
(6) 5 9 3 5 7 3 5 7 7 ← (12) 9 3 5 7 3 5 7 7
(9) 2 3 5 3 5 9 7 7 7 ← (10) 4 6 3 5 9 7 7 7
(9) 4 5 3 5 9 3 5 7 7 ← (16) 9 5 5 3 6 6 5 3
(15) 4 5 5 5 3 6 6 5 3 ← (18) 5 6 5 2 3 5 7 7
(19) 2 3 5 5 3 6 6 5 3 ← (20) 3 6 5 2 3 5 7 7
(22) 2 4 3 3 3 6 6 5 3 ← (27) 5 6 2 4 5 3 3 3
(23) 3 5 6 2 4 5 3 3 3 ← (24) 5 6 2 3 5 7 3 3
(25) ...3 3 6 6 5 3 ← (26) 3 6 2 3 5 7 3 3
(27) 5 8 1 1 2 4 3 3 3 ← (28) 7 13 1 * 1
(28) ....3 5 7 3 3 ← (33) 8 1 1 2 4 3 3 3
(29) 4 ...4 5 3 3 3 ← (30) 6 ..4 5 3 3 3
(31) ....4 5 3 3 3 ← (32) 4 ..4 5 3 3 3
(35) 5 1 2 3 4 4 1 1 1 ← (36) 6 2 3 4 4 1 1 1

(57, 11)

(1) 5 5 9 3 5 7 3 5 7 7
(1) 8 4 5 3 5 9 3 5 7 7
(3) 1 2 3 5 10 11 3 5 7 7 ← (4) 12 9 5 5 3 6 6 5 3
(3) 16 2 3 5 5 3 6 6 5 3
(7) 5 5 5 6 5 2 3 5 7 7 ← (13) 5 5 6 5 2 3 5 7 7
(13) 2 4 5 5 5 3 6 6 5 3 ← (16) 4 5 5 5 3 6 6 5 3
(20) ..4 3 3 3 6 6 5 3 ← (26) ...3 3 6 6 5 3
(23) ....3 3 6 6 5 3 ← (24) 3 5 6 2 4 5 3 3 3
(26) .....3 5 7 3 3 ← (32) ....4 5 3 3 3
(27) 4 ....4 5 3 3 3 ← (28) 5 8 1 1 2 4 3 3 3
(29) .....4 5 3 3 3 ← (30) 4 ...4 5 3 3 3
(35) 3 4 4 1 1 * 1 ← (36) 5 1 2 3 4 4 1 1 1
(39) 1 * * 1 ← (41) * * 1

(57, 12)

(1) 4 4 2 3 5 3 5 9 7 7 7 ← (2) 8 4 5 3 5 9 3 5 7 7
(2) 5 5 5 5 6 5 2 3 5 7 7
(3) 2 4 2 3 5 3 5 9 7 7 7 ← (5) 18 2 4 3 3 3 6 6 5 3
(3) 13 ..4 7 3 3 6 6 5 3 ← (4) 16 2 3 5 5 3 6 6 5 3
(5) 4 3 5 5 6 5 2 3 5 7 7 ← (8) 5 5 5 6 5 2 3 5 7 7
(11) ..4 5 5 5 3 6 6 5 3 ← (14) 2 4 5 5 5 3 6 6 5 3
(17) 6 ....3 3 6 6 5 3 ← (24) ....3 3 6 6 5 3
(23) 6 .....4 5 3 3 3 ← (30) .....4 5 3 3 3
(27) ......4 5 3 3 3 ← (28) 4 ....4 5 3 3 3
(38) 1 1 * * 1 ← (40) 1 * * 1

(57, 13)

(1) ..4 2 3 5 3 5 9 7 7 7 ← (2) 4 4 2 3 5 3 5 9 7 7 7
(2) 1 2 4 2 3 5 3 5 9 7 7 7 ← (4) 2 4 2 3 5 3 5 9 7 7 7
(3) 2 4 3 5 5 6 5 2 3 5 7 7 ← (6) 4 3 5 5 6 5 2 3 5 7 7
(3) 11 6 ..4 3 3 3 6 6 5 3 ← (4) 13 ..4 7 3 3 6 6 5 3
(9) ...4 5 5 5 3 6 6 5 3 ← (12) ..4 5 5 5 3 6 6 5 3
(15) 5 6 .....3 5 7 3 3 ← (21) 6 .....3 5 7 3 3
(17) 3 6 .....3 5 7 3 3 ← (18) 6 ....3 3 6 6 5 3
(21) 6 ......4 5 3 3 3 ← (28) ......4 5 3 3 3
(23) 4 ......4 5 3 3 3 ← (24) 6 ....4 5 3 3 3

(57, 14)

(1) 1 1 2 4 2 3 5 3 5 9 7 7 7 ← (2) ..4 2 3 5 3 5 9 7 7 7
(1) ..4 3 5 5 6 5 2 3 5 7 7 ← (4) 2 4 3 5 5 6 5 2 3 5 7 7
(3) 9 4 1 1 2 4 7 3 3 6 6 5 3 ← (4) 11 6 ..4 3 3 3 6 6 5 3
(7) ....4 5 5 5 3 6 6 5 3 ← (10) ...4 5 5 5 3 6 6 5 3
(14) .....4 3 3 3 6 6 5 3 ← (19) 5 6 .....4 5 3 3 3
(15) 3 5 6 .....4 5 3 3 3 ← (16) 5 6 .....3 5 7 3 3
(17) .......3 3 6 6 5 3 ← (18) 3 6 .....3 5 7 3 3
(20) ........3 5 7 3 3 ← (25) 8 1 1 * 2 4 3 3 3
(21) 4 .......4 5 3 3 3 ← (22) 6 .....4 5 3 3 3
(23) ........4 5 3 3 3 ← (24) 4 .....4 5 3 3 3
(27) 5 1 2 3 4 4 1 1 * 1 ← (28) 6 2 3 4 4 1 1 * 1

(57, 15)

(2) ....4 3 5 6 5 2 3 5 7 7
(3) 8 ..1 ..4 7 3 3 6 6 5 3 ← (4) 9 4 1 1 2 4 7 3 3 6 6 5 3
(5) .....4 5 5 5 3 6 6 5 3 ← (8) ....4 5 5 5 3 6 6 5 3
(11) 1.........4 5 3 3 3 ← (18) .......3 3 6 6 5 3
(15) ........3 3 6 6 5 3 ← (16) 3 5 6 .....4 5 3 3 3
(18) .........3 5 7 3 3 ← (24) ........4 5 3 3 3
(21) .........4 5 3 3 3 ← (22) 4 .......4 5 3 3 3
(27) 3 4 4 1 1 * * 1 ← (28) 5 1 2 3 4 4 1 1 * 1
(31) 1 * * * 1 ← (33) * * * 1

(57, 16)

(3) ......4 5 5 5 3 6 6 5 3 ← (6) .....4 5 5 5 3 6 6 5 3
(3) 5 2 * 2 4 7 3 3 6 6 5 3 ← (4) 8 ..1 ..4 7 3 3 6 6 5 3
(9) 6 ........3 3 6 6 5 3 ← (16) ........3 3 6 6 5 3
(11) 10 .........4 5 3 3 3 ← (12) 1.........4 5 3 3 3
(15) 6 .........4 5 3 3 3 ← (22) .........4 5 3 3 3
(30) 1 1 * * * 1 ← (32) 1 * * * 1

(57, 17)

(1) .......4 5 5 5 3 6 6 5 3 ← (4) ......4 5 5 5 3 6 6 5 3
(3) 3 6 ......4 3 3 3 6 6 5 3 ← (4) 5 2 * 2 4 7 3 3 6 6 5 3
(7) 5 6 .........3 5 7 3 3 ← (13) 6 .........3 5 7 3 3
(9) 3 6 .........3 5 7 3 3 ← (10) 6 ........3 3 6 6 5 3
(11) 7 13 1 * * * 1 ← (12) 10 .........4 5 3 3 3
(13) 6 ..........4 5 3 3 3 ← (19) 13 1 * * * 1
(15) 4 ..........4 5 3 3 3 ← (16) 6 .........4 5 3 3 3

(58, 2)

(55) 3 ← (59)

(58, 3)

(27) 30 1 ← (28) 31
(43) 14 1 ← (44) 15
(51) 6 1 ← (52) 7
(52) 3 3 ← (58) 1
(55) 2 1 ← (56) 3

(58, 4)

(19) 21 11 7 ← (21) 23 15
(21) 23 7 7 ← (25) 27 7
(27) 13 11 7 ← (29) 15 15
(27) 29 1 1 ← (28) 30 1
(37) 7 7 7 ← (41) 11 7
(39) 5 7 7 ← (45) 7 7
(43) 13 1 1 ← (44) 14 1
(50) 2 3 3 ← (57) 1 1
(51) 5 1 1 ← (52) 6 1
(55) 1 1 1 ← (56) 2 1

(58, 5)

(13) 14 13 11 7 ← (14) 15 15 15
(17) 10 13 11 7 ← (18) 11 15 15
(18) 19 7 7 7 ← (20) 21 11 7
(19) 20 5 7 7 ← (22) 23 7 7
(25) 14 5 7 7 ← (28) 13 11 7
(27) 28 1 1 1 ← (28) 29 1 1
(35) 4 5 7 7 ← (38) 7 7 7
(36) 3 5 7 7 ← (40) 5 7 7
(43) 12 1 1 1 ← (44) 13 1 1
(49) 1 2 3 3 ← (56) 1 1 1
(51) 4 1 1 1 ← (52) 5 1 1

(58, 6)

(5) 5 7 11 15 15 ← (9) 9 11 15 15
(7) 7 13 13 11 7 ← (14) 14 13 11 7
(11) 7 11 15 7 7 ← (19) 11 15 7 7
(17) 9 11 7 7 7 ← (18) 10 13 11 7
(18) 18 3 5 7 7 ← (20) 20 5 7 7
(19) 7 13 5 7 7 ← (21) 17 7 7 7
(23) 5 9 7 7 7 ← (27) 13 5 7 7
(25) 11 3 5 7 7 ← (26) 14 5 7 7
(27) 24 4 1 1 1 ← (28) 28 1 1 1
(28) 12 9 3 3 3
(34) 2 3 5 7 7 ← (36) 4 5 7 7
(37) 3 5 7 3 3 ← (41) 5 7 3 3
(41) 3 6 2 3 3 ← (42) 8 3 3 3
(43) 2 4 3 3 3 ← (45) 6 2 3 3
(43) 8 4 1 1 1 ← (44) 12 1 1 1
(47) 4 4 1 1 1 ← (52) 4 1 1 1

(58, 7)

(6) 5 7 11 15 7 7 ← (11) 10 17 7 7 7
(7) 6 9 15 7 7 7 ← (8) 7 13 13 11 7
(9) 8 9 11 7 7 7 ← (10) 9 11 15 7 7
(11) 6 9 11 7 7 7 ← (12) 7 11 15 7 7
(13) 12 11 3 5 7 7 ← (14) 13 13 5 7 7
(18) 5 5 9 7 7 7 ← (20) 7 13 5 7 7
(20) 3 5 9 7 7 7 ← (24) 5 9 7 7 7
(21) 13 2 3 5 7 7 ← (22) 14 4 5 7 7
(22) 5 9 3 5 7 7 ← (28) 9 3 5 7 7
(26) 9 3 6 6 5 3
(27) 22 * 1 ← (28) 24 4 1 1 1
(35) 2 3 5 7 3 3 ← (36) 3 6 6 5 3
(41) ..4 3 3 3 ← (42) 3 6 2 3 3
(42) 1 2 4 3 3 3 ← (44) 2 4 3 3 3
(43) 6 * 1 ← (44) 8 4 1 1 1
(44) 3 4 4 1 1 1 ← (50) * 1
(47) 2 * 1 ← (48) 4 4 1 1 1

(58, 8)

(1) 27 12 4 5 3 3 3
(3) 1 2 4 7 11 15 15 ← (5) 2 4 7 11 15 15
(5) 3 5 9 15 7 7 7 ← (9) 5 9 15 7 7 7
(7) 4 6 9 11 7 7 7 ← (8) 6 9 15 7 7 7
(11) 9 3 5 9 7 7 7 ← (13) 11 5 9 7 7 7
(13) 7 8 12 9 3 3 3 ← (14) 12 11 3 5 7 7
(19) 3 5 9 3 5 7 7 ← (21) 8 12 9 3 3 3
(21) 3 5 7 3 5 7 7 ← (25) 5 7 3 5 7 7
(21) 7 12 4 5 3 3 3 ← (22) 13 2 3 5 7 7
(23) 6 5 2 3 5 7 7 ← (29) 12 4 5 3 3 3
(25) 5 5 3 6 6 5 3
(27) 21 1 * 1 ← (28) 22 * 1
(41) 1 1 2 4 3 3 3 ← (42) ..4 3 3 3
(42) 2 3 4 4 1 1 1 ← (49) 1 * 1
(43) 5 1 * 1 ← (44) 6 * 1
(47) 1 1 * 1 ← (48) 2 * 1

(58, 9)

(1) 6 4 6 9 11 7 7 7 ← (4) 1 2 4 7 11 15 15
(1) 18 3 5 9 3 5 7 7 ← (2) 27 12 4 5 3 3 3
(6) 4 8 5 5 9 7 7 7 ← (12) 9 3 5 9 7 7 7
(7) 3 5 10 11 3 5 7 7 ← (11) 5 10 11 3 5 7 7
(11) 4 5 3 5 9 7 7 7 ← (13) 8 3 5 9 7 7 7
(11) 8 3 5 9 3 5 7 7 ← (14) 7 8 12 9 3 3 3
(21) 4 7 3 3 6 6 5 3 ← (27) 6 3 3 6 6 5 3
(21) 5 6 3 3 6 6 5 3 ← (22) 7 12 4 5 3 3 3
(23) 3 6 3 3 6 6 5 3 ← (24) 6 5 2 3 5 7 7
(27) 20 1 1 * 1 ← (28) 21 1 * 1
(29) 3 6 2 4 5 3 3 3 ← (30) 6 2 3 5 7 3 3
(35) 12 1 1 * 1 ← (36) 13 1 * 1
(41) 1 2 3 4 4 1 1 1 ← (48) 1 1 * 1
(43) 4 1 1 * 1 ← (44) 5 1 * 1

(58, 10)

(1) 4 2 4 6 9 11 7 7 7 ← (2) 6 4 6 9 11 7 7 7
(1) 11 9 3 5 7 3 5 7 7 ← (2) 18 3 5 9 3 5 7 7
(2) 4 4 8 5 5 9 7 7 7 ← (8) 3 5 10 11 3 5 7 7
(5) 2 3 5 10 11 3 5 7 7
(7) 5 9 3 5 7 3 5 7 7 ← (13) 9 3 5 7 3 5 7 7
(10) 2 3 5 3 5 9 7 7 7 ← (12) 4 5 3 5 9 7 7 7
(10) 4 5 3 5 9 3 5 7 7 ← (12) 8 3 5 9 3 5 7 7
(19) 2 4 7 3 3 6 6 5 3 ← (22) 4 7 3 3 6 6 5 3
(20) 2 3 5 5 3 6 6 5 3 ← (25) 5 6 2 3 5 7 3 3
(21) 3 5 6 2 3 5 7 3 3 ← (22) 5 6 3 3 6 6 5 3
(23) 2 4 3 3 3 6 6 5 3 ← (24) 3 6 3 3 6 6 5 3
(27) 3 6 ..4 5 3 3 3 ← (28) 5 6 2 4 5 3 3 3
(27) 16 4 1 1 * 1 ← (28) 20 1 1 * 1
(29) ....3 5 7 3 3 ← (30) 3 6 2 4 5 3 3 3
(33) 3 6 2 3 4 4 1 1 1 ← (34) 8 1 1 2 4 3 3 3
(35) * 2 4 3 3 3 ← (37) 6 2 3 4 4 1 1 1
(35) 8 4 1 1 * 1 ← (36) 12 1 1 * 1
(39) 4 4 1 1 * 1 ← (44) 4 1 1 * 1

(58, 11)

(1) ...4 6 9 11 7 7 7 ← (2) 4 2 4 6 9 11 7 7 7
(2) 5 5 9 3 5 7 3 5 7 7 ← (8) 5 9 3 5 7 3 5 7 7
(4) 1 2 3 5 10 11 3 5 7 7
(11) 4 3 5 6 5 2 3 5 7 7 ← (14) 5 5 6 5 2 3 5 7 7
(17) ..4 7 3 3 6 6 5 3 ← (24) 2 4 3 3 3 6 6 5 3
(18) 1 2 4 7 3 3 6 6 5 3 ← (20) 2 4 7 3 3 6 6 5 3
(21) ..4 3 3 3 6 6 5 3 ← (22) 3 5 6 2 3 5 7 3 3
(27) .....3 5 7 3 3 ← (28) 3 6 ..4 5 3 3 3
(27) 14 * * 1 ← (28) 16 4 1 1 * 1
(33) 2 * 2 4 3 3 3 ← (34) 3 6 2 3 4 4 1 1 1
(34) 1 * 2 4 3 3 3 ← (36) * 2 4 3 3 3
(35) 6 * * 1 ← (36) 8 4 1 1 * 1
(36) 3 4 4 1 1 * 1 ← (42) * * 1
(39) 2 * * 1 ← (40) 4 4 1 1 * 1

(58, 12)

(1) 4 5 4 5 3 5 9 3 5 7 7
(3) 5 5 5 5 6 5 2 3 5 7 7 ← (9) 5 5 5 6 5 2 3 5 7 7
(5) 16 ..4 3 3 3 6 6 5 3 ← (6) 18 2 4 3 3 3 6 6 5 3
(9) 2 4 3 5 6 5 2 3 5 7 7 ← (12) 4 3 5 6 5 2 3 5 7 7
(15) 6 ..4 3 3 3 6 6 5 3 ← (22) ..4 3 3 3 6 6 5 3
(17) 1 1 2 4 7 3 3 6 6 5 3 ← (18) ..4 7 3 3 6 6 5 3
(27) 13 1 * * 1 ← (28) 14 * * 1
(33) 1 1 * 2 4 3 3 3 ← (34) 2 * 2 4 3 3 3
(34) 2 3 4 4 1 1 * 1 ← (41) 1 * * 1
(35) 5 1 * * 1 ← (36) 6 * * 1
(39) 1 1 * * 1 ← (40) 2 * * 1

(58, 13)

(1) 4 3 5 5 5 6 5 2 3 5 7 7 ← (4) 5 5 5 5 6 5 2 3 5 7 7
(3) 1 2 4 2 3 5 3 5 9 7 7 7 ← (5) 2 4 2 3 5 3 5 9 7 7 7
(5) 13 6 ....3 3 6 6 5 3 ← (6) 16 ..4 3 3 3 6 6 5 3
(7) ..4 3 5 6 5 2 3 5 7 7 ← (10) 2 4 3 5 6 5 2 3 5 7 7
(13) 4 1 1 2 4 7 3 3 6 6 5 3 ← (19) 6 ....3 3 6 6 5 3
(15) 3 6 ....3 3 6 6 5 3 ← (16) 6 ..4 3 3 3 6 6 5 3
(21) 3 6 .....4 5 3 3 3 ← (22) 6 .....3 5 7 3 3
(27) 12 1 1 * * 1 ← (28) 13 1 * * 1
(33) 1 2 3 4 4 1 1 * 1 ← (40) 1 1 * * 1
(35) 4 1 1 * * 1 ← (36) 5 1 * * 1

(58, 14)

(2) 1 1 2 4 2 3 5 3 5 9 7 7 7 ← (4) 1 2 4 2 3 5 3 5 9 7 7 7
(2) ..4 3 5 5 6 5 2 3 5 7 7
(5) ...4 3 5 6 5 2 3 5 7 7 ← (8) ..4 3 5 6 5 2 3 5 7 7
(5) 11 5 6 .....3 5 7 3 3 ← (6) 13 6 ....3 3 6 6 5 3
(11) * 2 4 7 3 3 6 6 5 3 ← (14) 4 1 1 2 4 7 3 3 6 6 5 3
(11) 24 4 1 1 * * 1 ← (17) 5 6 .....3 5 7 3 3
(15) .....4 3 3 3 6 6 5 3 ← (16) 3 6 ....3 3 6 6 5 3
(19) 3 6 ......4 5 3 3 3 ← (20) 5 6 .....4 5 3 3 3
(21) ........3 5 7 3 3 ← (22) 3 6 .....4 5 3 3 3
(25) 3 6 2 3 4 4 1 1 * 1 ← (26) 8 1 1 * 2 4 3 3 3
(27) * * 2 4 3 3 3 ← (29) 6 2 3 4 4 1 1 * 1
(27) 8 4 1 1 * * 1 ← (28) 12 1 1 * * 1
(31) 4 4 1 1 * * 1 ← (36) 4 1 1 * * 1

(58, 15)

(3) ....4 3 5 6 5 2 3 5 7 7 ← (6) ...4 3 5 6 5 2 3 5 7 7
(5) 10 .....4 3 3 3 6 6 5 3 ← (6) 11 5 6 .....3 5 7 3 3
(9) 2 * 2 4 7 3 3 6 6 5 3 ← (16) .....4 3 3 3 6 6 5 3
(10) 1 * 2 4 7 3 3 6 6 5 3 ← (12) * 2 4 7 3 3 6 6 5 3
(11) 22 * * * 1 ← (12) 24 4 1 1 * * 1
(19) .........3 5 7 3 3 ← (20) 3 6 ......4 5 3 3 3
(25) 2 * * 2 4 3 3 3 ← (26) 3 6 2 3 4 4 1 1 * 1
(26) 1 * * 2 4 3 3 3 ← (28) * * 2 4 3 3 3
(27) 6 * * * 1 ← (28) 8 4 1 1 * * 1
(28) 3 4 4 1 1 * * 1 ← (34) * * * 1
(31) 2 * * * 1 ← (32) 4 4 1 1 * * 1

(58, 16)

(1) .....4 3 5 6 5 2 3 5 7 7 ← (4) ....4 3 5 6 5 2 3 5 7 7
(5) 7 1.........4 5 3 3 3 ← (6) 10 .....4 3 3 3 6 6 5 3
(7) 6 ......4 3 3 3 6 6 5 3 ← (13) 1.........4 5 3 3 3
(9) 1 1 * 2 4 7 3 3 6 6 5 3 ← (10) 2 * 2 4 7 3 3 6 6 5 3
(11) 21 1 * * * 1 ← (12) 22 * * * 1
(25) 1 1 * * 2 4 3 3 3 ← (26) 2 * * 2 4 3 3 3
(26) 2 3 4 4 1 1 * * 1 ← (33) 1 * * * 1
(27) 5 1 * * * 1 ← (28) 6 * * * 1
(31) 1 1 * * * 1 ← (32) 2 * * * 1

(59, 3)

(27) 29 3 ← (29) 31
(43) 13 3 ← (45) 15
(51) 5 3 ← (53) 7
(53) 3 3 ← (57) 3

(59, 4)

(21) 22 13 3 ← (22) 23 15
(25) 26 5 3 ← (26) 27 7
(26) 27 3 3 ← (28) 29 3
(29) 14 13 3 ← (30) 15 15
(41) 10 5 3 ← (42) 11 7
(42) 11 3 3 ← (44) 13 3
(45) 6 5 3 ← (46) 7 7
(50) 3 3 3 ← (52) 5 3
(51) 2 3 3 ← (54) 3 3

(59, 5)

(11) 7 11 15 15 ← (19) 11 15 15
(15) 13 13 11 7 ← (29) 13 11 7
(19) 19 7 7 7 ← (21) 21 11 7
(21) 21 11 3 3 ← (22) 22 13 3
(25) 25 3 3 3 ← (26) 26 5 3
(29) 13 11 3 3 ← (30) 14 13 3
(37) 3 5 7 7 ← (41) 5 7 7
(39) 6 6 5 3 ← (46) 6 5 3
(41) 9 3 3 3 ← (42) 10 5 3
(50) 1 2 3 3 ← (52) 2 3 3

(59, 6)

(6) 5 7 11 15 15 ← (10) 9 11 15 15
(7) 4 7 11 15 15 ← (12) 7 11 15 15
(14) 9 15 7 7 7 ← (27) 14 5 7 7
(15) 11 14 5 7 7 ← (16) 13 13 11 7
(18) 9 11 7 7 7 ← (22) 17 7 7 7
(19) 7 14 5 7 7 ← (20) 11 15 7 7
(19) 18 3 5 7 7 ← (21) 20 5 7 7
(21) 20 9 3 3 3 ← (22) 21 11 3 3
(26) 11 3 5 7 7 ← (28) 13 5 7 7
(29) 12 9 3 3 3 ← (30) 13 11 3 3
(35) 2 3 5 7 7 ← (37) 4 5 7 7
(38) 3 5 7 3 3 ← (43) 8 3 3 3
(39) 4 7 3 3 3 ← (40) 6 6 5 3
(41) 4 5 3 3 3 ← (42) 5 7 3 3
(45) 5 1 2 3 3 ← (46) 6 2 3 3

(59, 7)

(1) 28 12 9 3 3 3 ← (8) 4 7 11 15 15
(7) 5 7 11 15 7 7 ← (9) 7 13 13 11 7
(10) 8 9 11 7 7 7 ← (23) 14 4 5 7 7
(11) 9 7 13 5 7 7 ← (12) 10 17 7 7 7
(12) 6 9 11 7 7 7 ← (21) 7 13 5 7 7
(15) 7 14 4 5 7 7 ← (16) 11 14 5 7 7
(17) 12 12 9 3 3 3 ← (20) 18 3 5 7 7
(19) 5 5 9 7 7 7 ← (20) 7 14 5 7 7
(19) 17 3 6 6 5 3 ← (22) 20 9 3 3 3
(21) 3 5 9 7 7 7 ← (25) 5 9 7 7 7
(23) 5 9 3 5 7 7 ← (29) 9 3 5 7 7
(27) 9 3 6 6 5 3 ← (30) 12 9 3 3 3
(33) 3 3 6 6 5 3 ← (36) 2 3 5 7 7
(36) 2 3 5 7 3 3 ← (42) 4 5 3 3 3
(39) 2 4 5 3 3 3 ← (40) 4 7 3 3 3
(43) 1 2 4 3 3 3 ← (45) 2 4 3 3 3
(45) 3 4 4 1 1 1 ← (46) 5 1 2 3 3

(59, 8)

(1) 26 9 3 6 6 5 3 ← (2) 28 12 9 3 3 3
(6) 3 5 9 15 7 7 7 ← (10) 5 9 15 7 7 7
(8) 4 6 9 11 7 7 7 ← (16) 7 14 4 5 7 7
(11) 8 5 5 9 7 7 7 ← (12) 9 7 13 5 7 7
(17) 10 9 3 6 6 5 3 ← (18) 12 12 9 3 3 3
(18) 11 12 4 5 3 3 3 ← (20) 17 3 6 6 5 3
(20) 3 5 9 3 5 7 7 ← (26) 5 7 3 5 7 7
(21) 6 9 3 6 6 5 3 ← (22) 8 12 9 3 3 3
(22) 3 5 7 3 5 7 7 ← (24) 5 9 3 5 7 7
(26) 5 5 3 6 6 5 3 ← (28) 9 3 6 6 5 3
(29) 10 2 4 5 3 3 3 ← (30) 12 4 5 3 3 3
(33) 6 2 4 5 3 3 3 ← (40) 2 4 5 3 3 3
(42) 1 1 2 4 3 3 3 ← (44) 1 2 4 3 3 3
(43) 2 3 4 4 1 1 1 ← (46) 3 4 4 1 1 1

(59, 9)

(1) 25 5 5 3 6 6 5 3 ← (2) 26 9 3 6 6 5 3
(5) 13 11 12 4 5 3 3 3 ← (14) 8 3 5 9 7 7 7
(7) 4 8 5 5 9 7 7 7 ← (12) 8 5 5 9 7 7 7
(11) 4 6 3 5 9 7 7 7 ← (12) 5 10 11 3 5 7 7
(17) 9 5 5 3 6 6 5 3 ← (18) 10 9 3 6 6 5 3
(19) 5 6 5 2 3 5 7 7 ← (25) 6 5 2 3 5 7 7
(21) 3 6 5 2 3 5 7 7 ← (22) 6 9 3 6 6 5 3
(27) 3 6 2 3 5 7 3 3 ← (28) 6 3 3 6 6 5 3
(29) 7 13 1 * 1 ← (30) 10 2 4 5 3 3 3
(31) 6 ..4 5 3 3 3 ← (37) 13 1 * 1
(33) 4 ..4 5 3 3 3 ← (34) 6 2 4 5 3 3 3
(42) 1 2 3 4 4 1 1 1 ← (44) 2 3 4 4 1 1 1

(59, 10)

(2) 11 9 3 5 7 3 5 7 7 ← (9) 3 5 10 11 3 5 7 7
(3) 4 4 8 5 5 9 7 7 7 ← (8) 4 8 5 5 9 7 7 7
(5) 12 9 5 5 3 6 6 5 3 ← (6) 13 11 12 4 5 3 3 3
(6) 2 3 5 10 11 3 5 7 7
(11) 2 3 5 3 5 9 7 7 7 ← (12) 4 6 3 5 9 7 7 7
(11) 4 5 3 5 9 3 5 7 7 ← (13) 8 3 5 9 3 5 7 7
(17) 4 5 5 5 3 6 6 5 3 ← (20) 5 6 5 2 3 5 7 7
(21) 2 3 5 5 3 6 6 5 3 ← (22) 3 6 5 2 3 5 7 7
(25) 3 5 6 2 4 5 3 3 3 ← (26) 5 6 2 3 5 7 3 3
(27) ...3 3 6 6 5 3 ← (28) 3 6 2 3 5 7 3 3
(29) 5 8 1 1 2 4 3 3 3 ← (30) 7 13 1 * 1
(30) ....3 5 7 3 3 ← (35) 8 1 1 2 4 3 3 3
(31) 4 ...4 5 3 3 3 ← (32) 6 ..4 5 3 3 3
(33) ....4 5 3 3 3 ← (34) 4 ..4 5 3 3 3
(37) 5 1 2 3 4 4 1 1 1 ← (38) 6 2 3 4 4 1 1 1

(59, 11)

(2) ...4 6 9 11 7 7 7 ← (4) 4 4 8 5 5 9 7 7 7
(3) 5 5 9 3 5 7 3 5 7 7 ← (9) 5 9 3 5 7 3 5 7 7
(3) 8 4 5 3 5 9 3 5 7 7
(5) 1 2 3 5 10 11 3 5 7 7 ← (6) 12 9 5 5 3 6 6 5 3
(5) 16 2 3 5 5 3 6 6 5 3 ← (12) 4 5 3 5 9 3 5 7 7
(15) 2 4 5 5 5 3 6 6 5 3 ← (18) 4 5 5 5 3 6 6 5 3
(19) 1 2 4 7 3 3 6 6 5 3 ← (21) 2 4 7 3 3 6 6 5 3
(25) ....3 3 6 6 5 3 ← (26) 3 5 6 2 4 5 3 3 3
(28) .....3 5 7 3 3 ← (34) ....4 5 3 3 3
(29) 4 ....4 5 3 3 3 ← (30) 5 8 1 1 2 4 3 3 3
(31) .....4 5 3 3 3 ← (32) 4 ...4 5 3 3 3
(35) 1 * 2 4 3 3 3 ← (37) * 2 4 3 3 3
(37) 3 4 4 1 1 * 1 ← (38) 5 1 2 3 4 4 1 1 1

(59, 12)

(2) 4 5 4 5 3 5 9 3 5 7 7
(3) 4 4 2 3 5 3 5 9 7 7 7 ← (4) 8 4 5 3 5 9 3 5 7 7
(5) 13 ..4 7 3 3 6 6 5 3 ← (6) 16 2 3 5 5 3 6 6 5 3
(7) 4 3 5 5 6 5 2 3 5 7 7 ← (10) 5 5 5 6 5 2 3 5 7 7
(13) ..4 5 5 5 3 6 6 5 3 ← (16) 2 4 5 5 5 3 6 6 5 3
(18) 1 1 2 4 7 3 3 6 6 5 3 ← (20) 1 2 4 7 3 3 6 6 5 3
(25) 6 .....4 5 3 3 3 ← (32) .....4 5 3 3 3
(29) .....4 5 3 3 3 ← (30) 4 ....4 5 3 3 3
(34) 1 1 * 2 4 3 3 3 ← (36) 1 * 2 4 3 3 3
(35) 2 3 4 4 1 1 * 1 ← (38) 3 4 4 1 1 * 1

(59, 13)

(2) 4 3 5 5 5 6 5 2 3 5 7 7
(3) ..4 2 3 5 3 5 9 7 7 7 ← (4) 4 4 2 3 5 3 5 9 7 7 7
(5) 2 4 3 5 5 6 5 2 3 5 7 7 ← (8) 4 3 5 5 6 5 2 3 5 7 7
(5) 11 6 ..4 3 3 3 6 6 5 3 ← (6) 13 ..4 7 3 3 6 6 5 3
(11) ...4 5 5 5 3 6 6 5 3 ← (14) ..4 5 5 5 3 6 6 5 3
(19) 3 6 .....3 5 7 3 3 ← (20) 6 ....3 3 6 6 5 3
(23) 6 .....4 5 3 3 3 ← (30) .....4 5 3 3 3
(25) 4 .....4 5 3 3 3 ← (26) 6 .....4 5 3 3 3
(34) 1 2 3 4 4 1 1 * 1 ← (36) 2 3 4 4 1 1 * 1

(59, 14)

(3) 1 1 2 4 2 3 5 3 5 9 7 7 7 ← (4) ..4 2 3 5 3 5 9 7 7 7
(3) ..4 3 5 5 6 5 2 3 5 7 7 ← (6) 2 4 3 5 5 6 5 2 3 5 7 7
(5) 9 4 1 1 2 4 7 3 3 6 6 5 3 ← (6) 11 6 ..4 3 3 3 6 6 5 3
(9) ....4 5 5 5 3 6 6 5 3 ← (12) ...4 5 5 5 3 6 6 5 3
(17) 3 5 6 .....4 5 3 3 3 ← (18) 5 6 .....3 5 7 3 3
(19) .......3 3 6 6 5 3 ← (20) 3 6 .....3 5 7 3 3
(22) ........3 5 7 3 3 ← (27) 8 1 1 * 2 4 3 3 3
(23) 4 .......4 5 3 3 3 ← (24) 6 .....4 5 3 3 3
(25) ........4 5 3 3 3 ← (26) 4 .....4 5 3 3 3
(29) 5 1 2 3 4 4 1 1 * 1 ← (30) 6 2 3 4 4 1 1 * 1

(59, 15)

(1) ...4 3 5 5 6 5 2 3 5 7 7 ← (4) ..4 3 5 5 6 5 2 3 5 7 7
(5) 8 ..1 ..4 7 3 3 6 6 5 3 ← (6) 9 4 1 1 2 4 7 3 3 6 6 5 3
(7) .....4 5 5 5 3 6 6 5 3 ← (10) ....4 5 5 5 3 6 6 5 3
(11) 1 * 2 4 7 3 3 6 6 5 3 ← (13) * 2 4 7 3 3 6 6 5 3
(17) ........3 3 6 6 5 3 ← (18) 3 5 6 .....4 5 3 3 3
(20) .........3 5 7 3 3 ← (26) ........4 5 3 3 3
(23) .........4 5 3 3 3 ← (24) 4 .......4 5 3 3 3
(27) 1 * * 2 4 3 3 3 ← (29) * * 2 4 3 3 3
(29) 3 4 4 1 1 * * 1 ← (30) 5 1 2 3 4 4 1 1 * 1

(60, 2)

(59) 1 ← (61)

(60, 3)

(29) 30 1 ← (30) 31
(45) 14 1 ← (46) 15
(53) 6 1 ← (54) 7
(57) 2 1 ← (58) 3
(58) 1 1 ← (60) 1

(60, 4)

(15) 15 15 15 ← (23) 23 15
(23) 23 7 7 ← (27) 27 7
(27) 27 3 3 ← (29) 29 3
(29) 29 1 1 ← (30) 30 1
(39) 7 7 7 ← (43) 11 7
(43) 11 3 3 ← (45) 13 3
(45) 13 1 1 ← (46) 14 1
(51) 3 3 3 ← (53) 5 3
(53) 5 1 1 ← (54) 6 1
(57) 1 1 1 ← (58) 2 1

(60, 5)

(15) 14 13 11 7 ← (16) 15 15 15
(19) 10 13 11 7 ← (20) 11 15 15
(20) 19 7 7 7 ← (24) 23 7 7
(26) 25 3 3 3 ← (28) 27 3 3
(29) 28 1 1 1 ← (30) 29 1 1
(38) 3 5 7 7 ← (42) 5 7 7
(42) 9 3 3 3 ← (44) 11 3 3
(45) 12 1 1 1 ← (46) 13 1 1
(51) 1 2 3 3 ← (53) 2 3 3
(53) 4 1 1 1 ← (54) 5 1 1

(60, 6)

(7) 5 7 11 15 15 ← (11) 9 11 15 15
(11) 9 11 15 7 7 ← (23) 17 7 7 7
(13) 7 11 15 7 7 ← (21) 11 15 7 7
(15) 9 15 7 7 7 ← (17) 13 13 11 7
(15) 13 13 5 7 7 ← (22) 20 5 7 7
(19) 9 11 7 7 7 ← (20) 10 13 11 7
(27) 11 3 5 7 7 ← (28) 14 5 7 7
(29) 24 4 1 1 1 ← (30) 28 1 1 1
(37) 3 6 6 5 3 ← (43) 5 7 3 3
(39) 3 5 7 3 3 ← (41) 6 6 5 3
(43) 3 6 2 3 3 ← (44) 8 3 3 3
(45) 8 4 1 1 1 ← (46) 12 1 1 1
(49) 4 4 1 1 1 ← (52) 1 2 3 3
(51) * 1 ← (54) 4 1 1 1

(60, 7)

(6) 2 4 7 11 15 15
(8) 5 7 11 15 7 7 ← (16) 9 15 7 7 7
(9) 6 9 15 7 7 7 ← (10) 7 13 13 11 7
(11) 8 9 11 7 7 7 ← (12) 9 11 15 7 7
(13) 6 9 11 7 7 7 ← (14) 7 11 15 7 7
(14) 11 5 9 7 7 7 ← (21) 18 3 5 7 7
(15) 12 11 3 5 7 7 ← (16) 13 13 5 7 7
(20) 5 5 9 7 7 7
(22) 3 5 9 7 7 7 ← (26) 5 9 7 7 7
(23) 13 2 3 5 7 7 ← (24) 14 4 5 7 7
(29) 22 * 1 ← (30) 24 4 1 1 1
(34) 3 3 6 6 5 3 ← (40) 3 5 7 3 3
(37) 2 3 5 7 3 3 ← (38) 3 6 6 5 3
(43) ..4 3 3 3 ← (44) 3 6 2 3 3
(45) 6 * 1 ← (46) 8 4 1 1 1
(49) 2 * 1 ← (50) 4 4 1 1 1
(50) 1 * 1 ← (52) * 1

(60, 8)

(3) 27 12 4 5 3 3 3
(5) 1 2 4 7 11 15 15
(7) 3 5 9 15 7 7 7 ← (11) 5 9 15 7 7 7
(9) 4 6 9 11 7 7 7 ← (10) 6 9 15 7 7 7
(13) 9 3 5 9 7 7 7 ← (19) 12 12 9 3 3 3
(15) 7 8 12 9 3 3 3 ← (16) 12 11 3 5 7 7
(19) 11 12 4 5 3 3 3 ← (21) 17 3 6 6 5 3
(21) 3 5 9 3 5 7 7 ← (27) 5 7 3 5 7 7
(23) 3 5 7 3 5 7 7 ← (25) 5 9 3 5 7 7
(23) 7 12 4 5 3 3 3 ← (24) 13 2 3 5 7 7
(27) 5 5 3 6 6 5 3 ← (29) 9 3 6 6 5 3
(29) 21 1 * 1 ← (30) 22 * 1
(31) 6 2 3 5 7 3 3 ← (38) 2 3 5 7 3 3
(43) 1 1 2 4 3 3 3 ← (44) ..4 3 3 3
(45) 5 1 * 1 ← (46) 6 * 1
(49) 1 1 * 1 ← (50) 2 * 1

(60, 9)

(2) 25 5 5 3 6 6 5 3
(3) 6 4 6 9 11 7 7 7 ← (16) 7 8 12 9 3 3 3
(3) 18 3 5 9 3 5 7 7 ← (4) 27 12 4 5 3 3 3
(13) 4 5 3 5 9 7 7 7
(14) 9 3 5 7 3 5 7 7 ← (24) 3 5 7 3 5 7 7
(18) 9 5 5 3 6 6 5 3 ← (20) 11 12 4 5 3 3 3
(23) 4 7 3 3 6 6 5 3 ← (28) 5 5 3 6 6 5 3
(23) 5 6 3 3 6 6 5 3 ← (24) 7 12 4 5 3 3 3
(25) 3 6 3 3 6 6 5 3 ← (26) 6 5 2 3 5 7 7
(29) 5 6 2 4 5 3 3 3 ← (35) 6 2 4 5 3 3 3
(29) 20 1 1 * 1 ← (30) 21 1 * 1
(31) 3 6 2 4 5 3 3 3 ← (32) 6 2 3 5 7 3 3
(37) 12 1 1 * 1 ← (38) 13 1 * 1
(43) 1 2 3 4 4 1 1 1 ← (45) 2 3 4 4 1 1 1
(45) 4 1 1 * 1 ← (46) 5 1 * 1

(60, 10)

(3) 4 2 4 6 9 11 7 7 7 ← (4) 6 4 6 9 11 7 7 7
(3) 11 9 3 5 7 3 5 7 7 ← (4) 18 3 5 9 3 5 7 7
(7) 2 3 5 10 11 3 5 7 7 ← (10) 3 5 10 11 3 5 7 7
(12) 2 3 5 3 5 9 7 7 7
(15) 5 5 6 5 2 3 5 7 7 ← (21) 5 6 5 2 3 5 7 7
(22) 2 3 5 5 3 6 6 5 3 ← (24) 4 7 3 3 6 6 5 3
(23) 3 5 6 2 3 5 7 3 3 ← (24) 5 6 3 3 6 6 5 3
(25) 2 4 3 3 3 6 6 5 3 ← (26) 3 6 3 3 6 6 5 3
(28) ...3 3 6 6 5 3 ← (33) 6 ..4 5 3 3 3
(29) 3 6 ..4 5 3 3 3 ← (30) 5 6 2 4 5 3 3 3
(29) 16 4 1 1 * 1 ← (30) 20 1 1 * 1
(31) ....3 5 7 3 3 ← (32) 3 6 2 4 5 3 3 3
(35) 3 6 2 3 4 4 1 1 1 ← (36) 8 1 1 2 4 3 3 3
(37) 8 4 1 1 * 1 ← (38) 12 1 1 * 1
(41) 4 4 1 1 * 1 ← (44) 1 2 3 4 4 1 1 1
(43) * * 1 ← (46) 4 1 1 * 1

(60, 11)

(1) 6 2 3 5 10 11 3 5 7 7
(3) ...4 6 9 11 7 7 7 ← (4) 4 2 4 6 9 11 7 7 7
(4) 5 5 9 3 5 7 3 5 7 7
(6) 1 2 3 5 10 11 3 5 7 7 ← (8) 2 3 5 10 11 3 5 7 7
(7) 18 2 4 3 3 3 6 6 5 3
(13) 4 3 5 6 5 2 3 5 7 7 ← (16) 5 5 6 5 2 3 5 7 7
(19) ..4 7 3 3 6 6 5 3 ← (22) 2 4 7 3 3 6 6 5 3
(23) ..4 3 3 3 6 6 5 3 ← (24) 3 5 6 2 3 5 7 3 3
(26) ....3 3 6 6 5 3 ← (32) ....3 5 7 3 3
(29) .....3 5 7 3 3 ← (30) 3 6 ..4 5 3 3 3
(29) 14 * * 1 ← (30) 16 4 1 1 * 1
(35) 2 * 2 4 3 3 3 ← (36) 3 6 2 3 4 4 1 1 1
(37) 6 * * 1 ← (38) 8 4 1 1 * 1
(41) 2 * * 1 ← (42) 4 4 1 1 * 1
(42) 1 * * 1 ← (44) * * 1

(60, 12)

(1) 4 7 4 5 3 5 9 3 5 7 7 ← (2) 6 2 3 5 10 11 3 5 7 7
(3) 4 5 4 5 3 5 9 3 5 7 7 ← (5) 8 4 5 3 5 9 3 5 7 7
(5) 5 5 5 5 6 5 2 3 5 7 7
(6) 2 4 2 3 5 3 5 9 7 7 7
(7) 16 ..4 3 3 3 6 6 5 3 ← (8) 18 2 4 3 3 3 6 6 5 3
(11) 2 4 3 5 6 5 2 3 5 7 7 ← (14) 4 3 5 6 5 2 3 5 7 7
(17) 6 ..4 3 3 3 6 6 5 3 ← (21) 1 2 4 7 3 3 6 6 5 3
(19) 1 1 2 4 7 3 3 6 6 5 3 ← (20) ..4 7 3 3 6 6 5 3
(23) 6 .....3 5 7 3 3 ← (30) .....3 5 7 3 3
(29) 13 1 * * 1 ← (30) 14 * * 1
(35) 1 1 * 2 4 3 3 3 ← (36) 2 * 2 4 3 3 3
(37) 5 1 * * 1 ← (38) 6 * * 1
(41) 1 1 * * 1 ← (42) 2 * * 1

(60, 13)

(1) 2 4 5 4 5 3 5 9 3 5 7 7 ← (2) 4 7 4 5 3 5 9 3 5 7 7
(3) 4 3 5 5 5 6 5 2 3 5 7 7 ← (6) 5 5 5 5 6 5 2 3 5 7 7
(5) 1 2 4 2 3 5 3 5 9 7 7 7
(7) 13 6 ....3 3 6 6 5 3 ← (8) 16 ..4 3 3 3 6 6 5 3
(9) ..4 3 5 6 5 2 3 5 7 7 ← (12) 2 4 3 5 6 5 2 3 5 7 7
(15) 4 1 1 2 4 7 3 3 6 6 5 3 ← (20) 1 1 2 4 7 3 3 6 6 5 3
(17) 3 6 ....3 3 6 6 5 3 ← (18) 6 ..4 3 3 3 6 6 5 3
(21) 5 6 .....4 5 3 3 3 ← (27) 6 .....4 5 3 3 3
(23) 3 6 .....4 5 3 3 3 ← (24) 6 .....3 5 7 3 3
(29) 12 1 1 * * 1 ← (30) 13 1 * * 1
(35) 1 2 3 4 4 1 1 * 1 ← (37) 2 3 4 4 1 1 * 1
(37) 4 1 1 * * 1 ← (38) 5 1 * * 1

(60, 14)

(1) 2 4 3 5 5 5 6 5 2 3 5 7 7 ← (4) 4 3 5 5 5 6 5 2 3 5 7 7
(4) 1 1 2 4 2 3 5 3 5 9 7 7 7
(7) ...4 3 5 6 5 2 3 5 7 7 ← (10) ..4 3 5 6 5 2 3 5 7 7
(7) 11 5 6 .....3 5 7 3 3 ← (8) 13 6 ....3 3 6 6 5 3
(13) 24 4 1 1 * * 1 ← (16) 4 1 1 2 4 7 3 3 6 6 5 3
(17) .....4 3 3 3 6 6 5 3 ← (18) 3 6 ....3 3 6 6 5 3
(20) .....3 3 6 6 5 3 ← (25) 6 .....4 5 3 3 3
(21) 3 6 .....4 5 3 3 3 ← (22) 5 6 .....4 5 3 3 3
(23) .....3 5 7 3 3 ← (24) 3 6 .....4 5 3 3 3
(27) 3 6 2 3 4 4 1 1 * 1 ← (28) 8 1 1 * 2 4 3 3 3
(29) 8 4 1 1 * * 1 ← (30) 12 1 1 * * 1
(33) 4 4 1 1 * * 1 ← (36) 1 2 3 4 4 1 1 * 1
(35) * * * 1 ← (38) 4 1 1 * * 1

(61, 3)

(31) 15 15 ← (47) 15
(47) 7 7 ← (55) 7
(55) 3 3 ← (59) 3
(59) 1 1 ← (61) 1

(61, 4)

(22) 21 11 7
(23) 22 13 3 ← (24) 23 15
(27) 26 5 3 ← (28) 27 7
(30) 13 11 7 ← (46) 13 3
(31) 14 13 3 ← (32) 15 15
(40) 7 7 7 ← (54) 5 3
(43) 10 5 3 ← (44) 11 7
(47) 6 5 3 ← (48) 7 7
(52) 3 3 3 ← (56) 3 3
(58) 1 1 1 ← (60) 1 1

(61, 5)

(13) 7 11 15 15 ← (21) 11 15 15
(16) 14 13 11 7 ← (45) 11 3 3
(21) 19 7 7 7 ← (25) 23 7 7
(23) 21 11 3 3 ← (24) 22 13 3
(27) 25 3 3 3 ← (28) 26 5 3
(29) 13 5 7 7
(31) 13 11 3 3 ← (32) 14 13 3
(38) 4 5 7 7 ← (48) 6 5 3
(39) 3 5 7 7 ← (43) 5 7 7
(43) 9 3 3 3 ← (44) 10 5 3
(47) 6 2 3 3 ← (54) 2 3 3

(61, 6)

(8) 5 7 11 15 15
(9) 4 7 11 15 15
(13) 10 17 7 7 7 ← (44) 9 3 3 3
(17) 11 14 5 7 7 ← (18) 13 13 11 7
(20) 9 11 7 7 7
(21) 7 14 5 7 7 ← (22) 11 15 7 7
(22) 7 13 5 7 7 ← (24) 17 7 7 7
(23) 20 9 3 3 3 ← (24) 21 11 3 3
(28) 11 3 5 7 7
(30) 9 3 5 7 7 ← (40) 3 5 7 7
(31) 12 9 3 3 3 ← (32) 13 11 3 3
(37) 2 3 5 7 7 ← (45) 8 3 3 3
(41) 4 7 3 3 3 ← (42) 6 6 5 3
(43) 4 5 3 3 3 ← (44) 5 7 3 3
(46) 2 4 3 3 3 ← (53) 1 2 3 3
(47) 5 1 2 3 3 ← (48) 6 2 3 3

(61, 7)

(3) 28 12 9 3 3 3
(7) 2 4 7 11 15 15 ← (10) 4 7 11 15 15
(9) 5 7 11 15 7 7 ← (17) 9 15 7 7 7
(12) 8 9 11 7 7 7 ← (32) 12 9 3 3 3
(13) 9 7 13 5 7 7 ← (14) 10 17 7 7 7
(14) 6 9 11 7 7 7
(15) 11 5 9 7 7 7 ← (17) 13 13 5 7 7
(17) 7 14 4 5 7 7 ← (18) 11 14 5 7 7
(21) 5 5 9 7 7 7 ← (22) 7 14 5 7 7
(23) 3 5 9 7 7 7 ← (25) 14 4 5 7 7
(23) 8 12 9 3 3 3
(31) 12 4 5 3 3 3 ← (44) 4 5 3 3 3
(35) 3 3 6 6 5 3 ← (41) 3 5 7 3 3
(41) 2 4 5 3 3 3 ← (42) 4 7 3 3 3
(45) 1 2 4 3 3 3 ← (51) 4 4 1 1 1
(47) 3 4 4 1 1 1 ← (48) 5 1 2 3 3
(51) 1 * 1 ← (53) * 1

(61, 8)

(1) 6 2 4 7 11 15 15
(3) 26 9 3 6 6 5 3 ← (4) 28 12 9 3 3 3
(6) 1 2 4 7 11 15 15 ← (8) 2 4 7 11 15 15
(8) 3 5 9 15 7 7 7
(10) 4 6 9 11 7 7 7 ← (30) 9 3 6 6 5 3
(13) 5 10 11 3 5 7 7 ← (24) 3 5 9 7 7 7
(13) 8 5 5 9 7 7 7 ← (14) 9 7 13 5 7 7
(14) 9 3 5 9 7 7 7 ← (16) 11 5 9 7 7 7
(15) 8 3 5 9 7 7 7 ← (18) 7 14 4 5 7 7
(19) 10 9 3 6 6 5 3 ← (20) 12 12 9 3 3 3
(22) 3 5 9 3 5 7 7 ← (26) 5 9 3 5 7 7
(23) 6 9 3 6 6 5 3 ← (24) 8 12 9 3 3 3
(29) 6 3 3 6 6 5 3 ← (42) 2 4 5 3 3 3
(31) 10 2 4 5 3 3 3 ← (32) 12 4 5 3 3 3
(44) 1 1 2 4 3 3 3 ← (48) 3 4 4 1 1 1
(50) 1 1 * 1 ← (52) 1 * 1

(61, 9)

(1) 5 1 2 4 7 11 15 15 ← (2) 6 2 4 7 11 15 15
(3) 25 5 5 3 6 6 5 3 ← (4) 26 9 3 6 6 5 3
(7) 13 11 12 4 5 3 3 3 ← (27) 6 5 2 3 5 7 7
(9) 4 8 5 5 9 7 7 7
(13) 4 6 3 5 9 7 7 7 ← (14) 5 10 11 3 5 7 7
(14) 4 5 3 5 9 7 7 7 ← (16) 8 3 5 9 7 7 7
(14) 8 3 5 9 3 5 7 7
(15) 9 3 5 7 3 5 7 7 ← (25) 3 5 7 3 5 7 7
(19) 9 5 5 3 6 6 5 3 ← (20) 10 9 3 6 6 5 3
(23) 3 6 5 2 3 5 7 7 ← (24) 6 9 3 6 6 5 3
(27) 5 6 2 3 5 7 3 3 ← (39) 13 1 * 1
(29) 3 6 2 3 5 7 3 3 ← (30) 6 3 3 6 6 5 3
(31) 7 13 1 * 1 ← (32) 10 2 4 5 3 3 3
(35) 4 ..4 5 3 3 3 ← (36) 6 2 4 5 3 3 3
(39) 6 2 3 4 4 1 1 1 ← (46) 2 3 4 4 1 1 1

(61, 10)

(1) 3 6 4 6 9 11 7 7 7 ← (2) 5 1 2 4 7 11 15 15
(1) 13 4 5 3 5 9 7 7 7
(4) 11 9 3 5 7 3 5 7 7
(5) 4 4 8 5 5 9 7 7 7 ← (25) 4 7 3 3 6 6 5 3
(7) 12 9 5 5 3 6 6 5 3 ← (8) 13 11 12 4 5 3 3 3
(10) 5 9 3 5 7 3 5 7 7 ← (16) 9 3 5 7 3 5 7 7
(13) 2 3 5 3 5 9 7 7 7 ← (14) 4 6 3 5 9 7 7 7
(13) 4 5 3 5 9 3 5 7 7
(19) 4 5 5 5 3 6 6 5 3 ← (22) 5 6 5 2 3 5 7 7
(23) 2 3 5 5 3 6 6 5 3 ← (24) 3 6 5 2 3 5 7 7
(26) 2 4 3 3 3 6 6 5 3 ← (37) 8 1 1 2 4 3 3 3
(27) 3 5 6 2 4 5 3 3 3 ← (28) 5 6 2 3 5 7 3 3
(29) ...3 3 6 6 5 3 ← (30) 3 6 2 3 5 7 3 3
(31) 5 8 1 1 2 4 3 3 3 ← (32) 7 13 1 * 1
(33) 4 ...4 5 3 3 3 ← (34) 6 ..4 5 3 3 3
(35) ....4 5 3 3 3 ← (36) 4 ..4 5 3 3 3
(38) * 2 4 3 3 3 ← (45) 1 2 3 4 4 1 1 1
(39) 5 1 2 3 4 4 1 1 1 ← (40) 6 2 3 4 4 1 1 1

(61, 11)

(1) 1..3 5 3 5 9 7 7 7 ← (2) 13 4 5 3 5 9 7 7 7
(4) ...4 6 9 11 7 7 7 ← (9) 2 3 5 10 11 3 5 7 7
(5) 5 5 9 3 5 7 3 5 7 7
(7) 1 2 3 5 10 11 3 5 7 7 ← (8) 12 9 5 5 3 6 6 5 3
(7) 16 2 3 5 5 3 6 6 5 3
(11) 5 5 5 6 5 2 3 5 7 7 ← (17) 5 5 6 5 2 3 5 7 7
(17) 2 4 5 5 5 3 6 6 5 3 ← (20) 4 5 5 5 3 6 6 5 3
(24) ..4 3 3 3 6 6 5 3 ← (36) ....4 5 3 3 3
(27) ....3 3 6 6 5 3 ← (28) 3 5 6 2 4 5 3 3 3
(31) 4 ....4 5 3 3 3 ← (32) 5 8 1 1 2 4 3 3 3
(33) .....4 5 3 3 3 ← (34) 4 ...4 5 3 3 3
(37) 1 * 2 4 3 3 3 ← (43) 4 4 1 1 * 1
(39) 3 4 4 1 1 * 1 ← (40) 5 1 2 3 4 4 1 1 1
(43) 1 * * 1 ← (45) * * 1

(61, 12)

(1) ..4 5 9 3 5 9 7 7 7 ← (8) 1 2 3 5 10 11 3 5 7 7
(1) 8 4 2 3 5 3 5 9 7 7 7 ← (2) 1..3 5 3 5 9 7 7 7
(4) 4 5 4 5 3 5 9 3 5 7 7
(5) 4 4 2 3 5 3 5 9 7 7 7 ← (6) 8 4 5 3 5 9 3 5 7 7
(7) 2 4 2 3 5 3 5 9 7 7 7 ← (9) 18 2 4 3 3 3 6 6 5 3
(7) 13 ..4 7 3 3 6 6 5 3 ← (8) 16 2 3 5 5 3 6 6 5 3
(9) 4 3 5 5 6 5 2 3 5 7 7 ← (12) 5 5 5 6 5 2 3 5 7 7
(15) ..4 5 5 5 3 6 6 5 3 ← (18) 2 4 5 5 5 3 6 6 5 3
(21) 6 ....3 3 6 6 5 3 ← (34) .....4 5 3 3 3
(31) ......4 5 3 3 3 ← (32) 4 ....4 5 3 3 3
(36) 1 1 * 2 4 3 3 3 ← (40) 3 4 4 1 1 * 1
(42) 1 1 * * 1 ← (44) 1 * * 1

(61, 13)

(1) 5 5 5 5 5 6 5 2 3 5 7 7
(1) 6 2 4 2 3 5 3 5 9 7 7 7 ← (2) 8 4 2 3 5 3 5 9 7 7 7
(2) 2 4 5 4 5 3 5 9 3 5 7 7
(5) ..4 2 3 5 3 5 9 7 7 7 ← (6) 4 4 2 3 5 3 5 9 7 7 7
(6) 1 2 4 2 3 5 3 5 9 7 7 7 ← (8) 2 4 2 3 5 3 5 9 7 7 7
(7) 2 4 3 5 5 6 5 2 3 5 7 7 ← (10) 4 3 5 5 6 5 2 3 5 7 7
(7) 11 6 ..4 3 3 3 6 6 5 3 ← (8) 13 ..4 7 3 3 6 6 5 3
(13) ...4 5 5 5 3 6 6 5 3 ← (16) ..4 5 5 5 3 6 6 5 3
(19) 5 6 .....3 5 7 3 3 ← (32) ......4 5 3 3 3
(21) 3 6 .....3 5 7 3 3 ← (22) 6 ....3 3 6 6 5 3
(27) 4 ......4 5 3 3 3 ← (28) 6 .....4 5 3 3 3
(31) 6 2 3 4 4 1 1 * 1 ← (38) 2 3 4 4 1 1 * 1

(62, 2)

(31) 31

(62, 3)

(30) 29 3
(31) 30 1 ← (32) 31
(47) 14 1 ← (48) 15
(55) 6 1 ← (56) 7
(59) 2 1 ← (60) 3

(62, 4)

(17) 15 15 15 ← (45) 11 7
(23) 21 11 7 ← (25) 23 15
(29) 27 3 3
(31) 13 11 7 ← (33) 15 15
(31) 29 1 1 ← (32) 30 1
(41) 7 7 7 ← (49) 7 7
(47) 13 1 1 ← (48) 14 1
(53) 3 3 3 ← (57) 3 3
(55) 5 1 1 ← (56) 6 1
(59) 1 1 1 ← (60) 2 1

(62, 5)

(1) 22 21 11 7
(12) 9 11 15 15
(14) 7 11 15 15
(17) 14 13 11 7 ← (18) 15 15 15
(21) 10 13 11 7 ← (22) 11 15 15
(22) 19 7 7 7 ← (24) 21 11 7
(23) 20 5 7 7 ← (26) 23 7 7
(28) 25 3 3 3
(29) 14 5 7 7 ← (32) 13 11 7
(30) 13 5 7 7 ← (44) 5 7 7
(31) 28 1 1 1 ← (32) 29 1 1
(39) 4 5 7 7 ← (42) 7 7 7
(47) 12 1 1 1 ← (48) 13 1 1
(55) 4 1 1 1 ← (56) 5 1 1

(62, 6)

(9) 5 7 11 15 15
(11) 7 13 13 11 7 ← (23) 11 15 7 7
(13) 9 11 15 7 7 ← (18) 14 13 11 7
(15) 7 11 15 7 7 ← (19) 13 13 11 7
(21) 9 11 7 7 7 ← (22) 10 13 11 7
(22) 18 3 5 7 7 ← (24) 20 5 7 7
(23) 7 13 5 7 7 ← (25) 17 7 7 7
(24) 20 9 3 3 3
(27) 5 9 7 7 7
(29) 11 3 5 7 7 ← (30) 14 5 7 7
(31) 9 3 5 7 7 ← (41) 3 5 7 7
(31) 24 4 1 1 1 ← (32) 28 1 1 1
(38) 2 3 5 7 7 ← (40) 4 5 7 7
(39) 3 6 6 5 3 ← (43) 6 6 5 3
(45) 3 6 2 3 3 ← (46) 8 3 3 3
(47) 2 4 3 3 3 ← (49) 6 2 3 3
(47) 8 4 1 1 1 ← (48) 12 1 1 1

(62, 7)

(1) 20 9 11 7 7 7
(1) 28 11 3 5 7 7 ← (22) 9 11 7 7 7
(10) 5 7 11 15 7 7 ← (18) 9 15 7 7 7
(11) 6 9 15 7 7 7 ← (12) 7 13 13 11 7
(12) 5 9 15 7 7 7
(13) 8 9 11 7 7 7 ← (14) 9 11 15 7 7
(15) 6 9 11 7 7 7 ← (16) 7 11 15 7 7
(17) 12 11 3 5 7 7 ← (18) 13 13 5 7 7
(22) 5 5 9 7 7 7 ← (24) 7 13 5 7 7
(22) 17 3 6 6 5 3
(25) 13 2 3 5 7 7 ← (26) 14 4 5 7 7
(28) 5 7 3 5 7 7 ← (32) 9 3 5 7 7
(31) 22 * 1 ← (32) 24 4 1 1 1
(36) 3 3 6 6 5 3 ← (42) 3 5 7 3 3
(39) 2 3 5 7 3 3 ← (40) 3 6 6 5 3
(45) ..4 3 3 3 ← (46) 3 6 2 3 3
(46) 1 2 4 3 3 3 ← (48) 2 4 3 3 3
(47) 6 * 1 ← (48) 8 4 1 1 1
(51) 2 * 1 ← (52) 4 4 1 1 1

(62, 8)

(1) 14 6 9 11 7 7 7 ← (2) 20 9 11 7 7 7
(1) 23 8 12 9 3 3 3 ← (2) 28 11 3 5 7 7
(5) 27 12 4 5 3 3 3
(7) 1 2 4 7 11 15 15 ← (9) 2 4 7 11 15 15
(9) 3 5 9 15 7 7 7
(11) 4 6 9 11 7 7 7 ← (12) 6 9 15 7 7 7
(14) 8 5 5 9 7 7 7
(15) 9 3 5 9 7 7 7 ← (17) 11 5 9 7 7 7
(17) 7 8 12 9 3 3 3 ← (18) 12 11 3 5 7 7
(21) 11 12 4 5 3 3 3
(23) 3 5 9 3 5 7 7 ← (25) 8 12 9 3 3 3
(25) 7 12 4 5 3 3 3 ← (26) 13 2 3 5 7 7
(29) 5 5 3 6 6 5 3 ← (33) 12 4 5 3 3 3
(31) 21 1 * 1 ← (32) 22 * 1
(33) 6 2 3 5 7 3 3 ← (40) 2 3 5 7 3 3
(45) 1 1 2 4 3 3 3 ← (46) ..4 3 3 3
(47) 5 1 * 1 ← (48) 6 * 1
(51) 1 1 * 1 ← (52) 2 * 1

(62, 9)

(1) 2 4 3 4 7 11 15 15 ← (2) 23 8 12 9 3 3 3
(4) 25 5 5 3 6 6 5 3
(5) 6 4 6 9 11 7 7 7 ← (8) 1 2 4 7 11 15 15
(5) 18 3 5 9 3 5 7 7 ← (6) 27 12 4 5 3 3 3
(10) 4 8 5 5 9 7 7 7
(11) 3 5 10 11 3 5 7 7 ← (16) 9 3 5 9 7 7 7
(15) 4 5 3 5 9 7 7 7 ← (17) 8 3 5 9 7 7 7
(15) 8 3 5 9 3 5 7 7 ← (18) 7 8 12 9 3 3 3
(20) 9 5 5 3 6 6 5 3
(25) 5 6 3 3 6 6 5 3 ← (26) 7 12 4 5 3 3 3
(27) 3 6 3 3 6 6 5 3 ← (28) 6 5 2 3 5 7 7
(31) 5 6 2 4 5 3 3 3 ← (37) 6 2 4 5 3 3 3
(31) 20 1 1 * 1 ← (32) 21 1 * 1
(33) 3 6 2 4 5 3 3 3 ← (34) 6 2 3 5 7 3 3
(39) 12 1 1 * 1 ← (40) 13 1 * 1
(47) 4 1 1 * 1 ← (48) 5 1 * 1

(62, 10)

(1) 14 8 3 5 9 3 5 7 7
(2) 3 6 4 6 9 11 7 7 7
(5) 4 2 4 6 9 11 7 7 7 ← (6) 6 4 6 9 11 7 7 7
(5) 11 9 3 5 7 3 5 7 7 ← (6) 18 3 5 9 3 5 7 7
(6) 4 4 8 5 5 9 7 7 7
(11) 5 9 3 5 7 3 5 7 7 ← (17) 9 3 5 7 3 5 7 7
(14) 2 3 5 3 5 9 7 7 7 ← (16) 4 5 3 5 9 7 7 7
(14) 4 5 3 5 9 3 5 7 7 ← (16) 8 3 5 9 3 5 7 7
(23) 2 4 7 3 3 6 6 5 3 ← (26) 4 7 3 3 6 6 5 3
(24) 2 3 5 5 3 6 6 5 3
(25) 3 5 6 2 3 5 7 3 3 ← (26) 5 6 3 3 6 6 5 3
(27) 2 4 3 3 3 6 6 5 3 ← (28) 3 6 3 3 6 6 5 3
(30) ...3 3 6 6 5 3 ← (35) 6 ..4 5 3 3 3
(31) 3 6 ..4 5 3 3 3 ← (32) 5 6 2 4 5 3 3 3
(31) 16 4 1 1 * 1 ← (32) 20 1 1 * 1
(33) ....3 5 7 3 3 ← (34) 3 6 2 4 5 3 3 3
(37) 3 6 2 3 4 4 1 1 1 ← (38) 8 1 1 2 4 3 3 3
(39) * 2 4 3 3 3 ← (41) 6 2 3 4 4 1 1 1
(39) 8 4 1 1 * 1 ← (40) 12 1 1 * 1

(62, 11)

(1) 13 4 5 3 5 9 3 5 7 7 ← (2) 14 8 3 5 9 3 5 7 7
(3) 6 2 3 5 10 11 3 5 7 7
(5) ...4 6 9 11 7 7 7 ← (6) 4 2 4 6 9 11 7 7 7
(6) 5 5 9 3 5 7 3 5 7 7 ← (12) 5 9 3 5 7 3 5 7 7
(15) 4 3 5 6 5 2 3 5 7 7 ← (18) 5 5 6 5 2 3 5 7 7
(21) ..4 7 3 3 6 6 5 3
(22) 1 2 4 7 3 3 6 6 5 3 ← (24) 2 4 7 3 3 6 6 5 3
(25) ..4 3 3 3 6 6 5 3 ← (26) 3 5 6 2 3 5 7 3 3
(28) ....3 3 6 6 5 3 ← (34) ....3 5 7 3 3
(31) .....3 5 7 3 3 ← (32) 3 6 ..4 5 3 3 3
(31) 14 * * 1 ← (32) 16 4 1 1 * 1
(37) 2 * 2 4 3 3 3 ← (38) 3 6 2 3 4 4 1 1 1
(38) 1 * 2 4 3 3 3 ← (40) * 2 4 3 3 3
(39) 6 * * 1 ← (40) 8 4 1 1 * 1
(43) 2 * * 1 ← (44) 4 4 1 1 * 1

(62, 12)

(1) 5 5 5 9 3 5 7 3 5 7 7
(1) 8 5 4 5 3 5 9 3 5 7 7 ← (2) 13 4 5 3 5 9 3 5 7 7
(2) ..4 5 9 3 5 9 7 7 7
(3) 4 7 4 5 3 5 9 3 5 7 7 ← (4) 6 2 3 5 10 11 3 5 7 7
(5) 4 5 4 5 3 5 9 3 5 7 7 ← (9) 16 2 3 5 5 3 6 6 5 3
(7) 5 5 5 5 6 5 2 3 5 7 7 ← (13) 5 5 5 6 5 2 3 5 7 7
(9) 16 ..4 3 3 3 6 6 5 3 ← (10) 18 2 4 3 3 3 6 6 5 3
(13) 2 4 3 5 6 5 2 3 5 7 7 ← (16) 4 3 5 6 5 2 3 5 7 7
(19) 6 ..4 3 3 3 6 6 5 3
(21) 1 1 2 4 7 3 3 6 6 5 3 ← (22) ..4 7 3 3 6 6 5 3
(25) 6 .....3 5 7 3 3 ← (32) .....3 5 7 3 3
(31) 13 1 * * 1 ← (32) 14 * * 1
(37) 1 1 * 2 4 3 3 3 ← (38) 2 * 2 4 3 3 3
(39) 5 1 * * 1 ← (40) 6 * * 1
(43) 1 1 * * 1 ← (44) 2 * * 1

(63, 1)

(63)

**(63, 2)**

(62) 1

**(63, 3)**

(1) 31 31
(29) 27 7
(31) 29 3 ← (33) 31
(47) 13 3 ← (49) 15
(55) 5 3 ← (57) 7
(61) 1 1

**(63, 4)**

(1) 30 29 3 ← (2) 31 31
(25) 22 13 3 ← (26) 23 15
(29) 26 5 3 ← (30) 27 7
(30) 27 3 3 ← (32) 29 3
(33) 14 13 3 ← (34) 15 15
(45) 10 5 3 ← (46) 11 7
(46) 11 3 3 ← (48) 13 3
(49) 6 5 3 ← (50) 7 7
(54) 3 3 3 ← (56) 5 3
(55) 2 3 3 ← (58) 3 3
(60) 1 1 1

**(63, 5)**

(1) 29 27 3 3 ← (2) 30 29 3
(2) 22 21 11 7
(13) 9 11 15 15 ← (33) 13 11 7
(15) 7 11 15 15 ← (23) 11 15 15
(23) 19 7 7 7 ← (25) 21 11 7
(25) 21 11 3 3 ← (26) 22 13 3
(29) 25 3 3 3 ← (30) 26 5 3
(31) 13 5 7 7 ← (45) 5 7 7
(33) 13 11 3 3 ← (34) 14 13 3
(45) 5 7 3 3 ← (50) 6 5 3
(45) 9 3 3 3 ← (46) 10 5 3
(54) 1 2 3 3 ← (56) 2 3 3
(56) 4 1 1 1

**(63, 6)**

(1) 12 9 11 15 15 ← (16) 7 11 15 15
(1) 14 7 11 15 15
(1) 28 25 3 3 3 ← (2) 29 27 3 3
(10) 5 7 11 15 15 ← (26) 17 7 7 7
(11) 4 7 11 15 15
(15) 10 17 7 7 7 ← (24) 19 7 7 7
(19) 11 14 5 7 7 ← (20) 13 13 11 7
(23) 7 14 5 7 7 ← (24) 11 15 7 7
(23) 18 3 5 7 7 ← (25) 20 5 7 7
(25) 20 9 3 3 3 ← (26) 21 11 3 3
(28) 5 9 7 7 7 ← (42) 3 5 7 7
(30) 11 3 5 7 7 ← (32) 13 5 7 7
(33) 12 9 3 3 3 ← (34) 13 11 3 3
(39) 2 3 5 7 7 ← (41) 4 5 7 7
(43) 4 7 3 3 3 ← (44) 6 6 5 3
(45) 4 5 3 3 3 ← (46) 5 7 3 3
(49) 5 1 2 3 3 ← (50) 6 2 3 3
(54) * 1

**(63, 7)**

(1) 9 5 7 11 15 15
(1) 24 20 9 3 3 3 ← (2) 28 25 3 3 3
(5) 28 12 9 3 3 3
(11) 5 7 11 15 7 7 ← (13) 7 13 13 11 7
(13) 5 9 15 7 7 7
(14) 8 9 11 7 7 7 ← (19) 13 13 5 7 7
(15) 9 7 13 5 7 7 ← (16) 10 17 7 7 7
(16) 6 9 11 7 7 7
(19) 7 14 4 5 7 7 ← (20) 11 14 5 7 7
(21) 12 12 9 3 3 3 ← (24) 18 3 5 7 7
(23) 5 5 9 7 7 7 ← (24) 7 14 5 7 7
(23) 17 3 6 6 5 3 ← (26) 20 9 3 3 3
(25) 3 5 9 7 7 7
(27) 5 9 3 5 7 7 ← (41) 3 6 6 5 3
(29) 5 7 3 5 7 7 ← (33) 9 3 5 7 7
(31) 9 3 6 6 5 3 ← (34) 12 9 3 3 3
(37) 3 3 6 6 5 3 ← (40) 2 3 5 7 7
(43) 2 4 5 3 3 3 ← (44) 4 7 3 3 3
(47) 1 2 4 3 3 3 ← (49) 2 4 3 3 3
(49) 3 4 4 1 1 1 ← (50) 5 1 2 3 3
(53) 1 * 1

**(63, 8)**

(1) 22 17 3 6 6 5 3 ← (2) 24 20 9 3 3 3
(2) 14 6 9 11 7 7 7
(3) 6 2 4 7 11 15 15
(5) 26 9 3 6 6 5 3 ← (6) 28 12 9 3 3 3
(10) 3 5 9 15 7 7 7
(12) 4 6 9 11 7 7 7 ← (18) 11 5 9 7 7 7
(15) 5 10 11 3 5 7 7 ← (20) 7 14 4 5 7 7
(15) 8 5 5 9 7 7 7 ← (16) 9 7 13 5 7 7
(21) 10 9 3 6 6 5 3 ← (22) 12 12 9 3 3 3
(22) 11 12 4 5 3 3 3 ← (24) 17 3 6 6 5 3
(24) 3 5 9 3 5 7 7
(25) 6 9 3 6 6 5 3 ← (26) 8 12 9 3 3 3
(26) 3 5 7 3 5 7 7 ← (28) 5 9 3 5 7 7
(30) 5 5 3 6 6 5 3 ← (32) 9 3 6 6 5 3
(31) 6 3 3 6 6 5 3 ← (38) 3 3 6 6 5 3
(33) 10 2 4 5 3 3 3 ← (34) 12 4 5 3 3 3
(46) 1 1 2 4 3 3 3 ← (48) 1 2 4 3 3 3
(47) 2 3 4 4 1 1 1 ← (50) 3 4 4 1 1 1
(52) 1 1 * 1

**(63, 9)**

(1) 9 3 5 9 15 7 7 7
(1) 14 8 5 5 9 7 7 7
(1) 21 11 12 4 5 3 3 3 ← (2) 22 17 3 6 6 5 3
(2) 2 4 3 4 7 11 15 15
(3) 5 1 2 4 7 11 15 15 ← (4) 6 2 4 7 11 15 15
(5) 25 5 5 3 6 6 5 3 ← (6) 26 9 3 6 6 5 3
(9) 13 11 12 4 5 3 3 3 ← (16) 8 5 5 9 7 7 7
(11) 4 8 5 5 9 7 7 7
(12) 3 5 10 11 3 5 7 7 ← (18) 8 3 5 9 7 7 7
(15) 4 6 3 5 9 7 7 7 ← (16) 5 10 11 3 5 7 7
(21) 9 5 5 3 6 6 5 3 ← (22) 10 9 3 6 6 5 3
(23) 5 6 5 2 3 5 7 7 ← (29) 6 5 2 3 5 7 7
(25) 3 6 5 2 3 5 7 7 ← (26) 6 9 3 6 6 5 3
(29) 5 6 2 3 5 7 3 3 ← (35) 6 2 3 5 7 3 3
(31) 3 6 2 3 5 7 3 3 ← (32) 6 3 3 6 6 5 3
(33) 7 13 1 * 1 ← (34) 10 2 4 5 3 3 3
(37) 4 ..4 5 3 3 3 ← (38) 6 2 4 5 3 3 3
(46) 1 2 3 4 4 1 1 1 ← (48) 2 3 4 4 1 1 1
(48) 4 1 1 * 1

(63, 10)

(1) 20 9 5 5 3 6 6 5 3 ← (2) 21 11 12 4 5 3 3 3
(3) 3 6 4 6 9 11 7 7 7 ← (4) 5 1 2 4 7 11 15 15
(3) 13 4 5 3 5 9 7 7 7
(6) 11 9 3 5 7 3 5 7 7
(7) 4 4 8 5 5 9 7 7 7 ← (12) 4 8 5 5 9 7 7 7
(9) 12 9 5 5 3 6 6 5 3 ← (10) 13 11 12 4 5 3 3 3
(10) 2 3 5 10 11 3 5 7 7 ← (17) 4 5 3 5 9 7 7 7
(15) 2 3 5 3 5 9 7 7 7 ← (16) 4 6 3 5 9 7 7 7
(15) 4 5 3 5 9 3 5 7 7 ← (17) 8 3 5 9 3 5 7 7
(21) 4 5 5 5 3 6 6 5 3 ← (24) 5 6 5 2 3 5 7 7
(25) 2 3 5 5 3 6 6 5 3 ← (26) 3 6 5 2 3 5 7 7
(28) 2 4 3 3 3 6 6 5 3 ← (33) 5 6 2 4 5 3 3 3
(29) 3 5 6 2 4 5 3 3 3 ← (30) 5 6 2 3 5 7 3 3
(31) ...3 3 6 6 5 3 ← (32) 3 6 2 3 5 7 3 3
(33) 5 8 1 1 2 4 3 3 3 ← (34) 7 13 1 * 1
(35) 4 ...4 5 3 3 3 ← (36) 6 ..4 5 3 3 3
(37) ....4 5 3 3 3 ← (38) 4 ..4 5 3 3 3
(41) 5 1 2 3 4 4 1 1 1 ← (42) 6 2 3 4 4 1 1 1
(46) * * 1

(63, 11)

(1) 2 3 6 4 6 9 11 7 7 7
(1) 6 4 4 8 5 5 9 7 7 7
(1) 24 2 3 5 5 3 6 6 5 3
(3) 1..3 5 3 5 9 7 7 7 ← (4) 13 4 5 3 5 9 7 7 7
(6) ...4 6 9 11 7 7 7 ← (8) 4 4 8 5 5 9 7 7 7
(7) 5 5 9 3 5 7 3 5 7 7 ← (13) 5 9 3 5 7 3 5 7 7
(7) 8 4 5 3 5 9 3 5 7 7 ← (16) 2 3 5 3 5 9 7 7 7
(9) 1 2 3 5 10 11 3 5 7 7 ← (10) 12 9 5 5 3 6 6 5 3
(19) 2 4 5 5 5 3 6 6 5 3 ← (22) 4 5 5 5 3 6 6 5 3
(23) 1 2 4 7 3 3 6 6 5 3 ← (25) 2 4 7 3 3 6 6 5 3
(26) ..4 3 3 3 6 6 5 3 ← (32) ...3 3 6 6 5 3
(29) ....3 3 6 6 5 3 ← (30) 3 5 6 2 4 5 3 3 3
(33) 4 ....4 5 3 3 3 ← (34) 5 8 1 1 2 4 3 3 3
(35) .....4 5 3 3 3 ← (36) 4 ...4 5 3 3 3
(39) 1 * 2 4 3 3 3 ← (41) * 2 4 3 3 3
(41) 3 4 4 1 1 * 1 ← (42) 5 1 2 3 4 4 1 1 1
(45) 1 * * 1

(64, 2)

(1) 63
(61) 3
(63) 1 ← (65)

(64, 3)

(1) 62 1 ← (2) 63
(33) 30 1 ← (34) 31
(49) 14 1 ← (50) 15
(57) 6 1 ← (58) 7
(61) 2 1 ← (62) 3
(62) 1 1 ← (64) 1

(64, 4)

(1) 29 27 7
(1) 61 1 1 ← (2) 62 1
(19) 15 15 15 ← (35) 15 15
(27) 23 7 7
(31) 27 3 3 ← (33) 29 3
(33) 29 1 1 ← (34) 30 1
(43) 7 7 7 ← (51) 7 7
(47) 11 3 3 ← (49) 13 3
(49) 13 1 1 ← (50) 14 1
(55) 3 3 3 ← (57) 5 3
(57) 5 1 1 ← (58) 6 1
(61) 1 1 1 ← (62) 2 1

(64, 5)

(1) 60 1 1 1 ← (2) 61 1 1
(3) 22 21 11 7
(14) 9 11 15 15 ← (34) 13 11 7
(19) 14 13 11 7 ← (20) 15 15 15
(23) 10 13 11 7 ← (24) 11 15 15
(30) 25 3 3 3 ← (32) 27 3 3
(31) 14 5 7 7 ← (46) 5 7 7
(33) 28 1 1 1 ← (34) 29 1 1
(46) 9 3 3 3 ← (48) 11 3 3
(47) 8 3 3 3 ← (56) 3 3 3
(49) 12 1 1 1 ← (50) 13 1 1
(55) 1 2 3 3 ← (57) 2 3 3
(57) 4 1 1 1 ← (58) 5 1 1

(64, 6)

(1) 56 4 1 1 1 ← (2) 60 1 1 1
(2) 12 9 11 15 15 ← (4) 22 21 11 7
(2) 14 7 11 15 15
(11) 5 7 11 15 15 ← (27) 17 7 7 7
(12) 4 7 11 15 15
(15) 9 11 15 7 7 ← (20) 14 13 11 7
(17) 7 11 15 7 7
(19) 9 15 7 7 7 ← (21) 13 13 11 7
(23) 9 11 7 7 7 ← (24) 10 13 11 7
(25) 7 13 5 7 7
(27) 14 4 5 7 7 ← (43) 3 5 7 7
(29) 5 9 7 7 7 ← (33) 13 5 7 7
(31) 11 3 5 7 7 ← (32) 14 5 7 7
(33) 24 4 1 1 1 ← (34) 28 1 1 1
(43) 3 5 7 3 3 ← (45) 6 6 5 3
(46) 4 5 3 3 3 ← (51) 6 2 3 3
(47) 3 6 2 3 3 ← (48) 8 3 3 3
(49) 8 4 1 1 1 ← (50) 12 1 1 1
(53) 4 4 1 1 1 ← (56) 1 2 3 3
(55) * 1 ← (58) 4 1 1 1

(64, 7)

(1) 11 4 7 11 15 15
(1) 54 * 1 ← (2) 56 4 1 1 1
(2) 9 5 7 11 15 15
(3) 20 9 11 7 7 7
(3) 28 11 3 5 7 7
(10) 2 4 7 11 15 15
(12) 5 7 11 15 7 7 ← (17) 10 17 7 7 7
(13) 6 9 15 7 7 7 ← (14) 7 13 13 11 7
(14) 5 9 15 7 7 7 ← (20) 9 15 7 7 7
(15) 8 9 11 7 7 7 ← (16) 9 11 15 7 7
(17) 6 9 11 7 7 7 ← (18) 7 11 15 7 7
(19) 12 11 3 5 7 7 ← (20) 13 13 5 7 7
(24) 5 5 9 7 7 7
(26) 3 5 9 7 7 7 ← (32) 11 3 5 7 7
(27) 13 2 3 5 7 7 ← (28) 14 4 5 7 7
(30) 5 7 3 5 7 7 ← (34) 9 3 5 7 7
(33) 22 * 1 ← (34) 24 4 1 1 1
(41) 2 3 5 7 3 3 ← (42) 3 6 6 5 3
(44) 2 4 5 3 3 3 ← (50) 2 4 3 3 3
(47) ..4 3 3 3 ← (48) 3 6 2 3 3
(49) 6 * 1 ← (50) 8 4 1 1 1
(53) 2 * 1 ← (54) 4 4 1 1 1
(54) 1 * 1 ← (56) * 1

(64, 8)

(1) 13 5 9 15 7 7 7
(1) 25 3 5 9 7 7 7
(1) 53 1 * 1 ← (2) 54 * 1
(3) 14 6 9 11 7 7 7 ← (4) 20 9 11 7 7 7
(3) 23 8 12 9 3 3 3 ← (4) 28 11 3 5 7 7
(7) 27 12 4 5 3 3 3
(9) 1 2 4 7 11 15 15 ← (16) 8 9 11 7 7 7
(11) 3 5 9 15 7 7 7 ← (18) 6 9 11 7 7 7
(13) 4 6 9 11 7 7 7 ← (14) 6 9 15 7 7 7
(17) 9 3 5 9 7 7 7
(19) 7 8 12 9 3 3 3 ← (20) 12 11 3 5 7 7
(23) 11 12 4 5 3 3 3 ← (25) 17 3 6 6 5 3
(25) 3 5 9 3 5 7 7 ← (35) 12 4 5 3 3 3
(27) 3 5 7 3 5 7 7 ← (29) 5 9 3 5 7 7
(27) 7 12 4 5 3 3 3 ← (28) 13 2 3 5 7 7
(31) 5 5 3 6 6 5 3 ← (33) 9 3 6 6 5 3
(33) 21 1 * 1 ← (34) 22 * 1
(41) 13 1 * 1 ← (49) 1 2 4 3 3 3
(47) 1 1 2 4 3 3 3 ← (48) ..4 3 3 3
(49) 5 1 * 1 ← (50) 6 * 1
(53) 1 1 * 1 ← (54) 2 * 1

(64, 9)

(1) 3 6 2 4 7 11 15 15 ← (2) 25 3 5 9 7 7 7
(1) 52 1 1 * 1 ← (2) 53 1 * 1
(2) 9 3 5 9 15 7 7 7
(2) 14 8 5 5 9 7 7 7
(3) 2 4 3 4 7 11 15 15 ← (4) 23 8 12 9 3 3 3
(6) 25 5 5 3 6 6 5 3
(7) 6 4 6 9 11 7 7 7 ← (14) 4 6 9 11 7 7 7
(7) 18 3 5 9 3 5 7 7 ← (8) 27 12 4 5 3 3 3
(13) 3 5 10 11 3 5 7 7 ← (17) 5 10 11 3 5 7 7
(18) 9 3 5 7 3 5 7 7
(22) 9 5 5 3 6 6 5 3 ← (24) 11 12 4 5 3 3 3
(27) 4 7 3 3 6 6 5 3 ← (32) 5 5 3 6 6 5 3
(27) 5 6 3 3 6 6 5 3 ← (28) 7 12 4 5 3 3 3
(29) 3 6 3 3 6 6 5 3 ← (30) 6 5 2 3 5 7 7
(33) 20 1 1 * 1 ← (34) 21 1 * 1
(35) 3 6 2 4 5 3 3 3 ← (36) 6 2 3 5 7 3 3
(39) 8 1 1 2 4 3 3 3 ← (48) 1 1 2 4 3 3 3
(41) 12 1 1 * 1 ← (42) 13 1 * 1
(47) 1 2 3 4 4 1 1 1 ← (49) 2 3 4 4 1 1 1
(49) 4 1 1 * 1 ← (50) 5 1 * 1

(64, 10)

(1) ..4 3 4 7 11 15 15 ← (2) 3 6 2 4 7 11 15 15
(1) 11 4 8 5 5 9 7 7 7
(1) 48 4 1 1 * 1 ← (2) 52 1 1 * 1
(2) 20 9 5 5 3 6 6 5 3
(3) 14 8 3 5 9 3 5 7 7
(4) 3 6 4 6 9 11 7 7 7 ← (11) 13 11 12 4 5 3 3 3
(7) 4 2 4 6 9 11 7 7 7 ← (8) 6 4 6 9 11 7 7 7
(7) 11 9 3 5 7 3 5 7 7 ← (8) 18 3 5 9 3 5 7 7
(11) 2 3 5 10 11 3 5 7 7 ← (14) 3 5 10 11 3 5 7 7
(16) 4 5 3 5 9 3 5 7 7
(19) 5 5 6 5 2 3 5 7 7 ← (25) 5 6 5 2 3 5 7 7
(26) 2 3 5 5 3 6 6 5 3 ← (28) 4 7 3 3 6 6 5 3
(27) 3 5 6 2 3 5 7 3 3 ← (28) 5 6 3 3 6 6 5 3
(29) 2 4 3 3 3 6 6 5 3 ← (30) 3 6 3 3 6 6 5 3
(33) 3 6 ..4 5 3 3 3 ← (34) 5 6 2 4 5 3 3 3
(33) 16 4 1 1 * 1 ← (34) 20 1 1 * 1
(35) ....3 5 7 3 3 ← (36) 3 6 2 4 5 3 3 3
(38) ....4 5 3 3 3 ← (43) 6 2 3 4 4 1 1 1
(39) 3 6 2 3 4 4 1 1 1 ← (40) 8 1 1 2 4 3 3 3
(41) 8 4 1 1 * 1 ← (42) 12 1 1 * 1
(45) 4 4 1 1 * 1 ← (48) 1 2 3 4 4 1 1 1
(47) * * 1 ← (50) 4 1 1 * 1

(65, 3)

(1) 61 3
(3) 31 31
(27) 23 15
(31) 27 7 ← (35) 31
(47) 11 7 ← (51) 15
(59) 3 3
(63) 1 1 ← (65) 1

(65, 4)

(2) 29 27 7
(3) 30 29 3 ← (4) 31 31
(26) 21 11 7
(27) 22 13 3 ← (28) 23 15
(28) 23 7 7 ← (34) 29 3
(31) 26 5 3 ← (32) 27 7
(35) 14 13 3 ← (36) 15 15
(44) 7 7 7 ← (50) 13 3
(47) 10 5 3 ← (48) 11 7
(51) 6 5 3 ← (52) 7 7
(62) 1 1 1 ← (64) 1 1

(65, 5)

(1) 27 23 7 7
(3) 29 27 3 3 ← (4) 30 29 3
(15) 9 11 15 15 ← (21) 15 15 15
(17) 7 11 15 15
(25) 11 15 7 7
(25) 19 7 7 7
(26) 20 5 7 7 ← (33) 27 3 3
(27) 21 11 3 3 ← (28) 22 13 3
(31) 25 3 3 3 ← (32) 26 5 3
(35) 13 11 3 3 ← (36) 14 13 3
(42) 4 5 7 7 ← (49) 11 3 3
(47) 5 7 3 3 ← (52) 6 5 3
(47) 9 3 3 3 ← (48) 10 5 3

(65, 6)

(1) 10 9 15 15 15
(3) 12 9 11 15 15 ← (5) 22 21 11 7
(3) 14 7 11 15 15
(3) 28 25 3 3 3 ← (4) 29 27 3 3
(12) 5 7 11 15 15 ← (16) 9 11 15 15
(13) 4 7 11 15 15 ← (18) 7 11 15 15
(21) 11 14 5 7 7 ← (22) 13 13 11 7
(24) 9 11 7 7 7
(25) 7 14 5 7 7 ← (26) 11 15 7 7
(25) 18 3 5 7 7 ← (32) 25 3 3 3
(26) 7 13 5 7 7 ← (28) 17 7 7 7
(27) 20 9 3 3 3 ← (28) 21 11 3 3
(30) 5 9 7 7 7 ← (34) 13 5 7 7
(35) 12 9 3 3 3 ← (36) 13 11 3 3
(41) 2 3 5 7 7 ← (48) 9 3 3 3
(44) 3 5 7 3 3 ← (49) 8 3 3 3
(45) 4 7 3 3 3 ← (46) 6 6 5 3
(47) 4 5 3 3 3 ← (48) 5 7 3 3
(51) 5 1 2 3 3 ← (52) 6 2 3 3

(65, 7)

(1) 25 7 13 5 7 7 ← (4) 12 9 11 15 15
(2) 11 4 7 11 15 15 ← (4) 14 7 11 15 15
(3) 9 5 7 11 15 15
(3) 24 20 9 3 3 3 ← (4) 28 25 3 3 3
(7) 28 12 9 3 3 3
(11) 2 4 7 11 15 15 ← (14) 4 7 11 15 15
(13) 5 7 11 15 7 7 ← (17) 9 11 15 7 7
(15) 5 9 15 7 7 7 ← (21) 9 15 7 7 7
(17) 9 7 13 5 7 7 ← (18) 10 17 7 7 7
(19) 11 5 9 7 7 7 ← (21) 13 13 5 7 7
(21) 7 14 4 5 7 7 ← (22) 11 14 5 7 7
(23) 12 12 9 3 3 3 ← (28) 20 9 3 3 3
(25) 5 5 9 7 7 7 ← (26) 7 14 5 7 7
(27) 3 5 9 7 7 7 ← (29) 14 4 5 7 7
(27) 8 12 9 3 3 3 ← (36) 12 9 3 3 3
(31) 5 7 3 5 7 7 ← (35) 9 3 5 7 7
(39) 3 3 6 6 5 3 ← (43) 3 6 6 5 3
(42) 2 3 5 7 3 3 ← (48) 4 5 3 3 3
(45) 2 4 5 3 3 3 ← (46) 4 7 3 3 3
(51) 3 4 4 1 1 1 ← (52) 5 1 2 3 3
(55) 1 * 1 ← (57) * 1

(65, 8)

(1) 10 2 4 7 11 15 15
(1) 24 5 5 9 7 7 7 ← (2) 25 7 13 5 7 7
(2) 13 5 9 15 7 7 7
(3) 22 17 3 6 6 5 3 ← (4) 24 20 9 3 3 3
(4) 14 6 9 11 7 7 7
(5) 6 2 4 7 11 15 15
(7) 26 9 3 6 6 5 3 ← (8) 28 12 9 3 3 3
(10) 1 2 4 7 11 15 15 ← (12) 2 4 7 11 15 15
(12) 3 5 9 15 7 7 7 ← (16) 5 9 15 7 7 7
(17) 8 5 5 9 7 7 7 ← (18) 9 7 13 5 7 7
(18) 9 3 5 9 7 7 7 ← (20) 11 5 9 7 7 7
(19) 8 3 5 9 7 7 7 ← (22) 7 14 4 5 7 7
(20) 7 8 12 9 3 3 3 ← (26) 17 3 6 6 5 3
(23) 10 9 3 6 6 5 3 ← (24) 12 12 9 3 3 3
(26) 3 5 9 3 5 7 7 ← (34) 9 3 6 6 5 3
(27) 6 9 3 6 6 5 3 ← (28) 8 12 9 3 3 3
(28) 3 5 7 3 5 7 7 ← (32) 5 7 3 5 7 7
(33) 6 3 3 6 6 5 3 ← (40) 3 3 6 6 5 3
(35) 10 2 4 5 3 3 3 ← (36) 12 4 5 3 3 3
(39) 6 2 4 5 3 3 3 ← (46) 2 4 5 3 3 3
(54) 1 1 * 1 ← (56) 1 * 1

(65, 9)

(1) 5 10 8 9 11 7 7 7 ← (2) 10 2 4 7 11 15 15
(1) 10 20 5 7 3 5 7 7
(1) 17 9 3 5 9 7 7 7 ← (2) 24 5 5 9 7 7 7
(3) 9 3 5 9 15 7 7 7
(3) 14 8 5 5 9 7 7 7
(3) 21 11 12 4 5 3 3 3 ← (4) 22 17 3 6 6 5 3
(4) 2 4 3 4 7 11 15 15 ← (9) 27 12 4 5 3 3 3
(5) 5 1 2 4 7 11 15 15 ← (6) 6 2 4 7 11 15 15
(7) 25 5 5 3 6 6 5 3 ← (8) 26 9 3 6 6 5 3
(13) 4 8 5 5 9 7 7 7 ← (18) 8 5 5 9 7 7 7
(17) 4 6 3 5 9 7 7 7 ← (18) 5 10 11 3 5 7 7
(18) 4 5 3 5 9 7 7 7 ← (20) 8 3 5 9 7 7 7
(18) 8 3 5 9 3 5 7 7 ← (25) 11 12 4 5 3 3 3
(19) 9 3 5 7 3 5 7 7 ← (33) 5 5 3 6 6 5 3
(23) 9 5 5 3 6 6 5 3 ← (24) 10 9 3 6 6 5 3
(27) 3 6 5 2 3 5 7 7 ← (28) 6 9 3 6 6 5 3
(31) 5 6 2 3 5 7 3 3 ← (37) 6 2 3 5 7 3 3
(33) 3 6 2 3 5 7 3 3 ← (34) 6 3 3 6 6 5 3
(35) 7 13 1 * 1 ← (36) 10 2 4 5 3 3 3
(37) 6 ..4 5 3 3 3 ← (43) 13 1 * 1
(39) 4 ..4 5 3 3 3 ← (40) 6 2 4 5 3 3 3

(66, 2)

(3) 63
(59) 7
(63) 3 ← (67)

(66, 3)

(2) 61 3
(3) 62 1 ← (4) 63
(35) 30 1 ← (36) 31
(51) 14 1 ← (52) 15
(58) 5 3
(59) 6 1 ← (60) 7
(60) 3 3 ← (66) 1
(63) 2 1 ← (64) 3

(66, 4)

(1) 27 23 15
(1) 59 3 3
(3) 29 27 7 ← (5) 31 31
(3) 61 1 1 ← (4) 62 1
(25) 11 15 15
(27) 21 11 7 ← (29) 23 15
(29) 23 7 7 ← (33) 27 7
(35) 13 11 7 ← (37) 15 15
(35) 29 1 1 ← (36) 30 1
(45) 7 7 7 ← (49) 11 7
(47) 5 7 7 ← (53) 7 7
(51) 13 1 1 ← (52) 14 1
(57) 3 3 3
(58) 2 3 3 ← (65) 1 1
(59) 5 1 1 ← (60) 6 1
(63) 1 1 1 ← (64) 2 1

(66, 5)

(1) 26 21 11 7 ← (2) 27 23 15
(2) 27 23 7 7 ← (4) 29 27 7
(3) 60 1 1 1 ← (4) 61 1 1
(21) 14 13 11 7 ← (22) 15 15 15
(25) 10 13 11 7 ← (26) 11 15 15
(26) 19 7 7 7 ← (28) 21 11 7
(27) 20 5 7 7 ← (30) 23 7 7
(33) 14 5 7 7 ← (36) 13 11 7
(35) 28 1 1 1 ← (36) 29 1 1
(43) 4 5 7 7 ← (46) 7 7 7
(44) 3 5 7 7 ← (48) 5 7 7
(51) 12 1 1 1 ← (52) 13 1 1
(57) 1 2 3 3 ← (64) 1 1 1
(59) 4 1 1 1 ← (60) 5 1 1

(66, 6)

(1) 25 19 7 7 7 ← (2) 26 21 11 7
(2) 10 9 15 15 15
(3) 56 4 1 1 1 ← (4) 60 1 1 1
(13) 5 7 11 15 15 ← (17) 9 11 15 15
(15) 7 13 13 11 7 ← (22) 14 13 11 7
(19) 7 11 15 7 7
(25) 9 11 7 7 7 ← (26) 10 13 11 7
(26) 18 3 5 7 7 ← (28) 20 5 7 7
(27) 7 13 5 7 7 ← (29) 17 7 7 7
(31) 5 9 7 7 7 ← (35) 13 5 7 7
(33) 11 3 5 7 7 ← (34) 14 5 7 7
(35) 24 4 1 1 1 ← (36) 28 1 1 1
(42) 2 3 5 7 7 ← (44) 4 5 7 7
(45) 3 5 7 3 3 ← (49) 5 7 3 3
(49) 3 6 2 3 3 ← (50) 8 3 3 3
(51) 2 4 3 3 3 ← (53) 6 2 3 3
(51) 8 4 1 1 1 ← (52) 12 1 1 1
(55) 4 4 1 1 1 ← (60) 4 1 1 1

**(66, 7)**

(1) 6 11 7 11 15 15
(3) 11 4 7 11 15 15 ← (5) 14 7 11 15 15
(3) 54 * 1 ← (4) 56 4 1 1 1
(4) 9 5 7 11 15 15
(5) 20 9 11 7 7 7
(5) 28 11 3 5 7 7
(14) 5 7 11 15 7 7 ← (19) 10 17 7 7 7
(15) 6 9 15 7 7 7 ← (16) 7 13 13 11 7
(17) 8 9 11 7 7 7 ← (18) 9 11 15 7 7
(19) 6 9 11 7 7 7 ← (20) 7 11 15 7 7
(21) 12 11 3 5 7 7 ← (22) 13 13 5 7 7
(26) 5 5 9 7 7 7 ← (28) 7 13 5 7 7
(28) 3 5 9 7 7 7 ← (32) 5 9 7 7 7
(29) 13 2 3 5 7 7 ← (30) 14 4 5 7 7
(30) 5 9 3 5 7 7 ← (36) 9 3 5 7 7
(35) 22 * 1 ← (36) 24 4 1 1 1
(43) 2 3 5 7 3 3 ← (44) 3 6 6 5 3
(49) ..4 3 3 3 ← (50) 3 6 2 3 3
(50) 1 2 4 3 3 3 ← (52) 2 4 3 3 3
(51) 6 * 1 ← (52) 8 4 1 1 1
(52) 3 4 4 1 1 1 ← (58) * 1
(55) 2 * 1 ← (56) 4 4 1 1 1

**(66, 8)**

(1) 5 7 5 7 11 15 15
(1) 12 8 9 15 7 7 7 ← (4) 11 4 7 11 15 15
(3) 13 5 9 15 7 7 7
(3) 25 3 5 9 7 7 7 ← (18) 8 9 11 7 7 7
(3) 53 1 * 1 ← (4) 54 * 1
(5) 14 6 9 11 7 7 7 ← (6) 20 9 11 7 7 7
(5) 23 8 12 9 3 3 3 ← (6) 28 11 3 5 7 7
(11) 1 2 4 7 11 15 15 ← (13) 2 4 7 11 15 15
(13) 3 5 9 15 7 7 7 ← (17) 5 9 15 7 7 7
(15) 4 6 9 11 7 7 7 ← (16) 6 9 15 7 7 7
(19) 9 3 5 9 7 7 7 ← (21) 11 5 9 7 7 7
(21) 7 8 12 9 3 3 3 ← (22) 12 11 3 5 7 7
(27) 3 5 9 3 5 7 7 ← (29) 8 12 9 3 3 3
(29) 3 5 7 3 5 7 7 ← (33) 5 7 3 5 7 7
(29) 7 12 4 5 3 3 3 ← (30) 13 2 3 5 7 7
(31) 6 5 2 3 5 7 7 ← (37) 12 4 5 3 3 3
(35) 21 1 * 1 ← (36) 22 * 1
(49) 1 1 2 4 3 3 3 ← (50) ..4 3 3 3
(50) 2 3 4 4 1 1 1 ← (57) 1 * 1
(51) 5 1 * 1 ← (52) 6 * 1
(55) 1 1 * 1 ← (56) 2 * 1

**(67, 3)**

(1) 59 7
(3) 61 3 ← (5) 63
(35) 29 3 ← (37) 31
(51) 13 3 ← (53) 15
(59) 5 3 ← (61) 7
(61) 3 3 ← (65) 3

**(67, 4)**

(1) 58 5 3 ← (2) 59 7
(2) 59 3 3 ← (4) 61 3
(5) 30 29 3 ← (6) 31 31
(29) 22 13 3 ← (30) 23 15
(33) 26 5 3 ← (34) 27 7
(34) 27 3 3 ← (36) 29 3
(37) 14 13 3 ← (38) 15 15
(49) 10 5 3 ← (50) 11 7
(50) 11 3 3 ← (52) 13 3
(53) 6 5 3 ← (54) 7 7
(58) 3 3 3 ← (60) 5 3
(59) 2 3 3 ← (62) 3 3

**(67, 5)**

(1) 57 3 3 3 ← (2) 58 5 3
(3) 27 23 7 7 ← (5) 29 27 7
(5) 29 27 3 3 ← (6) 30 29 3
(6) 22 21 11 7
(19) 7 11 15 15
(23) 13 13 11 7
(27) 11 15 7 7 ← (37) 13 11 7
(27) 19 7 7 7 ← (29) 21 11 7
(29) 21 11 3 3 ← (30) 22 13 3
(33) 25 3 3 3 ← (34) 26 5 3
(37) 13 11 3 3 ← (38) 14 13 3
(45) 3 5 7 7 ← (49) 5 7 7
(47) 6 6 5 3 ← (54) 6 5 3
(49) 9 3 3 3 ← (50) 10 5 3
(58) 1 2 3 3 ← (60) 2 3 3

**(67, 6)**

(2) 25 19 7 7 7 ← (4) 27 23 7 7
(3) 10 9 15 15 15
(5) 12 9 11 15 15
(5) 28 25 3 3 3 ← (6) 29 27 3 3
(14) 5 7 11 15 15 ← (18) 9 11 15 15
(15) 4 7 11 15 15 ← (20) 7 11 15 15
(22) 9 15 7 7 7
(23) 11 14 5 7 7 ← (24) 13 13 11 7
(26) 9 11 7 7 7 ← (30) 17 7 7 7
(27) 7 14 5 7 7 ← (28) 11 15 7 7
(27) 18 3 5 7 7 ← (29) 20 5 7 7
(29) 20 9 3 3 3 ← (30) 21 11 3 3
(34) 11 3 5 7 7 ← (36) 13 5 7 7
(37) 12 9 3 3 3 ← (38) 13 11 3 3
(43) 2 3 5 7 7 ← (45) 4 5 7 7
(46) 3 5 7 3 3 ← (51) 8 3 3 3
(47) 4 7 3 3 3 ← (48) 6 6 5 3
(49) 4 5 3 3 3 ← (50) 5 7 3 3
(53) 5 1 2 3 3 ← (54) 6 2 3 3

**(67, 7)**

(1) 19 7 11 15 7 7
(2) 6 11 7 11 15 15
(3) 25 7 13 5 7 7
(5) 9 5 7 11 15 15 ← (19) 9 11 15 7 7
(5) 24 20 9 3 3 3 ← (6) 28 25 3 3 3
(9) 28 12 9 3 3 3 ← (16) 4 7 11 15 15
(15) 5 7 11 15 7 7 ← (17) 7 13 13 11 7
(19) 9 7 13 5 7 7 ← (20) 10 17 7 7 7
(20) 6 9 11 7 7 7
(23) 7 14 4 5 7 7 ← (24) 11 14 5 7 7
(25) 12 12 9 3 3 3 ← (28) 18 3 5 7 7
(27) 5 5 9 7 7 7 ← (28) 7 14 5 7 7
(27) 17 3 6 6 5 3 ← (30) 20 9 3 3 3
(29) 3 5 9 7 7 7 ← (33) 5 9 7 7 7
(31) 5 9 3 5 7 7 ← (37) 9 3 5 7 7
(35) 9 3 6 6 5 3 ← (38) 12 9 3 3 3
(41) 3 3 6 6 5 3 ← (44) 2 3 5 7 7
(44) 2 3 5 7 3 3 ← (50) 4 5 3 3 3
(47) 2 4 5 3 3 3 ← (48) 4 7 3 3 3
(51) 1 2 4 3 3 3 ← (53) 2 4 3 3 3
(53) 3 4 4 1 1 1 ← (54) 5 1 2 3 3

**(68, 2)**

(67) 1 ← (69)

**(68, 3)**

(5) 62 1 ← (6) 63
(37) 30 1 ← (38) 31
(53) 14 1 ← (54) 15
(61) 6 1 ← (62) 7
(65) 2 1 ← (66) 3
(66) 1 1 ← (68) 1

(68, 4)

(3) 27 23 15
(3) 59 3 3 ← (5) 61 3
(5) 61 1 1 ← (6) 62 1
(23) 15 15 15 ← (39) 15 15
(27) 11 15 15
(31) 23 7 7 ← (35) 27 7
(35) 27 3 3 ← (37) 29 3
(37) 29 1 1 ← (38) 30 1
(47) 7 7 7 ← (51) 11 7
(51) 11 3 3 ← (53) 13 3
(53) 13 1 1 ← (54) 14 1
(59) 3 3 3 ← (61) 5 3
(61) 5 1 1 ← (62) 6 1
(65) 1 1 1 ← (66) 2 1

(68, 5)

(2) 57 3 3 3 ← (4) 59 3 3
(3) 26 21 11 7 ← (4) 27 23 15
(5) 60 1 1 1 ← (6) 61 1 1
(7) 22 21 11 7
(23) 14 13 11 7 ← (24) 15 15 15
(27) 10 13 11 7 ← (28) 11 15 15
(28) 19 7 7 7 ← (32) 23 7 7
(34) 25 3 3 3 ← (36) 27 3 3
(35) 14 5 7 7 ← (48) 7 7 7
(37) 28 1 1 1 ← (38) 29 1 1
(46) 3 5 7 7 ← (50) 5 7 7
(50) 9 3 3 3 ← (52) 11 3 3
(53) 12 1 1 1 ← (54) 13 1 1
(59) 1 2 3 3 ← (61) 2 3 3
(61) 4 1 1 1 ← (62) 5 1 1

(68, 6)

(1) 19 7 11 15 15
(1) 23 13 13 11 7
(3) 25 19 7 7 7 ← (4) 26 21 11 7
(4) 10 9 15 15 15
(5) 56 4 1 1 1 ← (6) 60 1 1 1
(6) 12 9 11 15 15 ← (8) 22 21 11 7
(6) 14 7 11 15 15
(15) 5 7 11 15 15 ← (19) 9 11 15 15
(21) 7 11 15 7 7
(23) 9 15 7 7 7 ← (25) 13 13 11 7
(23) 13 13 5 7 7 ← (30) 20 5 7 7
(27) 9 11 7 7 7 ← (28) 10 13 11 7
(29) 7 13 5 7 7 ← (37) 13 5 7 7
(31) 14 4 5 7 7 ← (46) 4 5 7 7
(35) 11 3 5 7 7 ← (36) 14 5 7 7
(37) 24 4 1 1 1 ← (38) 28 1 1 1
(45) 3 6 6 5 3 ← (51) 5 7 3 3
(47) 3 5 7 3 3 ← (49) 6 6 5 3
(51) 3 6 2 3 3 ← (52) 8 3 3 3
(53) 8 4 1 1 1 ← (54) 12 1 1 1
(57) 4 4 1 1 1 ← (60) 1 2 3 3
(59) * 1 ← (62) 4 1 1 1

(69, 3)

(3) 59 7
(7) 31 31
(31) 23 15 ← (39) 31
(55) 7 7
(63) 3 3 ← (67) 3
(67) 1 1 ← (69) 1

(69, 4)

(3) 58 5 3 ← (4) 59 7
(6) 29 27 7
(7) 30 29 3 ← (8) 31 31
(30) 21 11 7 ← (38) 29 3
(31) 22 13 3 ← (32) 23 15
(35) 26 5 3 ← (36) 27 7
(38) 13 11 7
(39) 14 13 3 ← (40) 15 15
(51) 10 5 3 ← (52) 11 7
(55) 6 5 3 ← (56) 7 7
(60) 3 3 3 ← (64) 3 3
(66) 1 1 1 ← (68) 1 1

(69, 5)

(1) 27 11 15 15
(3) 57 3 3 3 ← (4) 58 5 3
(5) 27 23 7 7
(7) 29 27 3 3 ← (8) 30 29 3
(21) 7 11 15 15
(24) 14 13 11 7 ← (37) 27 3 3
(29) 11 15 7 7
(29) 19 7 7 7 ← (33) 23 7 7
(31) 17 7 7 7 ← (49) 7 7 7
(31) 21 11 3 3 ← (32) 22 13 3
(35) 25 3 3 3 ← (36) 26 5 3
(39) 13 11 3 3 ← (40) 14 13 3
(47) 3 5 7 7 ← (51) 5 7 7
(51) 9 3 3 3 ← (52) 10 5 3
(55) 6 2 3 3 ← (62) 2 3 3

(70, 2)

(7) 63
(55) 15
(63) 7 ← (71)

(70, 3)

(6) 61 3
(7) 62 1 ← (8) 63
(39) 30 1 ← (40) 31
(54) 13 3
(55) 14 1 ← (56) 15
(62) 5 3 ← (70) 1
(63) 6 1 ← (64) 7
(67) 2 1 ← (68) 3

(70, 4)

(1) 55 7 7
(5) 27 23 15
(5) 59 3 3
(7) 29 27 7 ← (9) 31 31
(7) 61 1 1 ← (8) 62 1
(25) 15 15 15 ← (37) 27 7
(29) 11 15 15
(31) 21 11 7 ← (33) 23 15
(39) 13 11 7 ← (41) 15 15
(39) 29 1 1 ← (40) 30 1
(53) 11 3 3
(55) 13 1 1 ← (56) 14 1
(56) 6 5 3 ← (69) 1 1
(61) 3 3 3 ← (65) 3 3
(63) 5 1 1 ← (64) 6 1
(67) 1 1 1 ← (68) 2 1

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