

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:

“... *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. ...*”

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^∞ 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 $X_0 \rightarrow X_1 \rightarrow \dots$ 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 and 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 $i = 0, 1, 2, \dots$ 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*

$$\begin{aligned} L_1 &= \{\lambda_2\} \\ L_2 &= \{\lambda_1\lambda_0\} \\ L_3 &= \{\lambda_0^3\} \end{aligned}$$

We next compute the boundary of λ_2 :

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

We therefore remove it from L_1 and tag $\lambda_1\lambda_0$ with λ_2 . The output gives us the following:

$$\begin{aligned} L_1 &= \emptyset \\ L_2 &= \{\lambda_1\lambda_0 \leftarrow \lambda_2\} \\ L_3 &= \{\lambda_0^3\} \end{aligned}$$

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 $Y_i \rightarrow C_i$ and a map $C_i \rightarrow Y_i$ 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 $\{l(d(x)) \mid l(x) = b\}$.

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

Let $X_0 \rightarrow X_1 \rightarrow \dots$ 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 $F_k X_i / F_{k-1} X_i$. 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_∞ -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. \square

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 $0 \rightarrow H^{\geq n+1}(X) \rightarrow H^{\geq n}(X) \rightarrow H^n(X) \rightarrow 0$. This induces a long exact sequence

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

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

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

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

Let us fix a free resolution $\cdots \rightarrow F_1 \rightarrow F_0 \rightarrow \mathbb{F}_2$ 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 be 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 $H^*(X) \otimes_{\mathbb{F}_2} F_* \rightarrow H^*(X)$ 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 $C^*(H^*(X)) = \text{Hom}_{\mathcal{A}}(H^*(X) \otimes_{\mathbb{F}_2} F_*, \mathbb{F}_2)$ satisfies*

- (1) *If there is a tag $a \leftarrow b$ in the Curtis table of $\text{Hom}_{\mathcal{A}}(F_i, \mathbb{Z}/2)$, 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_m^n 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_m^n , 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. \square

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_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 $\text{Ext}^{s-1, t-1}(H^*(P_1^\infty))$.

Example 6.3. *As a relatively easy example, we compute $\text{Ext}^{2, 2+9}(H^*(P_2^8))$ using the Curtis table of P_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:

$$\begin{aligned} (1) & 5\ 3 \\ (3) & 3\ 3 \\ (7) & 1\ 1 \leftarrow (9)\ 1 \end{aligned}$$

The spectrum P_2^8 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:

$$\begin{aligned} (1) & 5\ 1\ 1 \leftarrow (2)\ 6\ 1 \\ (5) & 1\ 1\ 1 \leftarrow (6)\ 2\ 1 \end{aligned}$$

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 $\text{Ext}^{2, 2+9}(H^(P_2^8))$ has dimension 3, generated by*

$$(3) 3\ 3, (7) 1\ 1, \text{ and } (2) 6\ 1.$$

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:

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

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:

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

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_{16}^{22} in the 60 and 61 stems for $s \leq 7$

$s \setminus t - s$	60	61
7	$h_1 y[21]$	$h_0^2 h_5 d_0[16]$ $h_1 y[22]$
6	$h_0^2 g_2[16]$ $h_0^2 f_1[20]$ $h_1 x[22]$	$h_0 h_5 d_0[16]$ $Ph_2 h_5[19]$
5	$h_0 g_2[16]$ $h_1 e_1[21]$	$h_1 g_2[16]$ $h_5 d_0[16]$ $h_1 f_1[20]$ $h_1 h_5 c_0[21]$ $h_3 d_1[22]$
4	$g_2[16]$ $f_1[20]$	$h_0 h_4^3[16]$ $g_2[17]$ $f_1[21]$ $h_1^2 h_3 h_5[21]$ $h_5 c_0[22]$
3	$c_2[19]$	$h_4^3[16]$ $h_1 h_3 h_5[22]$

7. THE HOMOMORPHISM INDUCED BY A MAP

Let $f : X \rightarrow Y$ 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, \dots, x_k is an ordered basis of $H_*(X)$ and y_1, \dots, y_l is an ordered basis of $H_*(Y)$, then $y_1, \dots, y_l, x_1, \dots, x_k$ 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 $0 \rightarrow H^{*+1}(X) \rightarrow H^*(Z) \rightarrow H^*(Y) \rightarrow 0$. We call this the map induced by f .

Theorem 7.1. *The Curtis table for $C^*(H^*(Z)) = \text{Hom}_{\mathcal{A}}(H^*(Z) \otimes_{\mathbb{F}_2} F_*, \mathbb{F}_2)$ 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 $X \rightarrow Y$. \square

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 output 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^∞ 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^∞ 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^∞ . 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 η . 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.

REFERENCES

- [1] J. Frank Adams. Stable homotopy theory. Lecture Notes in Mathematics Volume 3. Springer-Verlag, 1969.
- [2] Bousfield, A. K., Curtis, E. B., Kan, D. M., Quillen, D. G., Rector, D. L., Schlesinger, J. W. The mod-p lower central series and the Adams spectral sequence. *Topology* 5, 331 - 342 (1966).
- [3] Edward B. Curtis, Paul Goerss, Mark Mahowald, R. James Milgram. Calculations of unstable Adams E_2 terms for spheres. Lecture Notes in Mathematics Volume 1286, 1987, 208-266.
- [4] Wen Hsiung Lin. Algebraic Kahn-Priddy theorem. *Pacific J. Math.* Volume 96, Number 2 (1981), 435-455.
- [5] Martin C. Tangora. Computing the homology of the lambda algebra. *Memoirs of the American Mathematical Society*, Volume 58, Number 337 (1985).
- [6] Guozhen Wang and Zhouli Xu. The stable homotopy groups of the real projective space. In preparation.
- [7] Guozhen Wang and Zhouli Xu. The uniqueness of the smooth structure on the 61-sphere. In preparation.

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^∞ in the range of $t < 72$ is the following:

* = 2 4 1 1
 . = 2

(1, 1) (1)	(7, 1) (7)
(2, 2) (1) 1	(7, 2) (6) 1
(3, 1) (3)	(7, 3) (1) 3 3 (5) 1 1
(3, 2) (2) 1	(7, 4) (4) 1 1 1
(3, 3) (1) 1 1	(8, 2) (1) 7 (5) 3 (7) 1 \leftarrow (9)
(4, 2) (1) 3 (3) 1 \leftarrow (5)	(8, 3) (1) 6 1 \leftarrow (2) 7 (2) 3 3 (5) 2 1 \leftarrow (6) 3 (6) 1 1 \leftarrow (8) 1
(4, 3) (1) 2 1 \leftarrow (2) 3 (2) 1 1 \leftarrow (4) 1	(8, 4) (1) 5 1 1 \leftarrow (2) 6 1 (5) 1 1 1 \leftarrow (6) 2 1
(4, 4) (1) 1 1 1 \leftarrow (2) 2 1	(8, 5) (1) 4 1 1 1 \leftarrow (2) 5 1 1
(5, 3) (3) 1 1 \leftarrow (5) 1	(9, 3) (1) 5 3 (3) 3 3 (7) 1 1 \leftarrow (9) 1
(5, 4) (2) 1 1 1 \leftarrow (4) 1 1	(9, 4) (1) 2 3 3 (6) 1 1 1 \leftarrow (8) 1 1
(6, 2) (3) 3	(9, 5) (2) 4 1 1 1
(6, 3) (3) 2 1 \leftarrow (4) 3	
(6, 4) (3) 1 1 1 \leftarrow (4) 2 1	

(10, 2) (3) 7 (7) 3 \leftarrow (11)	(12, 3) (5) 6 1 \leftarrow (6) 7 (9) 2 1 \leftarrow (10) 3 (10) 1 1 \leftarrow (12) 1
(10, 3) (2) 5 3 (3) 6 1 \leftarrow (4) 7 (4) 3 3 \leftarrow (10) 1 (7) 2 1 \leftarrow (8) 3	(12, 4) (3) 3 3 3 \leftarrow (5) 5 3 (5) 5 1 1 \leftarrow (6) 6 1 (9) 1 1 1 \leftarrow (10) 2 1
(10, 4) (1) 3 3 3 (2) 2 3 3 \leftarrow (9) 1 1 (3) 5 1 1 \leftarrow (4) 6 1 (7) 1 1 1 \leftarrow (8) 2 1	(12, 5) (3) 1 2 3 3 \leftarrow (5) 2 3 3 (5) 4 1 1 1 \leftarrow (6) 5 1 1
(10, 5) (1) 1 2 3 3 \leftarrow (8) 1 1 1 (3) 4 1 1 1 \leftarrow (4) 5 1 1	(12, 6) (1) 4 4 1 1 1 \leftarrow (4) 1 2 3 3 (3) * 1 \leftarrow (6) 4 1 1 1
(10, 6) (1) * 1	(12, 7) (1) 2 * 1 \leftarrow (2) 4 4 1 1 1 (2) 1 * 1 \leftarrow (4) * 1
(11, 3) (3) 5 3 \leftarrow (5) 7 (5) 3 3 \leftarrow (9) 3	(12, 8) (1) 1 1 * 1 \leftarrow (2) 2 * 1
(11, 4) (2) 3 3 3 \leftarrow (4) 5 3 (3) 2 3 3 \leftarrow (6) 3 3	(13, 3) (7) 3 3 \leftarrow (11) 3 (11) 1 1 \leftarrow (13) 1
(11, 5) (2) 1 2 3 3 \leftarrow (4) 2 3 3 (4) 4 1 1 1	(13, 4) (4) 3 3 3 \leftarrow (8) 3 3 (10) 1 1 1 \leftarrow (12) 1 1
(11, 6) (2) * 1	(13, 7) (3) 1 * 1 \leftarrow (5) * 1
(11, 7) (1) 1 * 1	(13, 8) (2) 1 1 * 1 \leftarrow (4) 1 * 1
(12, 2) (11) 1 \leftarrow (13)	(14, 2) (7) 7

(14, 3)

(6) 5 3
 (7) 6 1 \leftarrow (8) 7
 (11) 2 1 \leftarrow (12) 3

(14, 4)

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

(14, 5)

(5) 1 2 3 3
 (7) 4 1 1 1 \leftarrow (8) 5 1 1

(14, 6)

(3) 4 4 1 1 1

(14, 7)

(3) 2 * 1 \leftarrow (4) 4 4 1 1 1

(14, 8)

(3) 1 1 * 1 \leftarrow (4) 2 * 1

(15, 1)

(15)

(15, 2)

(14) 1

(15, 3)

(1) 7 7
 (7) 5 3 \leftarrow (9) 7
 (13) 1 1

(15, 4)

(1) 6 5 3 \leftarrow (2) 7 7
 (6) 3 3 3 \leftarrow (8) 5 3
 (7) 2 3 3 \leftarrow (10) 3 3
 (12) 1 1 1

(15, 5)

(1) 6 2 3 3
 (6) 1 2 3 3 \leftarrow (8) 2 3 3
 (8) 4 1 1 1

(15, 6)

(1) 5 1 2 3 3 \leftarrow (2) 6 2 3 3
 (6) * 1

(15, 7)

(1) 3 4 4 1 1 1 \leftarrow (2) 5 1 2 3 3
 (5) 1 * 1

(15, 8)

(4) 1 1 * 1

(16, 2)

(1) 15
 (13) 3
 (15) 1 \leftarrow (17)

(16, 3)

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

(16, 4)

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

(16, 5)

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

(16, 6)

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

(16, 7)

- (1) $6 * 1 \leftarrow (2) 8 4 1 1 1$
- (2) $3 4 4 1 1 1$
- (5) $2 * 1 \leftarrow (6) 4 4 1 1 1$
- (6) $1 * 1 \leftarrow (8) * 1$

(16, 8)

- (1) $5 1 * 1 \leftarrow (2) 6 * 1$
- (5) $1 1 * 1 \leftarrow (6) 2 * 1$

(16, 9)

- (1) $4 1 1 * 1 \leftarrow (2) 5 1 * 1$

(17, 3)

- (1) $13 3$
- (3) $7 7$
- (11) $3 3$
- (15) $1 1 \leftarrow (17) 1$

(17, 4)

- (3) $6 5 3 \leftarrow (4) 7 7$
- (8) $3 3 3$
- (14) $1 1 1 \leftarrow (16) 1 1$

(17, 5)

- (3) $6 2 3 3$

(17, 6)

- (2) $2 4 3 3 3$
- (3) $5 1 2 3 3 \leftarrow (4) 6 2 3 3$

(17, 7)

- (1) $1 2 4 3 3 3$
- (3) $3 4 4 1 1 1 \leftarrow (4) 5 1 2 3 3$
- (7) $1 * 1 \leftarrow (9) * 1$

(17, 8)

- (1) $2 3 4 4 1 1 1$
- (6) $1 1 * 1 \leftarrow (8) 1 * 1$

(17, 9)

- (2) $4 1 1 * 1$

(18, 2)

- (3) 15
- (11) 7
- (15) $3 \leftarrow (19)$

(18, 3)

- (2) $13 3$
- (3) $14 1 \leftarrow (4) 15$
- (10) $5 3$
- (11) $6 1 \leftarrow (12) 7$
- (12) $3 3 \leftarrow (18) 1$
- (15) $2 1 \leftarrow (16) 3$

(18, 4)

- (1) $11 3 3$
- (3) $13 1 1 \leftarrow (4) 14 1$
- (4) $6 5 3$
- (9) $3 3 3$
- (10) $2 3 3 \leftarrow (17) 1 1$
- (11) $5 1 1 \leftarrow (12) 6 1$
- (15) $1 1 1 \leftarrow (16) 2 1$

(18, 5)

- (1) $8 3 3 3$
- (3) $12 1 1 1 \leftarrow (4) 13 1 1$
- (9) $1 2 3 3 \leftarrow (16) 1 1 1$
- (11) $4 1 1 1 \leftarrow (12) 5 1 1$

(18, 6)

- (1) $3 6 2 3 3 \leftarrow (2) 8 3 3 3$
- (3) $2 4 3 3 3 \leftarrow (5) 6 2 3 3$
- (3) $8 4 1 1 1 \leftarrow (4) 12 1 1 1$
- (7) $4 4 1 1 1 \leftarrow (12) 4 1 1 1$

(18, 7)

- (1) $..4 3 3 3 \leftarrow (2) 3 6 2 3 3$
- (2) $1 2 4 3 3 3 \leftarrow (4) 2 4 3 3 3$
- (3) $6 * 1 \leftarrow (4) 8 4 1 1 1$
- (4) $3 4 4 1 1 1 \leftarrow (10) * 1$
- (7) $2 * 1 \leftarrow (8) 4 4 1 1 1$

(18, 8)

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

(18, 9)

(1) 1 2 3 4 4 1 1 1 \leftarrow (8) 1 1 * 1
 (3) 4 1 1 * 1 \leftarrow (4) 5 1 * 1

(18, 10)

(1) * * 1

(19, 3)

(1) 11 7
 (3) 13 3 \leftarrow (5) 15
 (5) 7 7
 (11) 5 3 \leftarrow (13) 7
 (13) 3 3 \leftarrow (17) 3

(19, 4)

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

(19, 5)

(1) 5 7 3 3
 (1) 9 3 3 3 \leftarrow (2) 10 5 3
 (10) 1 2 3 3 \leftarrow (12) 2 3 3

(19, 6)

(1) 4 5 3 3 3 \leftarrow (2) 5 7 3 3
 (5) 5 1 2 3 3 \leftarrow (6) 6 2 3 3

(19, 7)

(3) 1 2 4 3 3 3 \leftarrow (5) 2 4 3 3 3
 (5) 3 4 4 1 1 1 \leftarrow (6) 5 1 2 3 3

(19, 8)

(2) 1 1 2 4 3 3 3 \leftarrow (4) 1 2 4 3 3 3
 (3) 2 3 4 4 1 1 1 \leftarrow (6) 3 4 4 1 1 1

(19, 9)

(2) 1 2 3 4 4 1 1 1 \leftarrow (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 \leftarrow (21)

(20, 3)

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

(20, 4)

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

(20, 5)

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

(20, 6)

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

(20, 7)

(3) ..4 3 3 3 \leftarrow (4) 3 6 2 3 3
 (5) 6 * 1 \leftarrow (6) 8 4 1 1 1
 (9) 2 * 1 \leftarrow (10) 4 4 1 1 1
 (10) 1 * 1 \leftarrow (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 \leftarrow (16) 4 1 1 1
 (5) 3 6 2 3 3 \leftarrow (6) 8 3 3 3
 (7) 2 4 3 3 3 \leftarrow (9) 6 2 3 3
 (7) 8 4 1 1 1 \leftarrow (8) 12 1 1 1

(22, 7)

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

(22, 8)

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

(22, 9)

(5) 1 2 3 4 4 1 1 1
 (7) 4 1 1 * 1 \leftarrow (8) 5 1 * 1

(22, 10)

(3) 4 4 1 1 * 1

(22, 11)

(3) 2 * * 1 \leftarrow (4) 4 4 1 1 * 1

(22, 12)

(3) 1 1 * * 1 \leftarrow (4) 2 * * 1

(23, 3)

(5) 11 7
 (7) 13 3 \leftarrow (9) 15
 (9) 7 7 \leftarrow (21) 3
 (15) 5 3 \leftarrow (17) 7

(23, 4)

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

(23, 5)

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

(23, 6)

(2) 3 5 7 3 3
 (3) 4 7 3 3 3 \leftarrow (4) 6 6 5 3
 (5) 4 5 3 3 3 \leftarrow (6) 5 7 3 3
 (9) 5 1 2 3 3 \leftarrow (10) 6 2 3 3

(23, 7)

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

(23, 8)

(6) 1 1 2 4 3 3 3 \leftarrow (8) 1 2 4 3 3 3
 (7) 2 3 4 4 1 1 1 \leftarrow (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 \leftarrow (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 \leftarrow (2) 6 2 3 4 4 1 1 1
 (6) * * 1

(23, 11)

(1) 3 4 4 1 1 * 1 \leftarrow (2) 5 1 2 3 4 4 1 1 1
 (5) 1 * * 1

(23, 12)

(4) 1 1 * * 1

(24, 2)

(23) 1 \leftarrow (25)

(24, 3)

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

(24, 4)

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

(24, 5)

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

(24, 6)

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

(24, 7)

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

(24, 8)

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

(24, 9)

- (1) 12 1 1 * 1 \leftarrow (2) 13 1 * 1
- (7) 1 2 3 4 4 1 1 1 \leftarrow (9) 2 3 4 4 1 1 1
- (9) 4 1 1 * 1 \leftarrow (10) 5 1 * 1

(24, 10)

- (1) * 2 4 3 3 3
- (1) 8 4 1 1 * 1 \leftarrow (2) 12 1 1 * 1
- (5) 4 4 1 1 * 1 \leftarrow (8) 1 2 3 4 4 1 1 1
- (7) * * 1 \leftarrow (10) 4 1 1 * 1

(24, 11)

- (1) 6 * * 1 \leftarrow (2) 8 4 1 1 * 1
- (2) 3 4 4 1 1 * 1
- (5) 2 * * 1 \leftarrow (6) 4 4 1 1 * 1
- (6) 1 * * 1 \leftarrow (8) * * 1

(24, 12)

- (1) 5 1 * * 1 \leftarrow (2) 6 * * 1
- (5) 1 1 * * 1 \leftarrow (6) 2 * * 1

(24, 13)

- (1) 4 1 1 * * 1 \leftarrow (2) 5 1 * * 1

(25, 3)

- (7) 11 7 \leftarrow (11) 15
- (11) 7 7 \leftarrow (19) 7
- (23) 1 1 \leftarrow (25) 1

(25, 4)

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

(25, 5)

- (2) 4 5 7 7 \leftarrow (9) 11 3 3
- (3) 3 5 7 7 \leftarrow (17) 3 3 3
- (7) 5 7 3 3 \leftarrow (12) 6 5 3
- (7) 9 3 3 3 \leftarrow (8) 10 5 3

(25, 6)

- (1) 2 3 5 7 7 \leftarrow (8) 9 3 3 3
- (4) 3 5 7 3 3 \leftarrow (9) 8 3 3 3
- (5) 4 7 3 3 3 \leftarrow (6) 6 6 5 3
- (7) 4 5 3 3 3 \leftarrow (8) 5 7 3 3
- (11) 5 1 2 3 3 \leftarrow (12) 6 2 3 3

(25, 7)

- (2) 2 3 5 7 3 3 \leftarrow (8) 4 5 3 3 3
- (5) 2 4 5 3 3 3 \leftarrow (6) 4 7 3 3 3
- (11) 3 4 4 1 1 1 \leftarrow (12) 5 1 2 3 3
- (15) 1 * 1 \leftarrow (17) * 1

(25, 8)

- (8) 1 1 2 4 3 3 3
- (14) 1 1 * 1 \leftarrow (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 \leftarrow (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 \leftarrow (4) 5 1 2 3 4 4 1 1 1
 (7) 1 * * 1 \leftarrow (9) * * 1

(25, 12)

(1) 2 3 4 4 1 1 * 1
 (6) 1 1 * * 1 \leftarrow (8) 1 * * 1

(25, 13)

(2) 4 1 1 * * 1

(26, 2)

(23) 3 \leftarrow (27)

(26, 3)

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

(26, 4)

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

(26, 5)

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

(26, 6)

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

(26, 7)

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

(26, 8)

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

(26, 9)

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

(26, 10)

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

(26, 11)

(1) 2 * 2 4 3 3 3 \leftarrow (2) 3 6 2 3 4 4 1 1 1
 (2) 1 * 2 4 3 3 3 \leftarrow (4) * 2 4 3 3 3
 (3) 6 * * 1 \leftarrow (4) 8 4 1 1 * 1
 (4) 3 4 4 1 1 * 1 \leftarrow (10) * * 1
 (7) 2 * * 1 \leftarrow (8) 4 4 1 1 * 1

(26, 12)

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

(26, 13)

(1) 1 2 3 4 4 1 1 * 1 \leftarrow (8) 1 1 * * 1
 (3) 4 1 1 * * 1 \leftarrow (4) 5 1 * * 1

(26, 14)

(1) * * * 1

(27, 3)

(11) 13 3 \leftarrow (13) 15
 (19) 5 3 \leftarrow (21) 7
 (21) 3 3 \leftarrow (25) 3

(27, 4)
 (9) 10 5 3 \leftarrow (10) 11 7
 (10) 11 3 3 \leftarrow (12) 13 3
 (13) 6 5 3 \leftarrow (14) 7 7
 (18) 3 3 3 \leftarrow (20) 5 3
 (19) 2 3 3 \leftarrow (22) 3 3

(27, 5)
 (5) 3 5 7 7 \leftarrow (9) 5 7 7
 (7) 6 6 5 3 \leftarrow (14) 6 5 3
 (9) 9 3 3 3 \leftarrow (10) 10 5 3
 (18) 1 2 3 3 \leftarrow (20) 2 3 3

(27, 6)
 (3) 2 3 5 7 7 \leftarrow (5) 4 5 7 7
 (6) 3 5 7 3 3 \leftarrow (11) 8 3 3 3
 (7) 4 7 3 3 3 \leftarrow (8) 6 6 5 3
 (9) 4 5 3 3 3 \leftarrow (10) 5 7 3 3
 (13) 5 1 2 3 3 \leftarrow (14) 6 2 3 3

(27, 7)
 (1) 3 3 6 6 5 3 \leftarrow (4) 2 3 5 7 7
 (4) 2 3 5 7 3 3 \leftarrow (10) 4 5 3 3 3
 (7) 2 4 5 3 3 3 \leftarrow (8) 4 7 3 3 3
 (11) 1 2 4 3 3 3 \leftarrow (13) 2 4 3 3 3
 (13) 3 4 4 1 1 1 \leftarrow (14) 5 1 2 3 3

(27, 8)
 (1) 6 2 4 5 3 3 3 \leftarrow (8) 2 4 5 3 3 3
 (10) 1 1 2 4 3 3 3 \leftarrow (12) 1 2 4 3 3 3
 (11) 2 3 4 4 1 1 1 \leftarrow (14) 3 4 4 1 1 1

(27, 9)
 (1) 4 ..4 5 3 3 3 \leftarrow (2) 6 2 4 5 3 3 3
 (10) 1 2 3 4 4 1 1 1 \leftarrow (12) 2 3 4 4 1 1 1

(27, 10)
 (1) ...4 5 3 3 3 \leftarrow (2) 4 ..4 5 3 3 3
 (5) 5 1 2 3 4 4 1 1 1 \leftarrow (6) 6 2 3 4 4 1 1 1

(27, 11)
 (3) 1 * 2 4 3 3 3 \leftarrow (5) * 2 4 3 3 3
 (5) 3 4 4 1 1 * 1 \leftarrow (6) 5 1 2 3 4 4 1 1 1

(27, 12)
 (2) 1 1 * 2 4 3 3 3 \leftarrow (4) 1 * 2 4 3 3 3
 (3) 2 3 4 4 1 1 * 1 \leftarrow (6) 3 4 4 1 1 * 1

(27, 13)
 (2) 1 2 3 4 4 1 1 * 1 \leftarrow (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 \leftarrow (29)

(28, 3)
 (13) 14 1 \leftarrow (14) 15
 (21) 6 1 \leftarrow (22) 7
 (25) 2 1 \leftarrow (26) 3
 (26) 1 1 \leftarrow (28) 1

(28, 4)
 (7) 7 7 7 \leftarrow (11) 11 7
 (11) 11 3 3 \leftarrow (13) 13 3
 (13) 13 1 1 \leftarrow (14) 14 1
 (19) 3 3 3 \leftarrow (21) 5 3
 (21) 5 1 1 \leftarrow (22) 6 1
 (25) 1 1 1 \leftarrow (26) 2 1

(28, 5)
 (6) 3 5 7 7 \leftarrow (10) 5 7 7
 (10) 9 3 3 3 \leftarrow (12) 11 3 3
 (13) 12 1 1 1 \leftarrow (14) 13 1 1
 (19) 1 2 3 3 \leftarrow (21) 2 3 3
 (21) 4 1 1 1 \leftarrow (22) 5 1 1

(28, 6)
 (5) 3 6 6 5 3 \leftarrow (11) 5 7 3 3
 (7) 3 5 7 3 3 \leftarrow (9) 6 6 5 3
 (11) 3 6 2 3 3 \leftarrow (12) 8 3 3 3
 (13) 8 4 1 1 1 \leftarrow (14) 12 1 1 1
 (17) 4 4 1 1 1 \leftarrow (20) 1 2 3 3
 (19) * 1 \leftarrow (22) 4 1 1 1

(28, 7)
 (2) 3 3 6 6 5 3 \leftarrow (8) 3 5 7 3 3
 (5) 2 3 5 7 3 3 \leftarrow (6) 3 6 6 5 3
 (11) ..4 3 3 3 \leftarrow (12) 3 6 2 3 3
 (13) 6 * 1 \leftarrow (14) 8 4 1 1 1
 (17) 2 * 1 \leftarrow (18) 4 4 1 1 1
 (18) 1 * 1 \leftarrow (20) * 1

(28, 8)
 (5) 13 1 * 1
 (11) 1 1 2 4 3 3 3 \leftarrow (12) ..4 3 3 3
 (13) 5 1 * 1 \leftarrow (14) 6 * 1
 (17) 1 1 * 1 \leftarrow (18) 2 * 1

(28, 9)

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

(28, 10)

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

(28, 11)

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

(28, 12)

(3) 1 1 * 2 4 3 3 3 \leftarrow (4) 2 * 2 4 3 3 3
 (5) 5 1 * * 1 \leftarrow (6) 6 * * 1
 (9) 1 1 * * 1 \leftarrow (10) 2 * * 1

(28, 13)

(3) 1 2 3 4 4 1 1 * 1 \leftarrow (5) 2 3 4 4 1 1 * 1
 (5) 4 1 1 * * 1 \leftarrow (6) 5 1 * * 1

(28, 14)

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

(28, 15)

(1) 2 * * * 1 \leftarrow (2) 4 4 1 1 * * 1
 (2) 1 * * * 1 \leftarrow (4) * * * 1

(28, 16)

(1) 1 1 * * * 1 \leftarrow (2) 2 * * * 1

(29, 3)

(15) 7 7 \leftarrow (23) 7
 (23) 3 3 \leftarrow (27) 3
 (27) 1 1 \leftarrow (29) 1

(29, 4)

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

(29, 5)

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

(29, 6)

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

(29, 7)

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

(29, 8)

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

(29, 9)

(1) 6 ..4 5 3 3 3
 (3) 4 ..4 5 3 3 3 \leftarrow (4) 6 2 4 5 3 3 3
 (7) 6 2 3 4 4 1 1 1 \leftarrow (14) 2 3 4 4 1 1 1

(29, 10)

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

(29, 11)

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

(29, 12)

(4) 1 1 * 2 4 3 3 3 \leftarrow (8) 3 4 4 1 1 * 1
 (10) 1 1 * * 1 \leftarrow (12) 1 * * 1

(29, 15)

(3) 1 * * * 1 \leftarrow (5) * * * 1

(29, 16)
 (2) 1 1 * * * 1 \leftarrow (4) 1 * * * 1

(30, 2)
 (15) 15

(30, 3)
 (14) 13 3
 (15) 14 1 \leftarrow (16) 15
 (23) 6 1 \leftarrow (24) 7
 (27) 2 1 \leftarrow (28) 3

(30, 4)
 (9) 7 7 7 \leftarrow (17) 7 7
 (13) 11 3 3
 (15) 13 1 1 \leftarrow (16) 14 1
 (21) 3 3 3 \leftarrow (25) 3 3
 (23) 5 1 1 \leftarrow (24) 6 1
 (27) 1 1 1 \leftarrow (28) 2 1

(30, 5)
 (7) 4 5 7 7 \leftarrow (10) 7 7 7
 (8) 3 5 7 7
 (12) 9 3 3 3
 (15) 12 1 1 1 \leftarrow (16) 13 1 1
 (23) 4 1 1 1 \leftarrow (24) 5 1 1

(30, 6)
 (6) 2 3 5 7 7 \leftarrow (8) 4 5 7 7
 (7) 3 6 6 5 3 \leftarrow (11) 6 6 5 3
 (12) 4 5 3 3 3
 (13) 3 6 2 3 3 \leftarrow (14) 8 3 3 3
 (15) 2 4 3 3 3 \leftarrow (17) 6 2 3 3
 (15) 8 4 1 1 1 \leftarrow (16) 12 1 1 1

(30, 7)
 (4) 3 3 6 6 5 3 \leftarrow (10) 3 5 7 3 3
 (7) 2 3 5 7 3 3 \leftarrow (8) 3 6 6 5 3
 (10) 2 4 5 3 3 3
 (13) ..4 3 3 3 \leftarrow (14) 3 6 2 3 3
 (14) 1 2 4 3 3 3 \leftarrow (16) 2 4 3 3 3
 (15) 6 * 1 \leftarrow (16) 8 4 1 1 1
 (19) 2 * 1 \leftarrow (20) 4 4 1 1 1

(30, 8)
 (1) 6 2 3 5 7 3 3 \leftarrow (8) 2 3 5 7 3 3
 (7) 13 1 * 1
 (13) 1 1 2 4 3 3 3 \leftarrow (14) ..4 3 3 3
 (15) 5 1 * 1 \leftarrow (16) 6 * 1
 (19) 1 1 * 1 \leftarrow (20) 2 * 1

(30, 9)
 (1) 3 6 2 4 5 3 3 3 \leftarrow (2) 6 2 3 5 7 3 3
 (5) 8 1 1 2 4 3 3 3
 (7) 12 1 1 * 1 \leftarrow (8) 13 1 * 1
 (15) 4 1 1 * 1 \leftarrow (16) 5 1 * 1

(30, 10)
 (1)3 5 7 3 3 \leftarrow (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 \leftarrow (6) 8 1 1 2 4 3 3 3
 (7) * 2 4 3 3 3 \leftarrow (9) 6 2 3 4 4 1 1 1
 (7) 8 4 1 1 * 1 \leftarrow (8) 12 1 1 * 1

(30, 11)
 (2)4 5 3 3 3
 (5) 2 * 2 4 3 3 3 \leftarrow (6) 3 6 2 3 4 4 1 1 1
 (6) 1 * 2 4 3 3 3 \leftarrow (8) * 2 4 3 3 3
 (7) 6 * * 1 \leftarrow (8) 8 4 1 1 * 1
 (11) 2 * * 1 \leftarrow (12) 4 4 1 1 * 1

(30, 12)
 (5) 1 1 * 2 4 3 3 3 \leftarrow (6) 2 * 2 4 3 3 3
 (6) 2 3 4 4 1 1 * 1
 (7) 5 1 * * 1 \leftarrow (8) 6 * * 1
 (11) 1 1 * * 1 \leftarrow (12) 2 * * 1

(30, 13)
 (5) 1 2 3 4 4 1 1 * 1
 (7) 4 1 1 * * 1 \leftarrow (8) 5 1 * * 1

(30, 14)
 (3) 4 4 1 1 * * 1

(30, 15)
 (3) 2 * * * 1 \leftarrow (4) 4 4 1 1 * * 1

(30, 16)
 (3) 1 1 * * * 1 \leftarrow (4) 2 * * * 1

(31, 1)
 (31)

(31, 2)
 (30) 1

(31, 3)
 (1) 15 15
 (13) 11 7
 (15) 13 3 \leftarrow (17) 15
 (23) 5 3 \leftarrow (25) 7
 (29) 1 1

(31, 4)

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

(31, 5)

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

(31, 6)

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

(31, 7)

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

(31, 8)

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

(31, 9)

(1) 7 13 1 * 1 \leftarrow (2) 10 2 4 5 3 3 3
 (3) 6 ..4 5 3 3 3
 (5) 4 ..4 5 3 3 3 \leftarrow (6) 6 2 4 5 3 3 3
 (14) 1 2 3 4 4 1 1 1 \leftarrow (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 \leftarrow (2) 7 13 1 * 1
 (2)3 5 7 3 3
 (3) 4 ...4 5 3 3 3 \leftarrow (4) 6 ..4 5 3 3 3
 (5)4 5 3 3 3 \leftarrow (6) 4 ..4 5 3 3 3
 (9) 5 1 2 3 4 4 1 1 1 \leftarrow (10) 6 2 3 4 4 1 1 1
 (14) * * 1

(31, 11)

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

(31, 12)

(1)4 5 3 3 3 \leftarrow (2) 4 ...4 5 3 3 3
 (6) 1 1 * 2 4 3 3 3 \leftarrow (8) 1 * 2 4 3 3 3
 (7) 2 3 4 4 1 1 * 1 \leftarrow (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 \leftarrow (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 \leftarrow (2) 6 2 3 4 4 1 1 * 1
 (6) * * * 1

(31, 15)

(1) 3 4 4 1 1 * * 1 \leftarrow (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 \leftarrow (33)

(32, 3)

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

(32, 4)

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

(32, 10)

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

(32, 5)

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

(32, 11)

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

(32, 6)

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

(32, 12)

- (1) 13 1 * * 1 \leftarrow (2) 14 * * 1
- (2)4 5 3 3 3 \leftarrow (9) 1 * 2 4 3 3 3
- (7) 1 1 * 2 4 3 3 3 \leftarrow (8) 2 * 2 4 3 3 3
- (9) 5 1 * * 1 \leftarrow (10) 6 * * 1
- (13) 1 1 * * 1 \leftarrow (14) 2 * * 1

(32, 13)

- (1) 12 1 1 * * 1 \leftarrow (2) 13 1 * * 1
- (7) 1 2 3 4 4 1 1 * 1 \leftarrow (9) 2 3 4 4 1 1 * 1
- (9) 4 1 1 * * 1 \leftarrow (10) 5 1 * * 1

(32, 7)

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

(32, 14)

- (1) * * 2 4 3 3 3
- (1) 8 4 1 1 * * 1 \leftarrow (2) 12 1 1 * * 1
- (5) 4 4 1 1 * * 1 \leftarrow (8) 1 2 3 4 4 1 1 * 1
- (7) * * * 1 \leftarrow (10) 4 1 1 * * 1

(32, 15)

- (1) 6 * * * 1 \leftarrow (2) 8 4 1 1 * * 1
- (2) 3 4 4 1 1 * * 1
- (5) 2 * * * 1 \leftarrow (6) 4 4 1 1 * * 1
- (6) 1 * * * 1 \leftarrow (8) * * * 1

(32, 8)

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

(32, 16)

- (1) 5 1 * * * 1 \leftarrow (2) 6 * * * 1
- (5) 1 1 * * * 1 \leftarrow (6) 2 * * * 1

(32, 9)

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

(32, 17)

- (1) 4 1 1 * * * 1 \leftarrow (2) 5 1 * * * 1

(33, 3)

- (1) 29 3
- (3) 15 15
- (15) 11 7 \leftarrow (19) 15
- (27) 3 3
- (31) 1 1 \leftarrow (33) 1

(33, 4)

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

(33, 5)

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

(33, 6)

(2) 9 3 5 7 7
 (3) 12 9 3 3 3 \leftarrow (4) 13 11 3 3
 (9) 2 3 5 7 7 \leftarrow (16) 9 3 3 3
 (12) 3 5 7 3 3 \leftarrow (17) 8 3 3 3
 (13) 4 7 3 3 3 \leftarrow (14) 6 6 5 3
 (15) 4 5 3 3 3 \leftarrow (16) 5 7 3 3
 (19) 5 1 2 3 3 \leftarrow (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 \leftarrow (11) 3 6 6 5 3
 (10) 2 3 5 7 3 3 \leftarrow (16) 4 5 3 3 3
 (13) 2 4 5 3 3 3 \leftarrow (14) 4 7 3 3 3
 (19) 3 4 4 1 1 1 \leftarrow (20) 5 1 2 3 3
 (23) 1 * 1 \leftarrow (25) * 1

(33, 8)

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

(33, 9)

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

(33, 10)

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

(33, 11)

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

(33, 12)

(3)4 5 3 3 3 \leftarrow (4) 44 5 3 3 3
 (8) 1 1 * 2 4 3 3 3
 (14) 1 1 * * 1 \leftarrow (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 \leftarrow (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 \leftarrow (4) 5 1 2 3 4 4 1 1 * 1
 (7) 1 * * * 1 \leftarrow (9) * * * 1

(33, 16)

(1) 2 3 4 4 1 1 * * 1
 (6) 1 1 * * * 1 \leftarrow (8) 1 * * * 1

(33, 17)

(2) 4 1 1 * * * 1

(34, 2)

(3) 31
 (27) 7
 (31) 3 \leftarrow (35)

(34, 3)

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

(34, 4)

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

(34, 5)

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

(34, 6)

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

(34, 7)

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

(34, 8)

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

(34, 9)

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

(34, 10)

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

(34, 11)

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

(34, 12)

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

(34, 13)

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

(34, 14)

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

(34, 15)

(1) 2 * * 2 4 3 3 3 \leftarrow (2) 3 6 2 3 4 4 1 1 * 1
 (2) 1 * * 2 4 3 3 3 \leftarrow (4) * * 2 4 3 3 3
 (3) 6 * * * 1 \leftarrow (4) 8 4 1 1 * * 1
 (4) 3 4 4 1 1 * * 1 \leftarrow (10) * * * 1
 (7) 2 * * * 1 \leftarrow (8) 4 4 1 1 * * 1

(34, 16)

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

(34, 17)

(1) 1 2 3 4 4 1 1 * * 1 \leftarrow (8) 1 1 * * * 1
 (3) 4 1 1 * * * 1 \leftarrow (4) 5 1 * * * 1

(34, 18)

(1) * * * * 1

(35, 3)

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

(35, 4)

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

(35, 5)

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

(35, 6)

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

(35, 7)

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

(35, 8)

(2) 5 5 3 6 6 5 3 \leftarrow (4) 9 3 6 6 5 3
 (3) 6 3 3 6 6 5 3
 (5) 10 2 4 5 3 3 3 \leftarrow (6) 12 4 5 3 3 3
 (9) 6 2 4 5 3 3 3 \leftarrow (16) 2 4 5 3 3 3
 (18) 1 1 2 4 3 3 3 \leftarrow (20) 1 2 4 3 3 3
 (19) 2 3 4 4 1 1 1 \leftarrow (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 \leftarrow (4) 6 3 3 6 6 5 3
 (5) 7 13 1 * 1 \leftarrow (6) 10 2 4 5 3 3 3
 (7) 6 ..4 5 3 3 3 \leftarrow (13) 13 1 * 1
 (9) 4 ..4 5 3 3 3 \leftarrow (10) 6 2 4 5 3 3 3
 (18) 1 2 3 4 4 1 1 1 \leftarrow (20) 2 3 4 4 1 1 1

(35, 10)

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

(35, 11)

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

(35, 12)

(1) 64 5 3 3 3 \leftarrow (8)4 5 3 3 3
 (5)4 5 3 3 3 \leftarrow (6) 44 5 3 3 3
 (10) 1 1 * 2 4 3 3 3 \leftarrow (12) 1 * 2 4 3 3 3
 (11) 2 3 4 4 1 1 * 1 \leftarrow (14) 3 4 4 1 1 * 1

(35, 13)

(1) 44 5 3 3 3 \leftarrow (2) 64 5 3 3 3
 (10) 1 2 3 4 4 1 1 * 1 \leftarrow (12) 2 3 4 4 1 1 * 1

(35, 14)

(1)4 5 3 3 3 \leftarrow (2) 44 5 3 3 3
 (5) 5 1 2 3 4 4 1 1 * 1 \leftarrow (6) 6 2 3 4 4 1 1 * 1

(35, 15)

(3) 1 * * 2 4 3 3 3 \leftarrow (5) * * 2 4 3 3 3
 (5) 3 4 4 1 1 * * 1 \leftarrow (6) 5 1 2 3 4 4 1 1 * 1

(35, 16)

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

(35, 17)

(2) 1 2 3 4 4 1 1 * * 1 \leftarrow (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 \leftarrow (37)

(36, 3)

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

(36, 4)

(3) 27 3 3 \leftarrow (5) 29 3
 (5) 13 11 7
 (5) 29 1 1 \leftarrow (6) 30 1
 (15) 7 7 7 \leftarrow (19) 11 7
 (19) 11 3 3 \leftarrow (21) 13 3
 (21) 13 1 1 \leftarrow (22) 14 1
 (27) 3 3 3 \leftarrow (29) 5 3
 (29) 5 1 1 \leftarrow (30) 6 1
 (33) 1 1 1 \leftarrow (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, 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, 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, 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, 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, 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, 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, 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, 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, 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, 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 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, 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 \leftarrow (35) 3
 (35) 1 1 \leftarrow (37) 1

(37, 4)

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

(37, 5)

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

(37, 6)

(2) 5 9 7 7 7
 (4) 11 3 5 7 7
 (6) 9 3 5 7 7 \leftarrow (16) 3 5 7 7
 (7) 12 9 3 3 3 \leftarrow (8) 13 11 3 3
 (13) 2 3 5 7 7
 (17) 4 7 3 3 3 \leftarrow (18) 6 6 5 3
 (19) 4 5 3 3 3 \leftarrow (20) 5 7 3 3
 (22) 2 4 3 3 3 \leftarrow (29) 1 2 3 3
 (23) 5 1 2 3 3 \leftarrow (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 \leftarrow (17) 3 5 7 3 3
 (17) 2 4 5 3 3 3 \leftarrow (18) 4 7 3 3 3
 (21) 1 2 4 3 3 3 \leftarrow (27) 4 4 1 1 1
 (23) 3 4 4 1 1 1 \leftarrow (24) 5 1 2 3 3
 (27) 1 * 1 \leftarrow (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 \leftarrow (8) 12 4 5 3 3 3
 (20) 1 1 2 4 3 3 3 \leftarrow (24) 3 4 4 1 1 1
 (26) 1 1 * 1 \leftarrow (28) 1 * 1

(37, 9)

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

(37, 11)

(3)3 3 6 6 5 3 \leftarrow (4) 3 5 6 2 4 5 3 3 3
 (6)3 5 7 3 3
 (7) 44 5 3 3 3 \leftarrow (8) 5 8 1 1 2 4 3 3 3
 (9)4 5 3 3 3 \leftarrow (10) 4 ...4 5 3 3 3
 (13) 1 * 2 4 3 3 3 \leftarrow (19) 4 4 1 1 * 1
 (15) 3 4 4 1 1 * 1 \leftarrow (16) 5 1 2 3 4 4 1 1 1
 (19) 1 * * 1 \leftarrow (21) * * 1

(37, 12)

(3) 64 5 3 3 3
 (7)4 5 3 3 3 \leftarrow (8) 4 ...4 5 3 3 3
 (12) 1 1 * 2 4 3 3 3 \leftarrow (16) 3 4 4 1 1 * 1
 (18) 1 1 * * 1 \leftarrow (20) 1 * * 1

(37, 13)

(1) 64 5 3 3 3
 (3) 44 5 3 3 3 \leftarrow (4) 64 5 3 3 3
 (7) 6 2 3 4 4 1 1 * 1 \leftarrow (14) 2 3 4 4 1 1 * 1

(37, 14)

(1) 44 5 3 3 3 \leftarrow (2) 64 5 3 3 3
 (3)4 5 3 3 3 \leftarrow (4) 44 5 3 3 3
 (6) * * 2 4 3 3 3 \leftarrow (13) 1 2 3 4 4 1 1 * 1
 (7) 5 1 2 3 4 4 1 1 * 1 \leftarrow (8) 6 2 3 4 4 1 1 * 1

(37, 15)

(1)4 5 3 3 3 \leftarrow (2) 44 5 3 3 3
 (5) 1 * * 2 4 3 3 3 \leftarrow (11) 4 4 1 1 * * 1
 (7) 3 4 4 1 1 * * 1 \leftarrow (8) 5 1 2 3 4 4 1 1 * 1
 (11) 1 * * * 1 \leftarrow (13) * * * 1

(37, 16)

(4) 1 1 * * 2 4 3 3 3 \leftarrow (8) 3 4 4 1 1 * * 1
 (10) 1 1 * * * 1 \leftarrow (12) 1 * * * 1

(37, 19)

(3) 1 * * * * 1 \leftarrow (5) * * * * 1

(37, 20)

(2) 1 1 * * * * 1 \leftarrow (4) 1 * * * * 1

(38, 2)

(7) 31
 (23) 15
 (31) 7 \leftarrow (39)

(38, 3)

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

(38, 4)

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

(38, 5)

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

(38, 6)

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

(38, 7)

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

(38, 8)

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

(38, 9)

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

(38, 10)

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

(38, 11)

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

(38, 12)

- (1) 63 5 7 3 3 \leftarrow (8)3 5 7 3 3
- (7) 13 1 * * 1 \leftarrow (8) 14 * * 1
- (8)4 5 3 3 3 \leftarrow (21) 1 * * 1
- (13) 1 1 * 2 4 3 3 3 \leftarrow (14) 2 * 2 4 3 3 3
- (15) 5 1 * * 1 \leftarrow (16) 6 * * 1
- (19) 1 1 * * 1 \leftarrow (20) 2 * * 1

(38, 13)

- (1) 3 64 5 3 3 3 \leftarrow (2) 63 5 7 3 3
- (5) 8 1 1 * 2 4 3 3 3 \leftarrow (20) 1 1 * * 1
- (7) 12 1 1 * * 1 \leftarrow (8) 13 1 * * 1
- (15) 4 1 1 * * 1 \leftarrow (16) 5 1 * * 1

(38, 14)

- (1)3 5 7 3 3 \leftarrow (2) 3 64 5 3 3 3
 (4)4 5 3 3 3 \leftarrow (16) 4 1 1 * * 1
 (5) 3 6 2 3 4 4 1 1 * 1 \leftarrow (6) 8 1 1 * 2 4 3 3 3
 (7) * * 2 4 3 3 3 \leftarrow (9) 6 2 3 4 4 1 1 * 1
 (7) 8 4 1 1 * * 1 \leftarrow (8) 12 1 1 * * 1

(38, 15)

- (2)4 5 3 3 3 \leftarrow (14) * * * 1
 (5) 2 * * 2 4 3 3 3 \leftarrow (6) 3 6 2 3 4 4 1 1 * 1
 (6) 1 * * 2 4 3 3 3 \leftarrow (8) * * 2 4 3 3 3
 (7) 6 * * * 1 \leftarrow (8) 8 4 1 1 * * 1
 (11) 2 * * * 1 \leftarrow (12) 4 4 1 1 * * 1

(38, 16)

- (5) 1 1 * * 2 4 3 3 3 \leftarrow (6) 2 * * 2 4 3 3 3
 (6) 2 3 4 4 1 1 * * 1
 (7) 5 1 * * * 1 \leftarrow (8) 6 * * * 1
 (11) 1 1 * * * 1 \leftarrow (12) 2 * * * 1

(38, 17)

- (5) 1 2 3 4 4 1 1 * * 1
 (7) 4 1 1 * * * 1 \leftarrow (8) 5 1 * * * 1

(38, 18)

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

(38, 19)

- (3) 2 * * * * 1 \leftarrow (4) 4 4 1 1 * * * 1

(38, 20)

- (3) 1 1 * * * * 1 \leftarrow (4) 2 * * * * 1

(39, 3)

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

(39, 4)

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

(39, 5)

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

(39, 6)

- (1) 20 9 3 3 3 \leftarrow (2) 21 11 3 3
 (4) 5 9 7 7 7
 (6) 11 3 5 7 7 \leftarrow (8) 13 5 7 7
 (9) 12 9 3 3 3 \leftarrow (10) 13 11 3 3
 (15) 2 3 5 7 7 \leftarrow (17) 4 5 7 7
 (19) 4 7 3 3 3 \leftarrow (20) 6 6 5 3
 (21) 4 5 3 3 3 \leftarrow (22) 5 7 3 3
 (25) 5 1 2 3 3 \leftarrow (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 \leftarrow (9) 9 3 5 7 7
 (7) 9 3 6 6 5 3 \leftarrow (10) 12 9 3 3 3
 (13) 3 3 6 6 5 3 \leftarrow (16) 2 3 5 7 7
 (19) 2 4 5 3 3 3 \leftarrow (20) 4 7 3 3 3
 (23) 1 2 4 3 3 3 \leftarrow (25) 2 4 3 3 3
 (25) 3 4 4 1 1 1 \leftarrow (26) 5 1 2 3 3

(39, 8)

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

(39, 9)

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

(39, 10)

- (1) 2 3 5 5 3 6 6 5 3 \leftarrow (2) 3 6 5 2 3 5 7 7
 (4) 2 4 3 3 3 6 6 5 3 \leftarrow (9) 5 6 2 4 5 3 3 3
 (5) 3 5 6 2 4 5 3 3 3 \leftarrow (6) 5 6 2 3 5 7 3 3
 (7) ...3 3 6 6 5 3 \leftarrow (8) 3 6 2 3 5 7 3 3
 (9) 5 8 1 1 2 4 3 3 3 \leftarrow (10) 7 13 1 * 1
 (11) 4 ...4 5 3 3 3 \leftarrow (12) 6 ..4 5 3 3 3
 (13) ...4 5 3 3 3 \leftarrow (14) 4 ..4 5 3 3 3
 (17) 5 1 2 3 4 4 1 1 1 \leftarrow (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) 64 5 3 3 3
 (9)4 5 3 3 3 ← (10) 44 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) 64 5 3 3 3
 (5) 44 5 3 3 3 ← (6) 64 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) 44 5 3 3 3 ← (4) 64 5 3 3 3
 (5)4 5 3 3 3 ← (6) 44 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) 44 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 \leftarrow (8) 5 5 3 6 6 5 3
 (3) 5 6 3 3 6 6 5 3 \leftarrow (4) 7 1 2 4 5 3 3 3
 (5) 3 6 3 3 6 6 5 3 \leftarrow (6) 6 5 2 3 5 7 7
 (9) 20 1 1 * 1 \leftarrow (10) 21 1 * 1
 (11) 3 6 2 4 5 3 3 3 \leftarrow (12) 6 2 3 5 7 3 3
 (15) 8 1 1 2 4 3 3 3 \leftarrow (24) 1 1 2 4 3 3 3
 (17) 12 1 1 * 1 \leftarrow (18) 13 1 * 1
 (23) 1 2 3 4 4 1 1 1 \leftarrow (25) 2 3 4 4 1 1 1
 (25) 4 1 1 * 1 \leftarrow (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 \leftarrow (4) 4 7 3 3 6 6 5 3
 (3) 3 5 6 2 3 5 7 3 3 \leftarrow (4) 5 6 3 3 6 6 5 3
 (5) 2 4 3 3 3 6 6 5 3 \leftarrow (6) 3 6 3 3 6 6 5 3
 (9) 3 6 ..4 5 3 3 3 \leftarrow (10) 5 6 2 4 5 3 3 3
 (9) 16 4 1 1 * 1 \leftarrow (10) 20 1 1 * 1
 (11)3 5 7 3 3 \leftarrow (12) 3 6 2 4 5 3 3 3
 (14)4 5 3 3 3 \leftarrow (19) 6 2 3 4 4 1 1 1
 (15) 3 6 2 3 4 4 1 1 1 \leftarrow (16) 8 1 1 2 4 3 3 3
 (17) 8 4 1 1 * 1 \leftarrow (18) 12 1 1 * 1
 (21) 4 4 1 1 * 1 \leftarrow (24) 1 2 3 4 4 1 1 1
 (23) * * 1 \leftarrow (26) 4 1 1 * 1

(40, 11)

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

(40, 12)

(3) 63 5 7 3 3
 (9) 13 1 * * 1 \leftarrow (10) 14 * * 1
 (10)4 5 3 3 3 \leftarrow (17) 1 * 2 4 3 3 3
 (15) 1 1 * 2 4 3 3 3 \leftarrow (16) 2 * 2 4 3 3 3
 (17) 5 1 * * 1 \leftarrow (18) 6 * * 1
 (21) 1 1 * * 1 \leftarrow (22) 2 * * 1

(40, 13)

(1) 5 64 5 3 3 3
 (3) 3 64 5 3 3 3 \leftarrow (4) 63 5 7 3 3
 (7) 8 1 1 * 2 4 3 3 3 \leftarrow (16) 1 1 * 2 4 3 3 3
 (9) 12 1 1 * * 1 \leftarrow (10) 13 1 * * 1
 (15) 1 2 3 4 4 1 1 * 1 \leftarrow (17) 2 3 4 4 1 1 * 1
 (17) 4 1 1 * * 1 \leftarrow (18) 5 1 * * 1

(40, 14)

(1) 3 64 5 3 3 3 \leftarrow (2) 5 64 5 3 3 3
 (3)3 5 7 3 3 \leftarrow (4) 3 64 5 3 3 3
 (6)4 5 3 3 3 \leftarrow (11) 6 2 3 4 4 1 1 * 1
 (7) 3 6 2 3 4 4 1 1 * 1 \leftarrow (8) 8 1 1 * 2 4 3 3 3
 (9) 8 4 1 1 * * 1 \leftarrow (10) 12 1 1 * * 1
 (13) 4 4 1 1 * * 1 \leftarrow (16) 1 2 3 4 4 1 1 * 1
 (15) * * * 1 \leftarrow (18) 4 1 1 * * 1

(40, 15)

(1)3 5 7 3 3 \leftarrow (2) 3 64 5 3 3 3
 (4)4 5 3 3 3 \leftarrow (10) * * 2 4 3 3 3
 (7) 2 * * 2 4 3 3 3 \leftarrow (8) 3 6 2 3 4 4 1 1 * 1
 (9) 6 * * * 1 \leftarrow (10) 8 4 1 1 * * 1
 (13) 2 * * * 1 \leftarrow (14) 4 4 1 1 * * 1
 (14) 1 * * * 1 \leftarrow (16) * * * 1

(40, 16)

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

(40, 17)

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

(40, 18)

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

(40, 19)

(1) 6 * * * * 1 \leftarrow (2) 8 4 1 1 * * * 1
 (2) 3 4 4 1 1 * * * 1
 (5) 2 * * * * 1 \leftarrow (6) 4 4 1 1 * * * 1
 (6) 1 * * * * 1 \leftarrow (8) * * * * 1

(40, 20)

(1) 5 1 * * * * 1 \leftarrow (2) 6 * * * * 1
 (5) 1 1 * * * * 1 \leftarrow (6) 2 * * * * 1

(40, 21)

(1) 4 1 1 * * * * 1 \leftarrow (2) 5 1 * * * * 1

(41, 3)

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

(41, 4)

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

(41, 5)

(1) 11 15 7 7
 (1) 19 7 7 7
 (2) 20 5 7 7 \leftarrow (9) 27 3 3
 (3) 17 7 7 7
 (3) 21 11 3 3 \leftarrow (4) 22 13 3
 (7) 25 3 3 3 \leftarrow (8) 26 5 3
 (11) 13 11 3 3 \leftarrow (12) 14 13 3
 (18) 4 5 7 7 \leftarrow (25) 11 3 3
 (19) 3 5 7 7 \leftarrow (33) 3 3 3
 (23) 5 7 3 3 \leftarrow (28) 6 5 3
 (23) 9 3 3 3 \leftarrow (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, 13)
 (1) 3 63 5 7 3 3 ← (2) 63 3 6 6 5 3
 (5) 64 5 3 3 3 ← (12)4 5 3 3 3
 (7) 44 5 3 3 3 ← (8) 64 5 3 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, 14)
 (1)3 3 6 6 5 3 ← (2) 3 63 5 7 3 3
 (4)3 5 7 3 3 ← (9) 8 1 1 * 2 4 3 3 3
 (5) 44 5 3 3 3 ← (6) 64 5 3 3 3
 (7)4 5 3 3 3 ← (8) 44 5 3 3 3
 (11) 5 1 2 3 4 4 1 1 * 1 ← (12) 6 2 3 4 4 1 1 * 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, 15)
 (2)3 5 7 3 3 ← (8)4 5 3 3 3
 (5)4 5 3 3 3 ← (6) 44 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, 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, 16)
 (8) 1 1 * * 2 4 3 3 3
 (14) 1 1 * * * 1 ← (16) 1 * * * 1

(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, 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, 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) 44 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, 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, 12)
 (1) 63 3 6 6 5 3 ← (8)3 3 6 6 5 3
 (7) 64 5 3 3 3 ← (14)4 5 3 3 3
 (11)4 5 3 3 3 ← (12) 44 5 3 3 3
 (22) 1 1 * * 1 ← (24) 1 * * 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 \leftarrow (2) 11 15 15
 (2) 19 7 7 7 \leftarrow (4) 21 11 7
 (3) 20 5 7 7 \leftarrow (6) 23 7 7
 (9) 14 5 7 7 \leftarrow (12) 13 11 7
 (11) 28 1 1 1 \leftarrow (12) 29 1 1
 (19) 4 5 7 7 \leftarrow (22) 7 7 7
 (20) 3 5 7 7 \leftarrow (24) 5 7 7
 (27) 12 1 1 1 \leftarrow (28) 13 1 1
 (33) 1 2 3 3 \leftarrow (40) 1 1 1
 (35) 4 1 1 1 \leftarrow (36) 5 1 1

(42, 10)

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

(42, 6)

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

(42, 11)

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

(42, 7)

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

(42, 12)

(1) 1 1 2 4 7 3 3 6 6 5 3 \leftarrow (2) ..4 7 3 3 6 6 5 3
 (5) 63 5 7 3 3
 (11) 13 1 * * 1 \leftarrow (12) 14 * * 1
 (17) 1 1 * 2 4 3 3 3 \leftarrow (18) 2 * 2 4 3 3 3
 (18) 2 3 4 4 1 1 * 1 \leftarrow (25) 1 * * 1
 (19) 5 1 * * 1 \leftarrow (20) 6 * * 1
 (23) 1 1 * * 1 \leftarrow (24) 2 * * 1

(42, 13)

(3) 5 64 5 3 3 3
 (5) 3 64 5 3 3 3 \leftarrow (6) 63 5 7 3 3
 (11) 12 1 1 * * 1 \leftarrow (12) 13 1 * * 1
 (17) 1 2 3 4 4 1 1 * 1 \leftarrow (24) 1 1 * * 1
 (19) 4 1 1 * * 1 \leftarrow (20) 5 1 * * 1

(42, 8)

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

(42, 14)

(2)3 3 6 6 5 3
 (3) 3 64 5 3 3 3 \leftarrow (4) 5 64 5 3 3 3
 (5)3 5 7 3 3 \leftarrow (6) 3 64 5 3 3 3
 (9) 3 6 2 3 4 4 1 1 * 1 \leftarrow (10) 8 1 1 * 2 4 3 3 3
 (11) * * 2 4 3 3 3 \leftarrow (13) 6 2 3 4 4 1 1 * 1
 (11) 8 4 1 1 * * 1 \leftarrow (12) 12 1 1 * * 1
 (15) 4 4 1 1 * * 1 \leftarrow (20) 4 1 1 * * 1

(42, 9)

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

(42, 15)

(3)3 5 7 3 3 \leftarrow (4) 3 64 5 3 3 3
 (6)4 5 3 3 3
 (9) 2 * * 2 4 3 3 3 \leftarrow (10) 3 6 2 3 4 4 1 1 * 1
 (10) 1 * * 2 4 3 3 3 \leftarrow (12) * * 2 4 3 3 3
 (11) 6 * * * 1 \leftarrow (12) 8 4 1 1 * * 1
 (12) 3 4 4 1 1 * * 1 \leftarrow (18) * * * 1
 (15) 2 * * * 1 \leftarrow (16) 4 4 1 1 * * 1

(42, 16)

(3) 13 1 * * * 1
 (9) 1 1 * * 2 4 3 3 3 \leftarrow (10) 2 * * 2 4 3 3 3
 (10) 2 3 4 4 1 1 * * 1 \leftarrow (17) 1 * * * 1
 (11) 5 1 * * * 1 \leftarrow (12) 6 * * * 1
 (15) 1 1 * * * 1 \leftarrow (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 \leftarrow (4) 1 2 4 7 3 3 6 6 5 3
 (3) 63 3 6 6 5 3
 (9) 64 5 3 3 3 \leftarrow (16)4 5 3 3 3
 (13)4 5 3 3 3 \leftarrow (14) 44 5 3 3 3
 (18) 1 1 * 2 4 3 3 3 \leftarrow (20) 1 * 2 4 3 3 3
 (19) 2 3 4 4 1 1 * 1 \leftarrow (22) 3 4 4 1 1 * 1

(43, 13)

(1) 5 63 5 7 3 3
 (3) 3 63 5 7 3 3 \leftarrow (4) 63 3 6 6 5 3
 (7) 64 5 3 3 3 \leftarrow (14)4 5 3 3 3
 (9) 44 5 3 3 3 \leftarrow (10) 64 5 3 3 3
 (18) 1 2 3 4 4 1 1 * 1 \leftarrow (20) 2 3 4 4 1 1 * 1

(43, 14)

(1) 3 5 64 5 3 3 3 \leftarrow (2) 5 63 5 7 3 3
 (3)3 3 6 6 5 3 \leftarrow (4) 3 63 5 7 3 3
 (6)3 5 7 3 3 \leftarrow (11) 8 1 1 * 2 4 3 3 3
 (7) 44 5 3 3 3 \leftarrow (8) 64 5 3 3 3
 (9)4 5 3 3 3 \leftarrow (10) 44 5 3 3 3
 (13) 5 1 2 3 4 4 1 1 * 1 \leftarrow (14) 6 2 3 4 4 1 1 * 1

(43, 15)

(1)3 3 6 6 5 3 \leftarrow (2) 3 5 64 5 3 3 3
 (4)3 5 7 3 3 \leftarrow (10)4 5 3 3 3
 (7)4 5 3 3 3 \leftarrow (8) 44 5 3 3 3
 (11) 1 * * 2 4 3 3 3 \leftarrow (13) * * 2 4 3 3 3
 (13) 3 4 4 1 1 * * 1 \leftarrow (14) 5 1 2 3 4 4 1 1 * 1

(43, 16)

(1) 64 5 3 3 3 \leftarrow (8)4 5 3 3 3
 (10) 1 1 * * 2 4 3 3 3 \leftarrow (12) 1 * * 2 4 3 3 3
 (11) 2 3 4 4 1 1 * * 1 \leftarrow (14) 3 4 4 1 1 * * 1

(43, 17)

(1) 44 5 3 3 3 \leftarrow (2) 64 5 3 3 3
 (10) 1 2 3 4 4 1 1 * * 1 \leftarrow (12) 2 3 4 4 1 1 * * 1

(43, 18)

(1)4 5 3 3 3 \leftarrow (2) 44 5 3 3 3
 (5) 5 1 2 3 4 4 1 1 * * 1 \leftarrow (6) 6 2 3 4 4 1 1 * * 1

(43, 19)

(3) 1 * * * 2 4 3 3 3 \leftarrow (5) * * * 2 4 3 3 3
 (5) 3 4 4 1 1 * * * 1 \leftarrow (6) 5 1 2 3 4 4 1 1 * * 1

(43, 20)

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

(43, 21)

(2) 1 2 3 4 4 1 1 * * * 1 \leftarrow (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 \leftarrow (45)

(44, 3)

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

(44, 4)

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

(44, 5)

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

(44, 6)

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

(44, 7)

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

(44, 8)

(3) 11 12 4 5 3 3 3 \leftarrow (5) 17 3 6 6 5 3
 (5) 3 5 9 3 5 7 7 \leftarrow (11) 5 7 3 5 7 7
 (7) 3 5 7 3 5 7 7 \leftarrow (9) 5 9 3 5 7 7
 (7) 7 12 4 5 3 3 3 \leftarrow (8) 13 2 3 5 7 7
 (11) 5 5 3 6 6 5 3 \leftarrow (13) 9 3 6 6 5 3
 (13) 21 1 * 1 \leftarrow (14) 22 * 1
 (15) 6 2 3 5 7 3 3 \leftarrow (22) 2 3 5 7 3 3
 (27) 1 1 2 4 3 3 3 \leftarrow (28) ..4 3 3 3
 (29) 5 1 * 1 \leftarrow (30) 6 * 1
 (33) 1 1 * 1 \leftarrow (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 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 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) 63 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 63 3 6 6 5 3 ← (2) 6 ..4 3 3 3 6 6 5 3
 (5) 5 64 5 3 3 3 ← (11) 64 5 3 3 3
 (7) 3 64 5 3 3 3 ← (8) 63 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 63 3 6 6 5 3
 (4)3 3 6 6 5 3 ← (9) 64 5 3 3 3
 (5) 3 64 5 3 3 3 ← (6) 5 64 5 3 3 3
 (7)3 5 7 3 3 ← (8) 3 64 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 64 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 \leftarrow (9) 23 7 7
 (6) 20 5 7 7
 (7) 17 7 7 7
 (7) 21 11 3 3 \leftarrow (8) 22 13 3
 (11) 25 3 3 3 \leftarrow (12) 26 5 3
 (13) 13 5 7 7
 (15) 13 11 3 3 \leftarrow (16) 14 13 3
 (22) 4 5 7 7 \leftarrow (32) 6 5 3
 (23) 3 5 7 7 \leftarrow (27) 5 7 7
 (27) 9 3 3 3 \leftarrow (28) 10 5 3
 (31) 6 2 3 3 \leftarrow (38) 2 3 3

(45, 6)

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

(45, 7)

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

(45, 8)

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

(45, 9)

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

(45, 10)

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

(45, 11)

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

(45, 12)

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

(45, 13)

(3) 5 6 3 5 7 3 3 \leftarrow (16) 4 5 3 3 3
 (5) 3 6 3 5 7 3 3 \leftarrow (6) 6 3 3 6 6 5 3
 (11) 4 4 5 3 3 3 \leftarrow (12) 6 4 5 3 3 3
 (15) 6 2 3 4 4 1 1 * 1 \leftarrow (22) 2 3 4 4 1 1 * 1

(45, 14)

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

(45, 15)

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

(45, 16)

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

(45, 17)

(1) 6 4 5 3 3 3
 (3) 4 4 5 3 3 3 \leftarrow (4) 6 4 5 3 3 3
 (7) 6 2 3 4 4 1 1 * * 1 \leftarrow (14) 2 3 4 4 1 1 * * 1

(45, 18)

(1) 4 4 5 3 3 3 \leftarrow (2) 6 4 5 3 3 3
 (3) 4 5 3 3 3 \leftarrow (4) 4 4 5 3 3 3
 (6) * * * 2 4 3 3 3 \leftarrow (13) 1 2 3 4 4 1 1 * * 1
 (7) 5 1 2 3 4 4 1 1 * * 1 \leftarrow (8) 6 2 3 4 4 1 1 * * 1

(45, 19)

- (1)4 5 3 3 3 ← (2) 44 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 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 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) 63 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 63 3 6 6 5 3 ← (4) 6 ..4 3 3 3 6 6 5 3
 (7) 5 64 5 3 3 3 ← (13) 64 5 3 3 3
 (9) 3 64 5 3 3 3 ← (10) 63 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 63 3 6 6 5 3
 (6)3 3 6 6 5 3 ← (11) 64 5 3 3 3
 (7) 3 64 5 3 3 3 ← (8) 5 64 5 3 3 3
 (9)3 5 7 3 3 ← (10) 3 64 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 64 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) 63 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 64 5 3 3 3 ← (2) 63 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 64 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) 4453333 ← (2) 5811**24333
 (3)453333 ← (4) 4453333
 (7) 1***243333 ← (9) ***24333
 (9) 34411***1 ← (10) 51234411**1
 (13) 1*****1

(47, 20)

(1)453333 ← (2) 4453333
 (6) 11***243333 ← (8) 1***24333
 (7) 234411***1 ← (10) 34411***1
 (12) 11*****1

(47, 21)

(1) 6234411***1
 (6) 1234411***1 ← (8) 234411***1
 (8) 411***1

(47, 22)

(1) 51234411***1 ← (2) 6234411***1
 (6) *****1

(47, 23)

(1) 34411***1 ← (2) 51234411***1
 (5) 1*****1

(47, 24)

(4) 11*****1

(48, 2)

(47) 1 ← (49)

(48, 3)

(17) 301 ← (18) 31
 (33) 141 ← (34) 15
 (41) 61 ← (42) 7
 (45) 21 ← (46) 3
 (46) 11 ← (48) 1

(48, 4)

(3) 151515
 (7) 111515
 (11) 2377
 (15) 2733 ← (17) 293
 (17) 13117 ← (43) 33
 (17) 2911 ← (18) 301
 (27) 777 ← (35) 77
 (31) 1133 ← (33) 133
 (33) 1311 ← (34) 141
 (39) 333 ← (41) 53
 (41) 511 ← (42) 61
 (45) 111 ← (46) 21

(48, 5)

(3) 1413117 ← (4) 151515
 (7) 1013117 ← (8) 111515
 (8) 19777
 (10) 17777
 (14) 25333 ← (16) 2733
 (15) 14577 ← (30) 577
 (17) 28111 ← (18) 2911
 (30) 9333 ← (32) 1133
 (31) 8333 ← (40) 333
 (33) 12111 ← (34) 1311
 (39) 1233 ← (41) 233
 (41) 4111 ← (42) 511

(48, 6)

(1) 7111577
 (3) 915777 ← (5) 1313117
 (3) 1313577
 (7) 911777 ← (8) 1013117
 (9) 713577
 (11) 144577 ← (27) 3577
 (13) 59777 ← (17) 13577
 (15) 113577 ← (16) 14577
 (17) 244111 ← (18) 28111
 (27) 35733 ← (29) 6653
 (30) 45333 ← (35) 6233
 (31) 36233 ← (32) 8333
 (33) 84111 ← (34) 12111
 (37) 44111 ← (40) 1233
 (39) *1 ← (42) 4111

(48, 7)

(1) 6911777 ← (2) 7111577
 (2) 1159777
 (3) 12113577 ← (4) 1313577
 (4) 7144577
 (8) 559777
 (10) 359777 ← (16) 113577
 (11) 1323577 ← (12) 144577
 (14) 573577 ← (18) 93577
 (17) 22*1 ← (18) 244111
 (25) 235733 ← (26) 36653
 (28) 245333 ← (34) 24333
 (31) ..4333 ← (32) 36233
 (33) 6*1 ← (34) 84111
 (37) 2*1 ← (38) 44111
 (38) 1*1 ← (40) *1

(48, 8)

(1) 9359777
 (2) 8359777
 (3) 78129333 ← (4) 12113577
 (7) 111245333 ← (9) 1736653
 (9) 3593577 ← (19) 1245333
 (11) 3573577 ← (13) 593577
 (11) 71245333 ← (12) 1323577
 (15) 5536653 ← (17) 936653
 (17) 211*1 ← (18) 22*1
 (25) 131*1 ← (33) 124333
 (31) 1124333 ← (32) ..4333
 (33) 51*1 ← (34) 6*1
 (37) 11*1 ← (38) 2*1

(48, 9)

(1) 45359777
 (1) 83593577
 (2) 93573577
 (6) 95536653 ← (8) 111245333
 (11) 47336653 ← (16) 5536653
 (11) 56336653 ← (12) 71245333
 (13) 36336653 ← (14) 6523577
 (17) 2011*1 ← (18) 211*1
 (19) 36245333 ← (20) 6235733
 (23) 81124333 ← (32) 1124333
 (25) 1211*1 ← (26) 131*1
 (31) 12344111 ← (33) 2344111
 (33) 411*1 ← (34) 51*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 63 3 6 6 5 3 ← (6) 6 .4 3 3 3 6 6 5 3
 (11) 3 64 5 3 3 3 ← (12) 63 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 63 3 6 6 5 3
 (9) 3 64 5 3 3 3 ← (10) 5 64 5 3 3 3
 (11)3 5 7 3 3 ← (12) 3 64 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 64 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) 63 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 64 5 3 3 3
 (1) 20 1 1 * * * 1 ← (2) 21 1 * * * 1
 (3) 3 64 5 3 3 3 ← (4) 63 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 64 5 3 3 3 ← (2) 5 64 5 3 3 3
 (1) 16 4 1 1 * * * 1 ← (2) 20 1 1 * * * 1
 (3)3 5 7 3 3 ← (4) 3 64 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 64 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 \leftarrow (19) 31
 (19) 15 15 \leftarrow (43) 7
 (31) 11 7 \leftarrow (35) 15
 (47) 1 1 \leftarrow (49) 1

(49, 4)

(10) 21 11 7
 (11) 22 13 3 \leftarrow (12) 23 15
 (12) 23 7 7 \leftarrow (18) 29 3
 (15) 26 5 3 \leftarrow (16) 27 7
 (18) 13 11 7 \leftarrow (42) 5 3
 (19) 14 13 3 \leftarrow (20) 15 15
 (28) 7 7 7 \leftarrow (34) 13 3
 (31) 10 5 3 \leftarrow (32) 11 7
 (35) 6 5 3 \leftarrow (36) 7 7
 (46) 1 1 1 \leftarrow (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 \leftarrow (17) 27 3 3
 (11) 17 7 7 7 \leftarrow (41) 3 3 3
 (11) 21 11 3 3 \leftarrow (12) 22 13 3
 (15) 25 3 3 3 \leftarrow (16) 26 5 3
 (19) 13 11 3 3 \leftarrow (20) 14 13 3
 (26) 4 5 7 7 \leftarrow (33) 11 3 3
 (31) 5 7 3 3 \leftarrow (36) 6 5 3
 (31) 9 3 3 3 \leftarrow (32) 10 5 3

(49, 6)

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

(49, 7)

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

(49, 8)

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

(49, 9)

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

(49, 10)

(1) 2 3 5 3 5 9 7 7 7 \leftarrow (2) 4 6 3 5 9 7 7 7
 (1) 4 5 3 5 9 3 5 7 7 \leftarrow (8) 9 5 5 3 6 6 5 3
 (7) 4 5 5 3 6 6 5 3 \leftarrow (10) 5 6 5 2 3 5 7 7
 (11) 2 3 5 5 3 6 6 5 3 \leftarrow (12) 3 6 5 2 3 5 7 7
 (14) 2 4 3 3 3 6 6 5 3 \leftarrow (19) 5 6 2 4 5 3 3 3
 (15) 3 5 6 2 4 5 3 3 3 \leftarrow (16) 5 6 2 3 5 7 3 3
 (17) ...3 3 6 6 5 3 \leftarrow (18) 3 6 2 3 5 7 3 3
 (19) 5 8 1 1 2 4 3 3 3 \leftarrow (20) 7 13 1 * 1
 (20) ...3 5 7 3 3 \leftarrow (25) 8 1 1 2 4 3 3 3
 (21) 4 ...4 5 3 3 3 \leftarrow (22) 6 ..4 5 3 3 3
 (23) ...4 5 3 3 3 \leftarrow (24) 4 ..4 5 3 3 3
 (27) 5 1 2 3 4 4 1 1 1 \leftarrow (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 \leftarrow (8) 4 5 5 5 3 6 6 5 3
 (12) ..4 3 3 3 6 6 5 3 \leftarrow (18) ...3 3 6 6 5 3
 (15) ...3 3 6 6 5 3 \leftarrow (16) 3 5 6 2 4 5 3 3 3
 (18) ...3 5 7 3 3 \leftarrow (24) ...4 5 3 3 3
 (19) 4 ...4 5 3 3 3 \leftarrow (20) 5 8 1 1 2 4 3 3 3
 (21) ...4 5 3 3 3 \leftarrow (22) 4 ...4 5 3 3 3
 (27) 3 4 4 1 1 * 1 \leftarrow (28) 5 1 2 3 4 4 1 1 1
 (31) 1 * * 1 \leftarrow (33) * * 1

(49, 12)

(3) ..4 5 5 5 3 6 6 5 3 \leftarrow (6) 2 4 5 5 5 3 6 6 5 3
 (9) 63 3 6 6 5 3 \leftarrow (16)3 3 6 6 5 3
 (15) 64 5 3 3 3 \leftarrow (22)4 5 3 3 3
 (19)4 5 3 3 3 \leftarrow (20) 44 5 3 3 3
 (30) 1 1 * * 1 \leftarrow (32) 1 * * 1

(49, 13)

(1) ...4 5 5 5 3 6 6 5 3 \leftarrow (4) ..4 5 5 5 3 6 6 5 3
 (7) 5 63 5 7 3 3 \leftarrow (13) 63 5 7 3 3
 (9) 3 63 5 7 3 3 \leftarrow (10) 63 3 6 6 5 3
 (13) 64 5 3 3 3 \leftarrow (20)4 5 3 3 3
 (15) 44 5 3 3 3 \leftarrow (16) 64 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 64 5 3 3 3
 (7) 3 5 64 5 3 3 3 ← (8) 5 63 5 7 3 3
 (9)3 3 6 6 5 3 ← (10) 3 63 5 7 3 3
 (12)3 5 7 3 3 ← (17) 8 1 1 * 2 4 3 3 3
 (13) 44 5 3 3 3 ← (14) 64 5 3 3 3
 (15)4 5 3 3 3 ← (16) 44 5 3 3 3
 (19) 5 1 2 3 4 4 1 1 * 1 ← (20) 6 2 3 4 4 1 1 * 1

(49, 24)
 (1) 2 3 4 4 1 1 * * * * 1
 (6) 1 1 * * * * 1 ← (8) 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 64 5 3 3 3
 (10)3 5 7 3 3 ← (16)4 5 3 3 3
 (13)4 5 3 3 3 ← (14) 44 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, 25)
 (2) 4 1 1 * * * * 1

(50, 2)
 (47) 3 ← (51)

(49, 16)
 (1) 63 3 6 6 5 3 ← (8)3 3 6 6 5 3
 (3) 104 5 3 3 3 ← (4) 1.....4 5 3 3 3
 (7) 64 5 3 3 3 ← (14)4 5 3 3 3
 (22) 1 1 * * * 1 ← (24) 1 * * * 1

(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

(49, 17)
 (1) 3 63 5 7 3 3 ← (2) 63 3 6 6 5 3
 (3) 7 13 1 * * * 1 ← (4) 104 5 3 3 3
 (5) 64 5 3 3 3 ← (11) 13 1 * * * 1
 (7) 44 5 3 3 3 ← (8) 64 5 3 3 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

(49, 18)
 (1)3 3 6 6 5 3 ← (2) 3 63 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) 44 5 3 3 3 ← (6) 64 5 3 3 3
 (7)4 5 3 3 3 ← (8) 44 5 3 3 3
 (11) 5 1 2 3 4 4 1 1 * * 1 ← (12) 6 2 3 4 4 1 1 * * 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

(49, 19)
 (2)3 5 7 3 3 ← (8)4 5 3 3 3
 (3) 44 5 3 3 3 ← (4) 5 8 1 1 * * 2 4 3 3 3
 (5)4 5 3 3 3 ← (6) 44 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) 44 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

(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

(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

(50, 7)

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

(50, 8)

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

(50, 9)

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

(50, 10)

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

(50, 11)

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

(50, 12)

(1) 2 4 3 5 6 5 2 3 5 7 7 \leftarrow (4) 4 3 5 6 5 2 3 5 7 7
 (7) 6 ..4 3 3 3 6 6 5 3 \leftarrow (14) ..4 3 3 3 6 6 5 3
 (9) 1 1 2 4 7 3 3 6 6 5 3 \leftarrow (10) ..4 7 3 3 6 6 5 3
 (19) 13 1 * * 1 \leftarrow (20) 14 * * 1
 (25) 1 1 * 2 4 3 3 3 \leftarrow (26) 2 * 2 4 3 3 3
 (26) 2 3 4 4 1 1 * 1 \leftarrow (33) 1 * * 1
 (27) 5 1 * * 1 \leftarrow (28) 6 * * 1
 (31) 1 1 * * 1 \leftarrow (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 \leftarrow (11) 63 3 6 6 5 3
 (7) 3 63 3 6 6 5 3 \leftarrow (8) 6 ..4 3 3 3 6 6 5 3
 (13) 3 64 5 3 3 3 \leftarrow (14) 63 5 7 3 3
 (19) 12 1 1 * * 1 \leftarrow (20) 13 1 * * 1
 (25) 1 2 3 4 4 1 1 * 1 \leftarrow (32) 1 1 * * 1
 (27) 4 1 1 * * 1 \leftarrow (28) 5 1 * * 1

(50, 14)

(3) * 2 4 7 3 3 6 6 5 3 \leftarrow (6) 4 1 1 2 4 7 3 3 6 6 5 3
 (3) 24 4 1 1 * * 1 \leftarrow (9) 5 63 5 7 3 3
 (7)4 3 3 3 6 6 5 3 \leftarrow (8) 3 63 3 6 6 5 3
 (11) 3 64 5 3 3 3 \leftarrow (12) 5 64 5 3 3 3
 (13)3 5 7 3 3 \leftarrow (14) 3 64 5 3 3 3
 (17) 3 6 2 3 4 4 1 1 * 1 \leftarrow (18) 8 1 1 * 2 4 3 3 3
 (19) * * 2 4 3 3 3 \leftarrow (21) 6 2 3 4 4 1 1 * 1
 (19) 8 4 1 1 * * 1 \leftarrow (20) 12 1 1 * * 1
 (23) 4 4 1 1 * * 1 \leftarrow (28) 4 1 1 * * 1

(50, 15)

(1) 2 * 2 4 7 3 3 6 6 5 3 \leftarrow (8)4 3 3 3 6 6 5 3
 (2) 1 * 2 4 7 3 3 6 6 5 3 \leftarrow (4) * 2 4 7 3 3 6 6 5 3
 (3) 22 * * * 1 \leftarrow (4) 24 4 1 1 * * 1
 (11)3 5 7 3 3 \leftarrow (12) 3 64 5 3 3 3
 (17) 2 * * 2 4 3 3 3 \leftarrow (18) 3 6 2 3 4 4 1 1 * 1
 (18) 1 * * 2 4 3 3 3 \leftarrow (20) * * 2 4 3 3 3
 (19) 6 * * * 1 \leftarrow (20) 8 4 1 1 * * 1
 (20) 3 4 4 1 1 * * 1 \leftarrow (26) * * * 1
 (23) 2 * * * 1 \leftarrow (24) 4 4 1 1 * * 1

(50, 16)

(1) 1 1 * 2 4 7 3 3 6 6 5 3 \leftarrow (2) 2 * 2 4 7 3 3 6 6 5 3
 (3) 21 1 * * * 1 \leftarrow (4) 22 * * * 1
 (5) 63 5 7 3 3
 (17) 1 1 * * 2 4 3 3 3 \leftarrow (18) 2 * * 2 4 3 3 3
 (18) 2 3 4 4 1 1 * * 1 \leftarrow (25) 1 * * * 1
 (19) 5 1 * * * 1 \leftarrow (20) 6 * * * 1
 (23) 1 1 * * * 1 \leftarrow (24) 2 * * * 1

(50, 17)

(3) 5 64 5 3 3 3
 (3) 20 1 1 * * * 1 \leftarrow (4) 21 1 * * * 1
 (5) 3 64 5 3 3 3 \leftarrow (6) 63 5 7 3 3
 (11) 12 1 1 * * * 1 \leftarrow (12) 13 1 * * * 1
 (17) 1 2 3 4 4 1 1 * * 1 \leftarrow (24) 1 1 * * * 1
 (19) 4 1 1 * * * 1 \leftarrow (20) 5 1 * * * 1

(50, 18)

(2)3 3 6 6 5 3
 (3) 3 64 5 3 3 3 \leftarrow (4) 5 64 5 3 3 3
 (3) 16 4 1 1 * * * 1 \leftarrow (4) 20 1 1 * * * 1
 (5)3 5 7 3 3 \leftarrow (6) 3 64 5 3 3 3
 (9) 3 6 2 3 4 4 1 1 * * 1 \leftarrow (10) 8 1 1 * * 2 4 3 3 3
 (11) * * * 2 4 3 3 3 \leftarrow (13) 6 2 3 4 4 1 1 * * 1
 (11) 8 4 1 1 * * * 1 \leftarrow (12) 12 1 1 * * * 1
 (15) 4 4 1 1 * * * 1 \leftarrow (20) 4 1 1 * * * 1

(50, 19)

- (3)3 5 7 3 3 ← (4) 3 64 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 1 3 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 3 6 6 5 3 ← (8) 2 4 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 3 6 6 5 3 ← (6) ...4 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 3 6 6 5 3 ← (4) ...4 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 1 3 1 * * * 1 ← (6) 10 ...4 5 3 3 3
 (7) 6 ...4 5 3 3 3 ← (13) 1 3 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 1 3 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, 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
 (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, 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, 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, 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, 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) 63 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, 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, 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 63 3 6 6 5 3 ← (10) 6 ..4 3 3 3 6 6 5 3
 (13) 5 64 5 3 3 3 ← (19) 64 5 3 3 3
 (15) 3 64 5 3 3 3 ← (16) 63 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)45536653
 (5) 24411***1 ← (8) 411247336653
 (9)43336653 ← (10) 36.....336653
 (12)336653 ← (17) 6.....45333
 (13) 36.....45333 ← (14) 56.....45333
 (15)35733 ← (16) 36.....45333
 (19) 36234411*1 ← (20) 811*24333
 (21) 8411***1 ← (22) 1211***1
 (25) 4411***1 ← (28) 1234411*1
 (27) ***1 ← (30) 411***1

(52, 15)

(3) 2*247336653 ← (6) *247336653
 (5) 22***1 ← (6) 24411***1
 (10)336653 ← (16)35733
 (13)35733 ← (14) 36.....45333
 (19) 2**24333 ← (20) 36234411*1
 (21) 6***1 ← (22) 8411***1
 (25) 2***1 ← (26) 4411***1
 (26) 1***1 ← (28) ***1

(52, 16)

(1) 6.....43336653 ← (5) 1*247336653
 (3) 11*247336653 ← (4) 2*247336653
 (5) 211***1 ← (6) 22***1
 (7) 6.....35733 ← (14)35733
 (19) 11**24333 ← (20) 2**24333
 (21) 51***1 ← (22) 6***1
 (25) 11***1 ← (26) 2***1

(52, 17)

(1) 36.....336653 ← (2) 6.....43336653
 (5) 56.....45333 ← (11) 6.....45333
 (5) 2011***1 ← (6) 211***1
 (7) 36.....45333 ← (8) 6.....35733
 (13) 1211***1 ← (14) 131***1
 (19) 1234411***1 ← (21) 234411***1
 (21) 411***1 ← (22) 51***1

(52, 18)

(1)43336653 ← (2) 36.....336653
 (4)336653 ← (9) 6.....45333
 (5) 36.....45333 ← (6) 56.....45333
 (5) 16411***1 ← (6) 2011***1
 (7)35733 ← (8) 36.....45333
 (11) 36234411*1 ← (12) 811*24333
 (13) 8411***1 ← (14) 1211***1
 (17) 4411***1 ← (20) 1234411***1
 (19) ***1 ← (22) 411***1

(52, 19)

(2)336653 ← (8)35733
 (5)35733 ← (6) 36.....45333
 (5) 14***1 ← (6) 16411***1
 (11) 2***24333 ← (12) 36234411*1
 (13) 6***1 ← (14) 8411***1
 (17) 2***1 ← (18) 4411***1
 (18) 1***1 ← (20) ***1

(52, 20)

(5) 131***1 ← (6) 14***1
 (6)45333
 (11) 11***24333 ← (12) 2***24333
 (13) 51***1 ← (14) 6***1
 (17) 11***1 ← (18) 2***1

(52, 21)

(3) 811***24333
 (5) 1211***1 ← (6) 131***1
 (11) 1234411***1 ← (13) 234411***1
 (13) 411***1 ← (14) 51***1

(52, 22)

(2)45333
 (3) 36234411***1 ← (4) 811***24333
 (5) 8411***1 ← (6) 1211***1
 (9) 4411***1 ← (12) 1234411***1
 (11) ***1 ← (14) 411***1

(53, 3)

(15) 2315 ← (23) 31
 (23) 1515 ← (39) 15
 (47) 33 ← (51) 3
 (51) 11 ← (53) 1

(53, 4)

(14) 21117 ← (22) 293
 (15) 22133 ← (16) 2315
 (19) 2653 ← (20) 277
 (22) 13117 ← (38) 133
 (23) 14133 ← (24) 1515
 (35) 1053 ← (36) 117
 (39) 653 ← (40) 77
 (44) 333 ← (48) 33
 (50) 111 ← (52) 11

(53, 5)

(3) 9111515
 (5) 7111515
 (8) 1413117 ← (21) 2733
 (13) 111577 ← (37) 1133
 (13) 19777 ← (17) 2377
 (15) 17777 ← (33) 777
 (15) 211133 ← (16) 22133
 (19) 25333 ← (20) 2653
 (23) 131133 ← (24) 14133
 (31) 3577 ← (35) 577
 (35) 9333 ← (36) 1053
 (39) 6233 ← (46) 233

(53, 6)

(1) 47111515
 (5) 1017777 ← (20) 25333
 (8) 915777 ← (36) 9333
 (9) 1114577 ← (10) 1313117
 (12) 911777 ← (22) 13577
 (13) 714577 ← (14) 111577
 (14) 713577 ← (16) 17777
 (15) 209333 ← (16) 211133
 (22) 93577 ← (32) 3577
 (23) 129333 ← (24) 131133
 (33) 47333 ← (34) 6653
 (35) 45333 ← (36) 5733
 (38) 24333 ← (45) 1233
 (39) 51233 ← (40) 6233

(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, 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) 63 3 6 6 5 3
- (23)4 5 3 3 3 ← (24) 44 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 63 5 7 3 3
- (13) 3 63 5 7 3 3 ← (14) 63 3 6 6 5 3
- (19) 44 5 3 3 3 ← (20) 64 5 3 3 3
- (23) 6 2 3 4 4 1 1 * 1 ← (30) 2 3 4 4 1 1 * 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, 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 64 5 3 3 3 ← (12) 5 63 5 7 3 3
- (13)3 3 6 6 5 3 ← (14) 3 63 5 7 3 3
- (17) 44 5 3 3 3 ← (18) 64 5 3 3 3
- (19)4 5 3 3 3 ← (20) 44 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) 14 5 3 3 3
- (11)3 3 6 6 5 3 ← (12) 3 5 64 5 3 3 3
- (17)4 5 3 3 3 ← (18) 44 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, 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, 16)

- (4) 1 1 * 2 4 7 3 3 6 6 5 3
- (5) 63 3 6 6 5 3
- (7) 104 5 3 3 3 ← (8) 14 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, 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, 17)

- (3) 5 63 5 7 3 3
- (5) 3 63 5 7 3 3 ← (6) 63 3 6 6 5 3
- (7) 7 13 1 * * * 1 ← (8) 104 5 3 3 3
- (11) 44 5 3 3 3 ← (12) 64 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 64 5 3 3 3 ← (4) 5 63 5 7 3 3
- (5)3 3 6 6 5 3 ← (6) 3 63 5 7 3 3
- (7) 5 8 1 1 * * 2 4 3 3 3 ← (8) 7 13 1 * * * 1
- (9) 44 5 3 3 3 ← (10) 64 5 3 3 3
- (11)4 5 3 3 3 ← (12) 44 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, 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) 44 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, 19)

- (3)3 3 6 6 5 3 ← (4) 3 5 64 5 3 3 3
- (6)3 5 7 3 3
- (7) 44 5 3 3 3 ← (8) 5 8 1 1 * * 2 4 3 3 3
- (9)4 5 3 3 3 ← (10) 44 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) 645333
 (7)45333 ← (8) 445333
 (12) 111***24333 ← (16) 344111***1
 (18) 111***1 ← (20) 1***1

(53, 21)

(1) 645333
 (3) 445333 ← (4) 645333
 (7) 6234411***1 ← (14) 234411***1

(54, 2)

(47) 7 ← (55)

(54, 3)

(23) 301 ← (24) 31
 (39) 141 ← (40) 15
 (46) 53 ← (54) 1
 (47) 61 ← (48) 7
 (51) 21 ← (52) 3

(54, 4)

(9) 151515 ← (21) 277
 (13) 111515 ← (37) 117
 (15) 21117 ← (17) 2315
 (23) 13117 ← (25) 1515
 (23) 2911 ← (24) 301
 (39) 1311 ← (40) 141
 (40) 653 ← (53) 11
 (45) 333 ← (49) 33
 (47) 511 ← (48) 61
 (51) 111 ← (52) 21

(54, 5)

(4) 9111515
 (6) 7111515 ← (36) 577
 (9) 1413117 ← (10) 151515
 (13) 1013117 ← (14) 111515
 (14) 19777 ← (16) 21117
 (15) 20577 ← (18) 2377
 (21) 14577 ← (24) 13117
 (23) 28111 ← (24) 29111
 (31) 4577 ← (34) 777
 (37) 8333 ← (52) 111
 (39) 12111 ← (40) 13111
 (47) 4111 ← (48) 511

(54, 6)

(1) 57111515
 (2) 47111515
 (3) 71313117
 (5) 9111577 ← (10) 1413117
 (7) 7111577 ← (11) 1313117
 (9) 915777 ← (23) 13577
 (13) 911777 ← (14) 1013117
 (14) 183577 ← (16) 20577
 (15) 713577 ← (17) 17777
 (21) 113577 ← (22) 14577
 (23) 93577 ← (33) 3577
 (23) 244111 ← (24) 28111
 (30) 23577 ← (32) 4577
 (31) 36653 ← (35) 6653
 (36) 45333 ← (48) 4111
 (37) 36233 ← (38) 8333
 (39) 24333 ← (41) 6233
 (39) 84111 ← (40) 12111

(54, 7)

(2) 57111577
 (3) 6915777 ← (4) 71313117
 (4) 5915777 ← (20) 59777
 (5) 8911777 ← (6) 9111577
 (7) 6911777 ← (8) 7111577
 (9) 12113577 ← (10) 1313577
 (14) 559777 ← (16) 713577
 (17) 1323577 ← (18) 144577
 (20) 573577 ← (24) 93577
 (23) 22*1 ← (24) 244111
 (28) 336653 ← (34) 35733
 (31) 235733 ← (32) 36653
 (34) 245333 ← (46) *1
 (37) ..4333 ← (38) 36233
 (38) 124333 ← (40) 24333
 (39) 6*1 ← (40) 84111
 (43) 2*1 ← (44) 44111

(54, 8)

(1) 35915777
 (3) 46911777 ← (4) 6915777
 (6) 8559777 ← (19) 593577
 (7) 9359777 ← (9) 1159777
 (9) 78129333 ← (10) 12113577
 (13) 111245333
 (15) 3593577 ← (17) 8129333
 (17) 71245333 ← (18) 1323577
 (21) 5536653 ← (25) 1245333
 (23) 211*1 ← (24) 22*1
 (25) 6235733 ← (32) 235733
 (31) 131*1 ← (45) 1*1
 (37) 1124333 ← (38) ..4333
 (39) 51*1 ← (40) 6*1
 (43) 11*1 ← (44) 2*1

(54, 9)

(2) 48559777 ← (16) 3593577
 (3) 3510113577 ← (8) 9359777
 (7) 45359777 ← (9) 8359777
 (7) 83593577 ← (10) 78129333
 (12) 95536653
 (17) 56336653 ← (18) 71245333
 (19) 36336653 ← (20) 6523577
 (23) 56245333 ← (29) 6245333
 (23) 2011*1 ← (24) 211*1
 (25) 36245333 ← (26) 6235733
 (29) 81124333 ← (44) 111*1
 (31) 1211*1 ← (32) 131*1
 (39) 4111*1 ← (40) 511*1

(54, 10)

(1) 23510113577
 (3) 593573577 ← (9) 93573577
 (6) 235359777 ← (8) 45359777
 (6) 453593577 ← (8) 83593577
 (15) 247336653 ← (18) 47336653
 (16) 235536653
 (17) 356235733 ← (18) 56336653
 (19) 243336653 ← (20) 36336653
 (22) ...336653 ← (27) 6..45333
 (23) 36..45333 ← (24) 56245333
 (23) 16411*1 ← (24) 2011*1
 (25) ...35733 ← (26) 36245333
 (28) ...45333 ← (40) 4111*1
 (29) 362344111 ← (30) 81124333
 (31) *24333 ← (33) 62344111
 (31) 84111*1 ← (32) 12111*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 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) 63 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 63 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 63 3 6 6 5 3 ← (12) 6 ..4 3 3 3 6 6 5 3
 - (15) 5 64 5 3 3 3 ← (21) 64 5 3 3 3
 - (17) 3 64 5 3 3 3 ← (18) 63 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 63 5 7 3 3 ← (2) 13 63 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 63 3 6 6 5 3
 - (14)3 3 6 6 5 3 ← (19) 64 5 3 3 3
 - (15) 3 64 5 3 3 3 ← (16) 5 64 5 3 3 3
 - (17)3 5 7 3 3 ← (18) 3 64 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) 104 3 3 3 6 6 5 3 ← (2) 11 5 63 5 7 3 3
 - (2)4 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 64 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 14 5 3 3 3 ← (2) 104 3 3 3 6 6 5 3
 - (3) 64 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) 63 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 63 3 6 6 5 3 ← (2) 7 14 5 3 3 3
 - (3) 3 63 3 6 6 5 3 ← (4) 64 3 3 3 6 6 5 3
 - (7) 5 64 5 3 3 3 ← (13) 64 5 3 3 3
 - (7) 20 1 1 * * * 1 ← (8) 21 1 * * * 1
 - (9) 3 64 5 3 3 3 ← (10) 63 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 63 5 7 3 3 ← (2) 5 63 3 6 6 5 3
 - (3)4 3 3 3 6 6 5 3 ← (4) 3 63 3 6 6 5 3
 - (6)3 3 6 6 5 3 ← (11) 64 5 3 3 3
 - (7) 3 64 5 3 3 3 ← (8) 5 64 5 3 3 3
 - (7) 16 4 1 1 * * * 1 ← (8) 20 1 1 * * * 1
 - (9)3 5 7 3 3 ← (10) 3 64 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 63 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 64 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) 63 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 \leftarrow (19) 23 7 7
 (7) 7 11 15 15 \leftarrow (35) 7 7 7
 (15) 11 15 7 7 \leftarrow (25) 13 11 7
 (15) 19 7 7 7 \leftarrow (17) 21 11 7
 (17) 21 11 3 3 \leftarrow (18) 22 13 3
 (21) 25 3 3 3 \leftarrow (22) 26 5 3
 (25) 13 11 3 3 \leftarrow (26) 14 13 3
 (37) 5 7 3 3 \leftarrow (42) 6 5 3
 (37) 9 3 3 3 \leftarrow (38) 10 5 3
 (46) 1 2 3 3 \leftarrow (48) 2 3 3

(55, 9)

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

(55, 6)

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

(55, 10)

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

(55, 7)

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

(55, 11)

(1) 1 2 3 5 10 11 3 5 7 7 \leftarrow (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 \leftarrow (14) 4 5 5 5 3 6 6 5 3
 (15) 1 2 4 7 3 3 6 6 5 3 \leftarrow (17) 2 4 7 3 3 6 6 5 3
 (18) ..4 3 3 3 6 6 5 3 \leftarrow (24) ...3 3 6 6 5 3
 (21) ...3 3 6 6 5 3 \leftarrow (22) 3 5 6 2 4 5 3 3 3
 (25) 4 ...4 5 3 3 3 \leftarrow (26) 5 8 1 1 2 4 3 3 3
 (27)4 5 3 3 3 \leftarrow (28) 4 ...4 5 3 3 3
 (31) 1 * 2 4 3 3 3 \leftarrow (33) * 2 4 3 3 3
 (33) 3 4 4 1 1 * 1 \leftarrow (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 \leftarrow (2) 16 2 3 5 5 3 6 6 5 3
 (3) 4 3 5 5 6 5 2 3 5 7 7 \leftarrow (6) 5 5 5 6 5 2 3 5 7 7
 (9) ..4 5 5 5 3 6 6 5 3 \leftarrow (12) 2 4 5 5 5 3 6 6 5 3
 (14) 1 1 2 4 7 3 3 6 6 5 3 \leftarrow (16) 1 2 4 7 3 3 6 6 5 3
 (15) 6 ...3 3 6 6 5 3 \leftarrow (22) ...3 3 6 6 5 3
 (25)4 5 3 3 3 \leftarrow (26) 44 5 3 3 3
 (30) 1 1 * 2 4 3 3 3 \leftarrow (32) 1 * 2 4 3 3 3
 (31) 2 3 4 4 1 1 * 1 \leftarrow (34) 3 4 4 1 1 * 1

(55, 8)

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

(55, 13)

(1) 2 4 3 5 5 6 5 2 3 5 7 7 \leftarrow (4) 4 3 5 5 6 5 2 3 5 7 7
 (1) 11 6 ..4 3 3 3 6 6 5 3 \leftarrow (2) 13 ..4 7 3 3 6 6 5 3
 (7) ...4 5 5 5 3 6 6 5 3 \leftarrow (10) ..4 5 5 5 3 6 6 5 3
 (13) 5 63 5 7 3 3 \leftarrow (19) 63 5 7 3 3
 (15) 3 63 5 7 3 3 \leftarrow (16) 63 3 6 6 5 3
 (21) 44 5 3 3 3 \leftarrow (22) 64 5 3 3 3
 (30) 1 2 3 4 4 1 1 * 1 \leftarrow (32) 2 3 4 4 1 1 * 1

(55, 14)

(1) 9 4 1 1 2 4 7 3 3 6 6 5 3 \leftarrow (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 \leftarrow (8) ...4 5 5 5 3 6 6 5 3
 (12)4 3 3 3 6 6 5 3 \leftarrow (17) 5 64 5 3 3 3
 (13) 3 5 64 5 3 3 3 \leftarrow (14) 5 63 5 7 3 3
 (15)3 3 6 6 5 3 \leftarrow (16) 3 63 5 7 3 3
 (19) 44 5 3 3 3 \leftarrow (20) 64 5 3 3 3
 (21)4 5 3 3 3 \leftarrow (22) 44 5 3 3 3
 (25) 5 1 2 3 4 4 1 1 * 1 \leftarrow (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 3 6 6 5 3 ← (6)4 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) 14 5 3 3 3 ← (16)3 3 6 6 5 3
 (13)3 3 6 6 5 3 ← (14) 3 5 64 5 3 3 3
 (19)4 5 3 3 3 ← (20) 44 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

(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

(55, 16)
 (1)4 5 5 3 6 6 5 3 ← (4)4 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) 63 3 6 6 5 3 ← (14)3 3 6 6 5 3
 (9) 104 5 3 3 3 ← (10) 14 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

(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

(55, 17)
 (1) 3 64 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 63 5 7 3 3 ← (11) 63 5 7 3 3
 (7) 3 63 5 7 3 3 ← (8) 63 3 6 6 5 3
 (9) 7 13 1 * * * 1 ← (10) 104 5 3 3 3
 (13) 44 5 3 3 3 ← (14) 64 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 64 3 3 3 6 6 5 3
 (4)4 3 3 3 6 6 5 3 ← (9) 5 64 5 3 3 3
 (5) 3 5 64 5 3 3 3 ← (6) 5 63 5 7 3 3
 (7)3 3 6 6 5 3 ← (8) 3 63 5 7 3 3
 (9) 5 8 1 1 * * 2 4 3 3 3 ← (10) 7 13 1 * * * 1
 (11) 44 5 3 3 3 ← (12) 64 5 3 3 3
 (13)4 5 3 3 3 ← (14) 44 5 3 3 3
 (17) 5 1 2 3 4 4 1 1 * * 1 ← (18) 6 2 3 4 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

(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 64 5 3 3 3
 (9) 44 5 3 3 3 ← (10) 5 8 1 1 * * 2 4 3 3 3
 (11)4 5 3 3 3 ← (12) 44 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, 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) 2 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, 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 63 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 63 3 6 6 5 3
 (17) 3 64 5 3 3 3 ← (18) 5 64 5 3 3 3
 (19)3 5 7 3 3 ← (20) 3 64 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, 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 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, 15)

(1)4 3 5 6 5 2 3 5 7 7 ← (4) ..4 3 5 6 5 2 3 5 7 7
 (3) 104 3 3 3 6 6 5 3 ← (4) 11 5 63 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 64 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, 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, 16)

(2)4 5 5 5 3 6 6 5 3
 (3) 7 14 5 3 3 3 ← (4) 104 3 3 3 6 6 5 3
 (5) 64 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, 12)

(1) 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, 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 63 3 6 6 5 3 ← (4) 7 14 5 3 3 3
 (5) 3 63 3 6 6 5 3 ← (6) 64 3 3 3 6 6 5 3
 (9) 20 1 1 * * * 1 ← (10) 21 1 * * * 1
 (11) 3 64 5 3 3 3 ← (12) 63 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, 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 63 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 63 3 6 6 5 3 ← (14) 6 ..4 3 3 3 6 6 5 3
 (19) 3 64 5 3 3 3 ← (20) 63 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, 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 63 5 7 3 3 ← (4) 5 63 3 6 6 5 3
 (5)4 3 3 3 6 6 5 3 ← (6) 3 63 3 6 6 5 3
 (9) 3 64 5 3 3 3 ← (10) 5 64 5 3 3 3
 (9) 16 4 1 1 * * * 1 ← (10) 20 1 1 * * * 1
 (11)3 5 7 3 3 ← (12) 3 64 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 3 ← (32)4 5 3 3 3
- (27) 44 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 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) 63 3 6 6 5 3 ← (24)3 3 6 6 5 3
- (23) 64 5 3 3 3 ← (30)4 5 3 3 3
- (27)4 5 3 3 3 ← (28) 44 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 63 5 7 3 3 ← (21) 63 5 7 3 3
- (17) 3 63 5 7 3 3 ← (18) 63 3 6 6 5 3
- (21) 64 5 3 3 3 ← (28)4 5 3 3 3
- (23) 44 5 3 3 3 ← (24) 64 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 64 5 3 3 3
 (15) 3 5 64 5 3 3 3 ← (16) 5 63 5 7 3 3
 (17)3 3 6 6 5 3 ← (18) 3 63 5 7 3 3
 (20)3 5 7 3 3 ← (25) 8 1 1 * 2 4 3 3 3
 (21) 44 5 3 3 3 ← (22) 64 5 3 3 3
 (23)4 5 3 3 3 ← (24) 44 5 3 3 3
 (27) 5 1 2 3 4 4 1 1 * 1 ← (28) 6 2 3 4 4 1 1 * 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

(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 64 5 3 3 3
 (18)3 5 7 3 3 ← (24)4 5 3 3 3
 (21)4 5 3 3 3 ← (22) 44 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

(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

(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) 63 3 6 6 5 3 ← (16)3 3 6 6 5 3
 (11) 104 5 3 3 3 ← (12) 1.....4 5 3 3 3
 (15) 64 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 64 3 3 3 6 6 5 3 ← (4) 5 2 * 2 4 7 3 3 6 6 5 3
 (7) 5 63 5 7 3 3 ← (13) 63 5 7 3 3
 (9) 3 63 5 7 3 3 ← (10) 63 3 6 6 5 3
 (11) 7 13 1 * * * 1 ← (12) 104 5 3 3 3
 (13) 64 5 3 3 3 ← (19) 13 1 * * * 1
 (15) 44 5 3 3 3 ← (16) 64 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, 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, 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, 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 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 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, 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
 (5) ... 4 3 5 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, 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, 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, 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 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, 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 \leftarrow (19) 11 15 15
 (15) 13 13 11 7 \leftarrow (29) 13 11 7
 (19) 19 7 7 7 \leftarrow (21) 21 11 7
 (21) 21 11 3 3 \leftarrow (22) 22 13 3
 (25) 25 3 3 3 \leftarrow (26) 26 5 3
 (29) 13 11 3 3 \leftarrow (30) 14 13 3
 (37) 3 5 7 7 \leftarrow (41) 5 7 7
 (39) 6 6 5 3 \leftarrow (46) 6 5 3
 (41) 9 3 3 3 \leftarrow (42) 10 5 3
 (50) 1 2 3 3 \leftarrow (52) 2 3 3

(59, 9)

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

(59, 6)

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

(59, 10)

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

(59, 7)

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

(59, 11)

(2) ...4 6 9 11 7 7 7 \leftarrow (4) 4 4 8 5 5 9 7 7 7
 (3) 5 5 9 3 5 7 3 5 7 7 \leftarrow (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 \leftarrow (6) 12 9 5 5 3 6 6 5 3
 (5) 16 2 3 5 5 3 6 6 5 3 \leftarrow (12) 4 5 3 5 9 3 5 7 7
 (15) 2 4 5 5 5 3 6 6 5 3 \leftarrow (18) 4 5 5 5 3 6 6 5 3
 (19) 1 2 4 7 3 3 6 6 5 3 \leftarrow (21) 2 4 7 3 3 6 6 5 3
 (25) ...3 3 6 6 5 3 \leftarrow (26) 3 5 6 2 4 5 3 3 3
 (28)3 5 7 3 3 \leftarrow (34) ...4 5 3 3 3
 (29) 4 ...4 5 3 3 3 \leftarrow (30) 5 8 1 1 2 4 3 3 3
 (31)4 5 3 3 3 \leftarrow (32) 4 ...4 5 3 3 3
 (35) 1 * 2 4 3 3 3 \leftarrow (37) * 2 4 3 3 3
 (37) 3 4 4 1 1 * 1 \leftarrow (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 \leftarrow (4) 8 4 5 3 5 9 3 5 7 7
 (5) 13 ..4 7 3 3 6 6 5 3 \leftarrow (6) 16 2 3 5 5 3 6 6 5 3
 (7) 4 3 5 5 6 5 2 3 5 7 7 \leftarrow (10) 5 5 5 6 5 2 3 5 7 7
 (13) ..4 5 5 5 3 6 6 5 3 \leftarrow (16) 2 4 5 5 5 3 6 6 5 3
 (18) 1 1 2 4 7 3 3 6 6 5 3 \leftarrow (20) 1 2 4 7 3 3 6 6 5 3
 (25) 64 5 3 3 3 \leftarrow (32)4 5 3 3 3
 (29)4 5 3 3 3 \leftarrow (30) 44 5 3 3 3
 (34) 1 1 * 2 4 3 3 3 \leftarrow (36) 1 * 2 4 3 3 3
 (35) 2 3 4 4 1 1 * 1 \leftarrow (38) 3 4 4 1 1 * 1

(59, 8)

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

(59, 13)

(2) 4 3 5 5 6 5 2 3 5 7 7
 (3) ..4 2 3 5 3 5 9 7 7 7 \leftarrow (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 \leftarrow (8) 4 3 5 5 6 5 2 3 5 7 7
 (5) 11 6 ..4 3 3 3 6 6 5 3 \leftarrow (6) 13 ..4 7 3 3 6 6 5 3
 (11) ...4 5 5 5 3 6 6 5 3 \leftarrow (14) ..4 5 5 5 3 6 6 5 3
 (19) 3 63 5 7 3 3 \leftarrow (20) 6 ...3 3 6 6 5 3
 (23) 64 5 3 3 3 \leftarrow (30)4 5 3 3 3
 (25) 44 5 3 3 3 \leftarrow (26) 64 5 3 3 3
 (34) 1 2 3 4 4 1 1 * 1 \leftarrow (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 64 5 3 3 3 ← (18) 5 63 5 7 3 3
 (19)3 3 6 6 5 3 ← (20) 3 63 5 7 3 3
 (22)3 5 7 3 3 ← (27) 8 1 1 * 2 4 3 3 3
 (23) 44 5 3 3 3 ← (24) 64 5 3 3 3
 (25)4 5 3 3 3 ← (26) 44 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 64 5 3 3 3
 (20)3 5 7 3 3 ← (26)4 5 3 3 3
 (23)4 5 3 3 3 ← (24) 44 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 \leftarrow (4) 6 4 6 9 11 7 7 7
 (3) 11 9 3 5 7 3 5 7 7 \leftarrow (4) 18 3 5 9 3 5 7 7
 (7) 2 3 5 10 11 3 5 7 7 \leftarrow (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 \leftarrow (21) 5 6 5 2 3 5 7 7
 (22) 2 3 5 5 3 6 6 5 3 \leftarrow (24) 4 7 3 3 6 6 5 3
 (23) 3 5 6 2 3 5 7 3 3 \leftarrow (24) 5 6 3 3 6 6 5 3
 (25) 2 4 3 3 3 6 6 5 3 \leftarrow (26) 3 6 3 3 6 6 5 3
 (28) ...3 3 6 6 5 3 \leftarrow (33) 6 ..4 5 3 3 3
 (29) 3 6 ..4 5 3 3 3 \leftarrow (30) 5 6 2 4 5 3 3 3
 (29) 16 4 1 1 * 1 \leftarrow (30) 20 1 1 * 1
 (31)3 5 7 3 3 \leftarrow (32) 3 6 2 4 5 3 3 3
 (35) 3 6 2 3 4 4 1 1 1 \leftarrow (36) 8 1 1 2 4 3 3 3
 (37) 8 4 1 1 * 1 \leftarrow (38) 12 1 1 * 1
 (41) 4 4 1 1 * 1 \leftarrow (44) 1 2 3 4 4 1 1 1
 (43) * * 1 \leftarrow (46) 4 1 1 * 1

(60, 14)

(1) 2 4 3 5 5 6 5 2 3 5 7 7 \leftarrow (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 \leftarrow (10) ..4 3 5 6 5 2 3 5 7 7
 (7) 11 5 63 5 7 3 3 \leftarrow (8) 13 63 3 6 6 5 3
 (13) 24 4 1 1 * * 1 \leftarrow (16) 4 1 1 2 4 7 3 3 6 6 5 3
 (17)4 3 3 3 6 6 5 3 \leftarrow (18) 3 63 3 6 6 5 3
 (20)3 3 6 6 5 3 \leftarrow (25) 64 5 3 3 3
 (21) 3 64 5 3 3 3 \leftarrow (22) 5 64 5 3 3 3
 (23)3 5 7 3 3 \leftarrow (24) 3 64 5 3 3 3
 (27) 3 6 2 3 4 4 1 1 * 1 \leftarrow (28) 8 1 1 * 2 4 3 3 3
 (29) 8 4 1 1 * * 1 \leftarrow (30) 12 1 1 * * 1
 (33) 4 4 1 1 * * 1 \leftarrow (36) 1 2 3 4 4 1 1 * 1
 (35) * * * 1 \leftarrow (38) 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 \leftarrow (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 \leftarrow (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 \leftarrow (16) 5 5 6 5 2 3 5 7 7
 (19) ..4 7 3 3 6 6 5 3 \leftarrow (22) 2 4 7 3 3 6 6 5 3
 (23) ..4 3 3 3 6 6 5 3 \leftarrow (24) 3 5 6 2 3 5 7 3 3
 (26)3 3 6 6 5 3 \leftarrow (32)3 5 7 3 3
 (29)3 5 7 3 3 \leftarrow (30) 3 6 ..4 5 3 3 3
 (29) 14 * * 1 \leftarrow (30) 16 4 1 1 * 1
 (35) 2 * 2 4 3 3 3 \leftarrow (36) 3 6 2 3 4 4 1 1 1
 (37) 6 * * 1 \leftarrow (38) 8 4 1 1 * 1
 (41) 2 * * 1 \leftarrow (42) 4 4 1 1 * 1
 (42) 1 * * 1 \leftarrow (44) * * 1

(61, 3)

(31) 15 15 \leftarrow (47) 15
 (47) 7 7 \leftarrow (55) 7
 (55) 3 3 \leftarrow (59) 3
 (59) 1 1 \leftarrow (61) 1

(61, 4)

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

(60, 12)

(1) 4 7 4 5 3 5 9 3 5 7 7 \leftarrow (2) 6 2 3 5 10 11 3 5 7 7
 (3) 4 5 4 5 3 5 9 3 5 7 7 \leftarrow (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 \leftarrow (8) 18 2 4 3 3 3 6 6 5 3
 (11) 2 4 3 5 6 5 2 3 5 7 7 \leftarrow (14) 4 3 5 6 5 2 3 5 7 7
 (17) 6 ..4 3 3 3 6 6 5 3 \leftarrow (21) 1 2 4 7 3 3 6 6 5 3
 (19) 1 1 2 4 7 3 3 6 6 5 3 \leftarrow (20) ..4 7 3 3 6 6 5 3
 (23) 63 5 7 3 3 \leftarrow (30)3 5 7 3 3
 (29) 13 1 * * 1 \leftarrow (30) 14 * * 1
 (35) 1 1 * 2 4 3 3 3 \leftarrow (36) 2 * 2 4 3 3 3
 (37) 5 1 * * 1 \leftarrow (38) 6 * * 1
 (41) 1 1 * * 1 \leftarrow (42) 2 * * 1

(61, 5)

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

(60, 13)

(1) 2 4 5 4 5 3 5 9 3 5 7 7 \leftarrow (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 \leftarrow (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 63 3 6 6 5 3 \leftarrow (8) 16 ..4 3 3 3 6 6 5 3
 (9) ..4 3 5 6 5 2 3 5 7 7 \leftarrow (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 \leftarrow (20) 1 1 2 4 7 3 3 6 6 5 3
 (17) 3 63 3 6 6 5 3 \leftarrow (18) 6 ..4 3 3 3 6 6 5 3
 (21) 5 64 5 3 3 3 \leftarrow (27) 64 5 3 3 3
 (23) 3 64 5 3 3 3 \leftarrow (24) 63 5 7 3 3
 (29) 12 1 1 * * 1 \leftarrow (30) 13 1 * * 1
 (35) 1 2 3 4 4 1 1 * 1 \leftarrow (37) 2 3 4 4 1 1 * 1
 (37) 4 1 1 * * 1 \leftarrow (38) 5 1 * * 1

(61, 6)

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

- (1) 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 63 5 7 3 3 ← (32)4 5 3 3 3
- (21) 3 63 5 7 3 3 ← (22) 6 ...3 3 6 6 5 3
- (27) 44 5 3 3 3 ← (28) 64 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

(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

(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 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) 63 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

(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

(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) 44 5 3 3 3 ← (34) 5 8 1 1 2 4 3 3 3
 (35)4 5 3 3 3 ← (36) 44 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, 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, 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, 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

(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

(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

(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

(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, 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 \leftarrow (4) 12 9 11 15 15
 (2) 11 4 7 11 15 15 \leftarrow (4) 14 7 11 15 15
 (3) 9 5 7 11 15 15
 (3) 24 20 9 3 3 3 \leftarrow (4) 28 25 3 3 3
 (7) 28 12 9 3 3 3
 (11) 2 4 7 11 15 15 \leftarrow (14) 4 7 11 15 15
 (13) 5 7 11 15 7 7 \leftarrow (17) 9 11 15 7 7
 (15) 5 9 15 7 7 7 \leftarrow (21) 9 15 7 7 7
 (17) 9 7 13 5 7 7 \leftarrow (18) 10 17 7 7 7
 (19) 11 5 9 7 7 7 \leftarrow (21) 13 13 5 7 7
 (21) 7 14 4 5 7 7 \leftarrow (22) 11 14 5 7 7
 (23) 12 12 9 3 3 3 \leftarrow (28) 20 9 3 3 3
 (25) 5 5 9 7 7 7 \leftarrow (26) 7 14 5 7 7
 (27) 3 5 9 7 7 7 \leftarrow (29) 14 4 5 7 7
 (27) 8 12 9 3 3 3 \leftarrow (36) 12 9 3 3 3
 (31) 5 7 3 5 7 7 \leftarrow (35) 9 3 5 7 7
 (39) 3 3 6 6 5 3 \leftarrow (43) 3 6 6 5 3
 (42) 2 3 5 7 3 3 \leftarrow (48) 4 5 3 3 3
 (45) 2 4 5 3 3 3 \leftarrow (46) 4 7 3 3 3
 (51) 3 4 4 1 1 1 \leftarrow (52) 5 1 2 3 3
 (55) 1 * 1 \leftarrow (57) * 1

(65, 8)

(1) 10 2 4 7 11 15 15
 (1) 24 5 5 9 7 7 7 \leftarrow (2) 25 7 13 5 7 7
 (2) 13 5 9 15 7 7 7
 (3) 22 17 3 6 6 5 3 \leftarrow (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 \leftarrow (8) 28 12 9 3 3 3
 (10) 1 2 4 7 11 15 15 \leftarrow (12) 2 4 7 11 15 15
 (12) 3 5 9 15 7 7 7 \leftarrow (16) 5 9 15 7 7 7
 (17) 8 5 5 9 7 7 7 \leftarrow (18) 9 7 13 5 7 7
 (18) 9 3 5 9 7 7 7 \leftarrow (20) 11 5 9 7 7 7
 (19) 8 3 5 9 7 7 7 \leftarrow (22) 7 14 4 5 7 7
 (20) 7 8 12 9 3 3 3 \leftarrow (26) 17 3 6 6 5 3
 (23) 10 9 3 6 6 5 3 \leftarrow (24) 12 12 9 3 3 3
 (26) 3 5 9 3 5 7 7 \leftarrow (34) 9 3 6 6 5 3
 (27) 6 9 3 6 6 5 3 \leftarrow (28) 8 12 9 3 3 3
 (28) 3 5 7 3 5 7 7 \leftarrow (32) 5 7 3 5 7 7
 (33) 6 3 3 6 6 5 3 \leftarrow (40) 3 3 6 6 5 3
 (35) 10 2 4 5 3 3 3 \leftarrow (36) 12 4 5 3 3 3
 (39) 6 2 4 5 3 3 3 \leftarrow (46) 2 4 5 3 3 3
 (54) 1 1 * 1 \leftarrow (56) 1 * 1

(65, 9)

(1) 5 10 8 9 11 7 7 7 \leftarrow (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 \leftarrow (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 \leftarrow (4) 22 17 3 6 6 5 3
 (4) 2 4 3 4 7 11 15 15 \leftarrow (9) 27 12 4 5 3 3 3
 (5) 5 1 2 4 7 11 15 15 \leftarrow (6) 6 2 4 7 11 15 15
 (7) 25 5 5 3 6 6 5 3 \leftarrow (8) 26 9 3 6 6 5 3
 (13) 4 8 5 5 9 7 7 7 \leftarrow (18) 8 5 5 9 7 7 7
 (17) 4 6 3 5 9 7 7 7 \leftarrow (18) 5 10 11 3 5 7 7
 (18) 4 5 3 5 9 7 7 7 \leftarrow (20) 8 3 5 9 7 7 7
 (18) 8 3 5 9 3 5 7 7 \leftarrow (25) 11 12 4 5 3 3 3
 (19) 9 3 5 7 3 5 7 7 \leftarrow (33) 5 5 3 6 6 5 3
 (23) 9 5 5 3 6 6 5 3 \leftarrow (24) 10 9 3 6 6 5 3
 (27) 3 6 5 2 3 5 7 7 \leftarrow (28) 6 9 3 6 6 5 3
 (31) 5 6 2 3 5 7 3 3 \leftarrow (37) 6 2 3 5 7 3 3
 (33) 3 6 2 3 5 7 3 3 \leftarrow (34) 6 3 3 6 6 5 3
 (35) 7 13 1 * 1 \leftarrow (36) 10 2 4 5 3 3 3
 (37) 6 ..4 5 3 3 3 \leftarrow (43) 13 1 * 1
 (39) 4 ..4 5 3 3 3 \leftarrow (40) 6 2 4 5 3 3 3

(66, 2)

(3) 63
 (59) 7
 (63) 3 \leftarrow (67)

(66, 3)

(2) 61 3
 (3) 62 1 \leftarrow (4) 63
 (35) 30 1 \leftarrow (36) 31
 (51) 14 1 \leftarrow (52) 15
 (58) 5 3
 (59) 6 1 \leftarrow (60) 7
 (60) 3 3 \leftarrow (66) 1
 (63) 2 1 \leftarrow (64) 3

(66, 4)

(1) 27 23 15
 (1) 59 3 3
 (3) 29 27 7 \leftarrow (5) 31 31
 (3) 61 1 1 \leftarrow (4) 62 1
 (25) 11 15 15
 (27) 21 11 7 \leftarrow (29) 23 15
 (29) 23 7 7 \leftarrow (33) 27 7
 (35) 13 11 7 \leftarrow (37) 15 15
 (35) 29 1 1 \leftarrow (36) 30 1
 (45) 7 7 7 \leftarrow (49) 11 7
 (47) 5 7 7 \leftarrow (53) 7 7
 (51) 13 1 1 \leftarrow (52) 14 1
 (57) 3 3 3
 (58) 2 3 3 \leftarrow (65) 1 1
 (59) 5 1 1 \leftarrow (60) 6 1
 (63) 1 1 1 \leftarrow (64) 2 1

(66, 5)

(1) 26 21 11 7 \leftarrow (2) 27 23 15
 (2) 27 23 7 7 \leftarrow (4) 29 27 7
 (3) 60 1 1 1 \leftarrow (4) 61 1 1
 (21) 14 13 11 7 \leftarrow (22) 15 15 15
 (25) 10 13 11 7 \leftarrow (26) 11 15 15
 (26) 19 7 7 7 \leftarrow (28) 21 11 7
 (27) 20 5 7 7 \leftarrow (30) 23 7 7
 (33) 14 5 7 7 \leftarrow (36) 13 11 7
 (35) 28 1 1 1 \leftarrow (36) 29 1 1
 (43) 4 5 7 7 \leftarrow (46) 7 7 7
 (44) 3 5 7 7 \leftarrow (48) 5 7 7
 (51) 12 1 1 1 \leftarrow (52) 13 1 1
 (57) 1 2 3 3 \leftarrow (64) 1 1 1
 (59) 4 1 1 1 \leftarrow (60) 5 1 1

(66, 6)

(1) 25 19 7 7 7 \leftarrow (2) 26 21 11 7
 (2) 10 9 15 15 15
 (3) 56 4 1 1 1 \leftarrow (4) 60 1 1 1
 (13) 5 7 11 15 15 \leftarrow (17) 9 11 15 15
 (15) 7 13 13 11 7 \leftarrow (22) 14 13 11 7
 (19) 7 11 15 7 7
 (25) 9 11 7 7 7 \leftarrow (26) 10 13 11 7
 (26) 18 3 5 7 7 \leftarrow (28) 20 5 7 7
 (27) 7 13 5 7 7 \leftarrow (29) 17 7 7 7
 (31) 5 9 7 7 7 \leftarrow (35) 13 5 7 7
 (33) 11 3 5 7 7 \leftarrow (34) 14 5 7 7
 (35) 24 4 1 1 1 \leftarrow (36) 28 1 1 1
 (42) 2 3 5 7 7 \leftarrow (44) 4 5 7 7
 (45) 3 5 7 3 3 \leftarrow (49) 5 7 3 3
 (49) 3 6 2 3 3 \leftarrow (50) 8 3 3 3
 (51) 2 4 3 3 3 \leftarrow (53) 6 2 3 3
 (51) 8 4 1 1 1 \leftarrow (52) 12 1 1 1
 (55) 4 4 1 1 1 \leftarrow (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 \leftarrow (5) 61 3
 (5) 61 1 1 \leftarrow (6) 62 1
 (23) 15 15 15 \leftarrow (39) 15 15
 (27) 11 15 15
 (31) 23 7 7 \leftarrow (35) 27 7
 (35) 27 3 3 \leftarrow (37) 29 3
 (37) 29 1 1 \leftarrow (38) 30 1
 (47) 7 7 7 \leftarrow (51) 11 7
 (51) 11 3 3 \leftarrow (53) 13 3
 (53) 13 1 1 \leftarrow (54) 14 1
 (59) 3 3 3 \leftarrow (61) 5 3
 (61) 5 1 1 \leftarrow (62) 6 1
 (65) 1 1 1 \leftarrow (66) 2 1

(68, 5)

(2) 57 3 3 3 \leftarrow (4) 59 3 3
 (3) 26 21 11 7 \leftarrow (4) 27 23 15
 (5) 60 1 1 1 \leftarrow (6) 61 1 1
 (7) 22 21 11 7
 (23) 14 13 11 7 \leftarrow (24) 15 15 15
 (27) 10 13 11 7 \leftarrow (28) 11 15 15
 (28) 19 7 7 7 \leftarrow (32) 23 7 7
 (34) 25 3 3 3 \leftarrow (36) 27 3 3
 (35) 14 5 7 7 \leftarrow (48) 7 7 7
 (37) 28 1 1 1 \leftarrow (38) 29 1 1
 (46) 3 5 7 7 \leftarrow (50) 5 7 7
 (50) 9 3 3 3 \leftarrow (52) 11 3 3
 (53) 12 1 1 1 \leftarrow (54) 13 1 1
 (59) 1 2 3 3 \leftarrow (61) 2 3 3
 (61) 4 1 1 1 \leftarrow (62) 5 1 1

(68, 6)

(1) 19 7 11 15 15
 (1) 23 13 13 11 7
 (3) 25 19 7 7 7 \leftarrow (4) 26 21 11 7
 (4) 10 9 15 15 15
 (5) 56 4 1 1 1 \leftarrow (6) 60 1 1 1
 (6) 12 9 11 15 15 \leftarrow (8) 22 21 11 7
 (6) 14 7 11 15 15
 (15) 5 7 11 15 15 \leftarrow (19) 9 11 15 15
 (21) 7 11 15 7 7
 (23) 9 15 7 7 7 \leftarrow (25) 13 13 11 7
 (23) 13 13 5 7 7 \leftarrow (30) 20 5 7 7
 (27) 9 11 7 7 7 \leftarrow (28) 10 13 11 7
 (29) 7 13 5 7 7 \leftarrow (37) 13 5 7 7
 (31) 14 4 5 7 7 \leftarrow (46) 4 5 7 7
 (35) 11 3 5 7 7 \leftarrow (36) 14 5 7 7
 (37) 24 4 1 1 1 \leftarrow (38) 28 1 1 1
 (45) 3 6 6 5 3 \leftarrow (51) 5 7 3 3
 (47) 3 5 7 3 3 \leftarrow (49) 6 6 5 3
 (51) 3 6 2 3 3 \leftarrow (52) 8 3 3 3
 (53) 8 4 1 1 1 \leftarrow (54) 12 1 1 1
 (57) 4 4 1 1 1 \leftarrow (60) 1 2 3 3
 (59) * 1 \leftarrow (62) 4 1 1 1

(69, 3)

(3) 59 7
 (7) 31 31
 (31) 23 15 \leftarrow (39) 31
 (55) 7 7
 (63) 3 3 \leftarrow (67) 3
 (67) 1 1 \leftarrow (69) 1

(69, 4)

(3) 58 5 3 \leftarrow (4) 59 7
 (6) 29 27 7
 (7) 30 29 3 \leftarrow (8) 31 31
 (30) 21 11 7 \leftarrow (38) 29 3
 (31) 22 13 3 \leftarrow (32) 23 15
 (35) 26 5 3 \leftarrow (36) 27 7
 (38) 13 11 7
 (39) 14 13 3 \leftarrow (40) 15 15
 (51) 10 5 3 \leftarrow (52) 11 7
 (55) 6 5 3 \leftarrow (56) 7 7
 (60) 3 3 3 \leftarrow (64) 3 3
 (66) 1 1 1 \leftarrow (68) 1 1

(69, 5)

(1) 27 11 15 15
 (3) 57 3 3 3 \leftarrow (4) 58 5 3
 (5) 27 23 7 7
 (7) 29 27 3 3 \leftarrow (8) 30 29 3
 (21) 7 11 15 15
 (24) 14 13 11 7 \leftarrow (37) 27 3 3
 (29) 11 15 7 7
 (29) 19 7 7 7 \leftarrow (33) 23 7 7
 (31) 17 7 7 7 \leftarrow (49) 7 7 7
 (31) 21 11 3 3 \leftarrow (32) 22 13 3
 (35) 25 3 3 3 \leftarrow (36) 26 5 3
 (39) 13 11 3 3 \leftarrow (40) 14 13 3
 (47) 3 5 7 7 \leftarrow (51) 5 7 7
 (51) 9 3 3 3 \leftarrow (52) 10 5 3
 (55) 6 2 3 3 \leftarrow (62) 2 3 3

(70, 2)

(7) 63
 (55) 15
 (63) 7 \leftarrow (71)

(70, 3)

(6) 61 3
 (7) 62 1 \leftarrow (8) 63
 (39) 30 1 \leftarrow (40) 31
 (54) 13 3
 (55) 14 1 \leftarrow (56) 15
 (62) 5 3 \leftarrow (70) 1
 (63) 6 1 \leftarrow (64) 7
 (67) 2 1 \leftarrow (68) 3

(70, 4)

(1) 55 7 7
 (5) 27 23 15
 (5) 59 3 3
 (7) 29 27 7 \leftarrow (9) 31 31
 (7) 61 1 1 \leftarrow (8) 62 1
 (25) 15 15 15 \leftarrow (37) 27 7
 (29) 11 15 15
 (31) 21 11 7 \leftarrow (33) 23 15
 (39) 13 11 7 \leftarrow (41) 15 15
 (39) 29 1 1 \leftarrow (40) 30 1
 (53) 11 3 3
 (55) 13 1 1 \leftarrow (56) 14 1
 (56) 6 5 3 \leftarrow (69) 1 1
 (61) 3 3 3 \leftarrow (65) 3 3
 (63) 5 1 1 \leftarrow (64) 6 1
 (67) 1 1 1 \leftarrow (68) 2 1

THE ALGEBRAIC ATIYAH-HIRZEBRUCH SPECTRAL SEQUENCE OF REAL PROJECTIVE SPECTRA ~~73~~

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