WPF SUDOKU/PUZZLE **GRAND PRIX** 2017

ROUND 7A

WPF PUZZLE GP 2017 COMPETITION BOOKLET

Host Country: Bulgaria

Author: Alexander Angelov

Special Notes: No special notes for this round.

A1. Word Search (28 points)

Locate the list of words in the grid. Words always appear along a straight line in one of the eight standard directions.

Two words will not be found in the grid.

Answer: Enter the missing words, in alphabetical order.

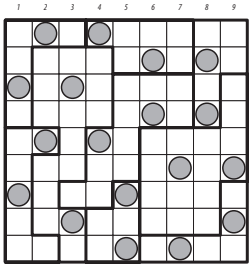
Example Answer: `GRAB,SLAB`

GLAD
GRAB
SAD
SLAB
BAD
DRAB

B L A G O E V G R A D
B U R G A S
D O B R I C H
E L E N A
G A B R O V O
H A S K O V O
L O V E C H
M E L N I K
P L E V E N
P L O V D I V
R U S E
S H U M E N
S L I V E N
S O F I A
V A R N A
V I D I N
Y A M B O L

1	V	A	A	N	A	K	R	A	V	V	G	C	I	R	B	O	D
	O	H	V	K	K	I	D	I	V	I	D	V	O	L	P	H	B
	B	H	A	S	O	M	D	D	V	P	U	R	U	S	F	A	U
	M	V	R	S	E	I	A									S	R
	A	A	N	L	K	P	R									K	G
	Y	P	A	N	L	O	G									V	S
	M	P	L	E	V	N	V									O	H
	S	E	V	O	R	U	E	O	B	A	A	O	A	I	F	O	U
	V	N	I	D	I	V	O	N	N	I	D	O	B	I	C	H	M
	Y	I	G	R	U	B	G	R	A	V	I	O	A	H	S	E	E
	A	A	D	O	U	B	A										
	K	M	M	R	U	S	L	P	L	G	A	B	R	O	V	O	P
	F	K	G	B	E	D	B	S	H	U	M	E	N	Y	A	M	S
	O	A	I	S	O	D	O	C	V	I	D	V	A	R	A	N	L
	S	U	R	N	U	L	I									M	I
	O	H	E	S	L	R	P									O	V
	A	S	U	L	B	E	V									V	E
	A	L	B	O	I	E	M									O	N
	O	I	D	B	L	A	G	O	E	V	G	R	D	P	E	B	V
	O	V	K	P	L	O	V	D	D	I	K	E	S	U	R	A	S
	V	N	S	A	H	P	L	E	V	E	N	A	R	U	R	G	L

A2. Star Battle (45 points)



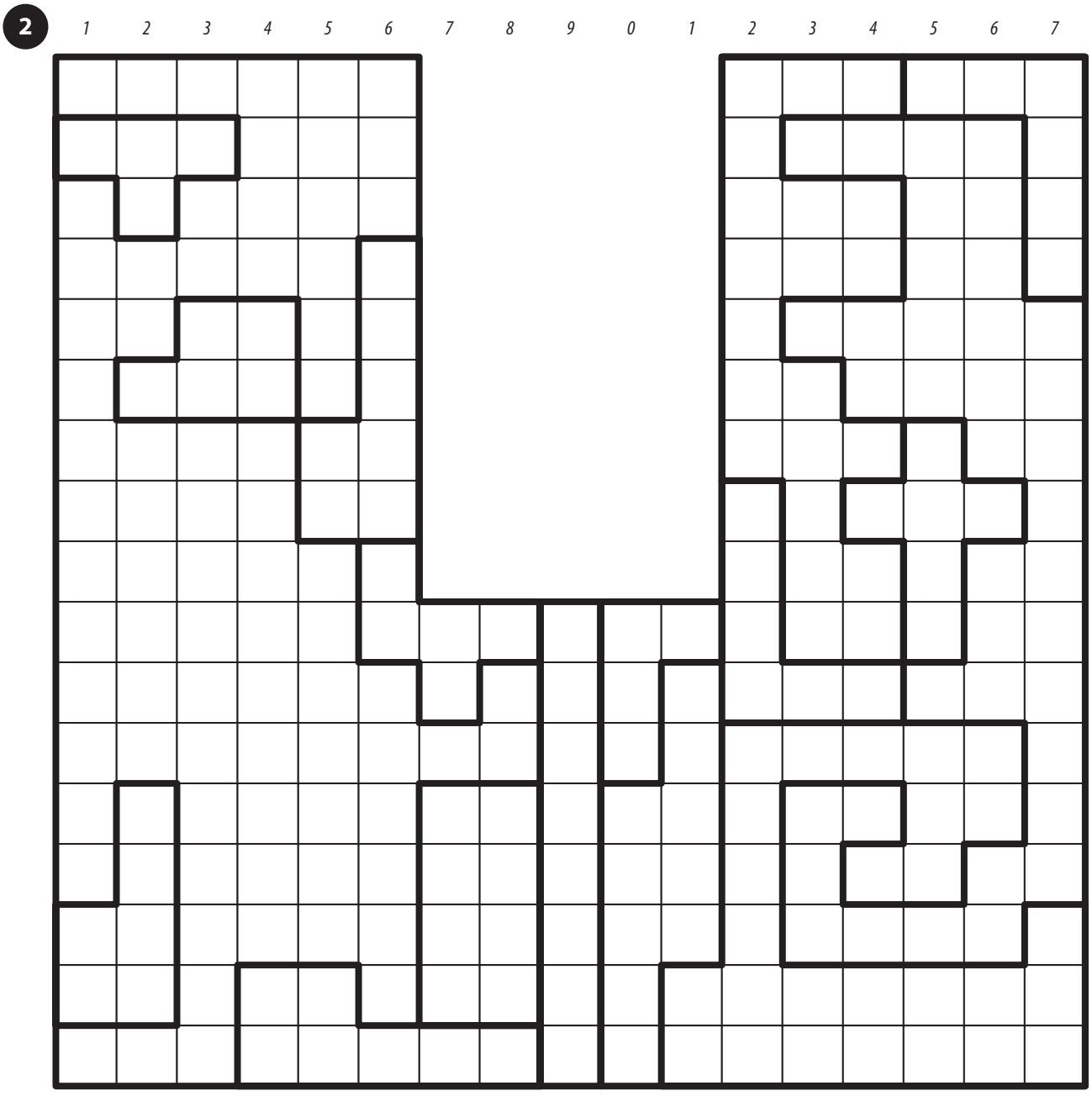
Place stars into some cells in the grid, no more than one star per cell. Each row, each column, and each outlined region must contain exactly two stars. Cells with stars may not touch each other, not even diagonally.

The numbers on top of the diagram are for Answer purposes only.

Answer: For each row from top to bottom, enter the number of the first column from the left where a star appears (the number on top of that column). Use only the last digit for two-digit numbers; e.g., use '0' if the first star appears in column 10.

Example Answer: 261627135

2

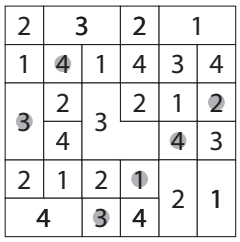


A3. Different Neighbors (52 points)

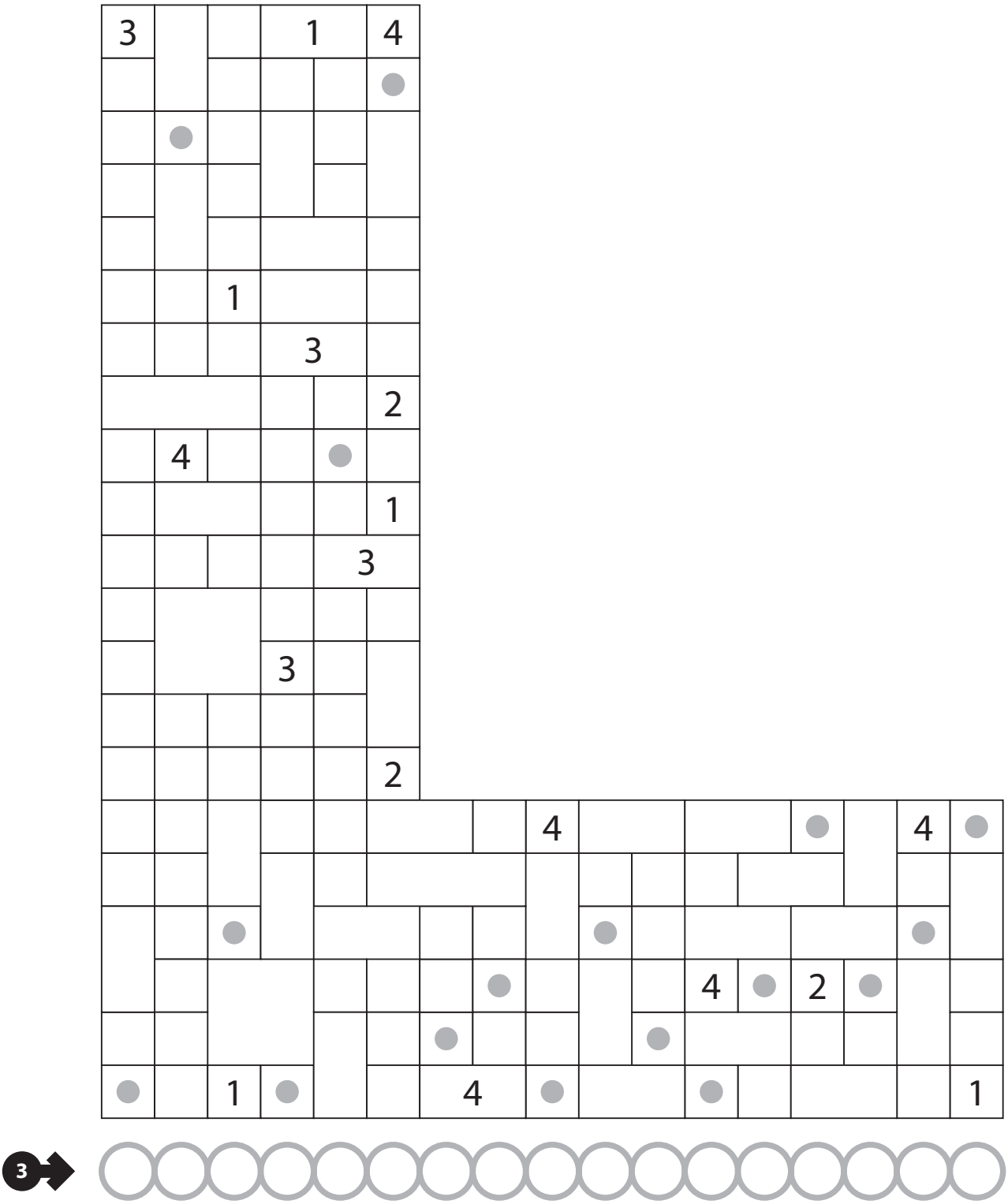
Place a digit from 1-4 into each cell, exactly one digit per cell. Adjacent cells (including diagonally-adjacent cells) must not contain the same digit. Some digits are already given for you.

Answer: Enter the digits in each of the dotted regions, reading the dots from left to right. (Ignore which row the dots are in.)

Example Answer: 343142

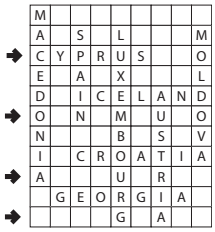


➡ (3) (4) (3) (1) (4) (2)



3 ➡

A4. Scrabble (97 points)

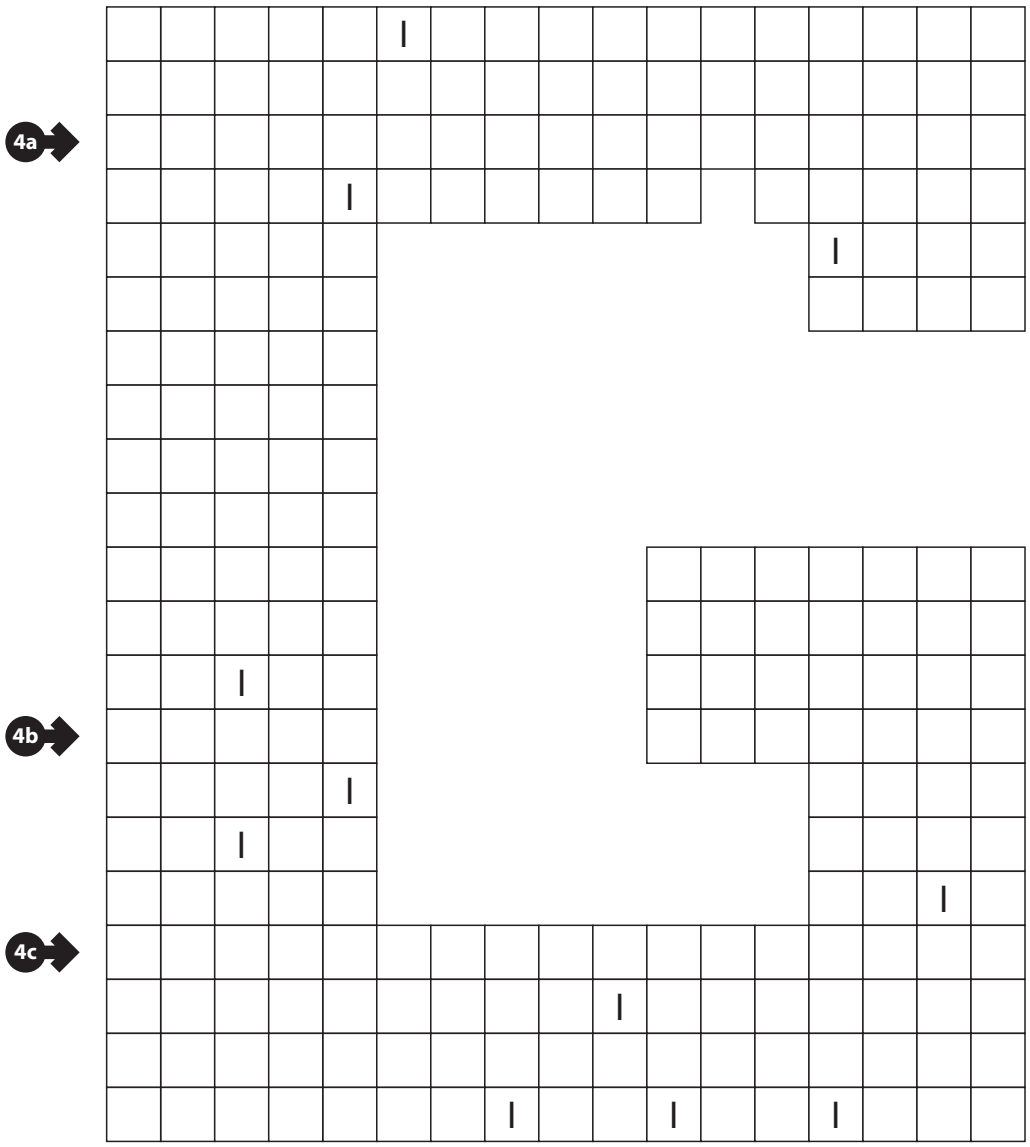


Put at most one letter into each cell so that the given words can be read either across (left-to-right) or down (top-to-bottom) in consecutive cells in the grid. Every word must appear in the grid exactly once, and no other words may appear in the grid (that is, if two cells are filled and are adjacent, then there must be a word that uses both of them). Every word must have either a blank cell or the edge of the grid before and after it. All letters must be (orthogonally) connected in a single group.

Copies of one letter are already supplied in the grid. All instances of that letter are supplied.

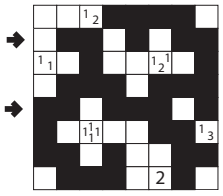
Answer: For each designated row, enter its contents from left to right, ignoring any blank cells. If all cells in the row are blank, enter a single letter 'X'.

Example Answer: `CYPRUSO,ONMUO,AUR,GA`



AUSTRALIA
BELARUS
BOTSWANA
BULGARIA
CHAD
CHINA
CUBA
ECUADOR
INDIA
IRAN
ISRAEL
JAPAN
LATVIA
MACEDONIA
MADAGASCAR
MALI
MALTA
MEXICO
MONTENEGRO
OMAN
PERU
POLAND
SERBIA
SLOVAKIA
THAILAND

A5. Tapa (63 points)

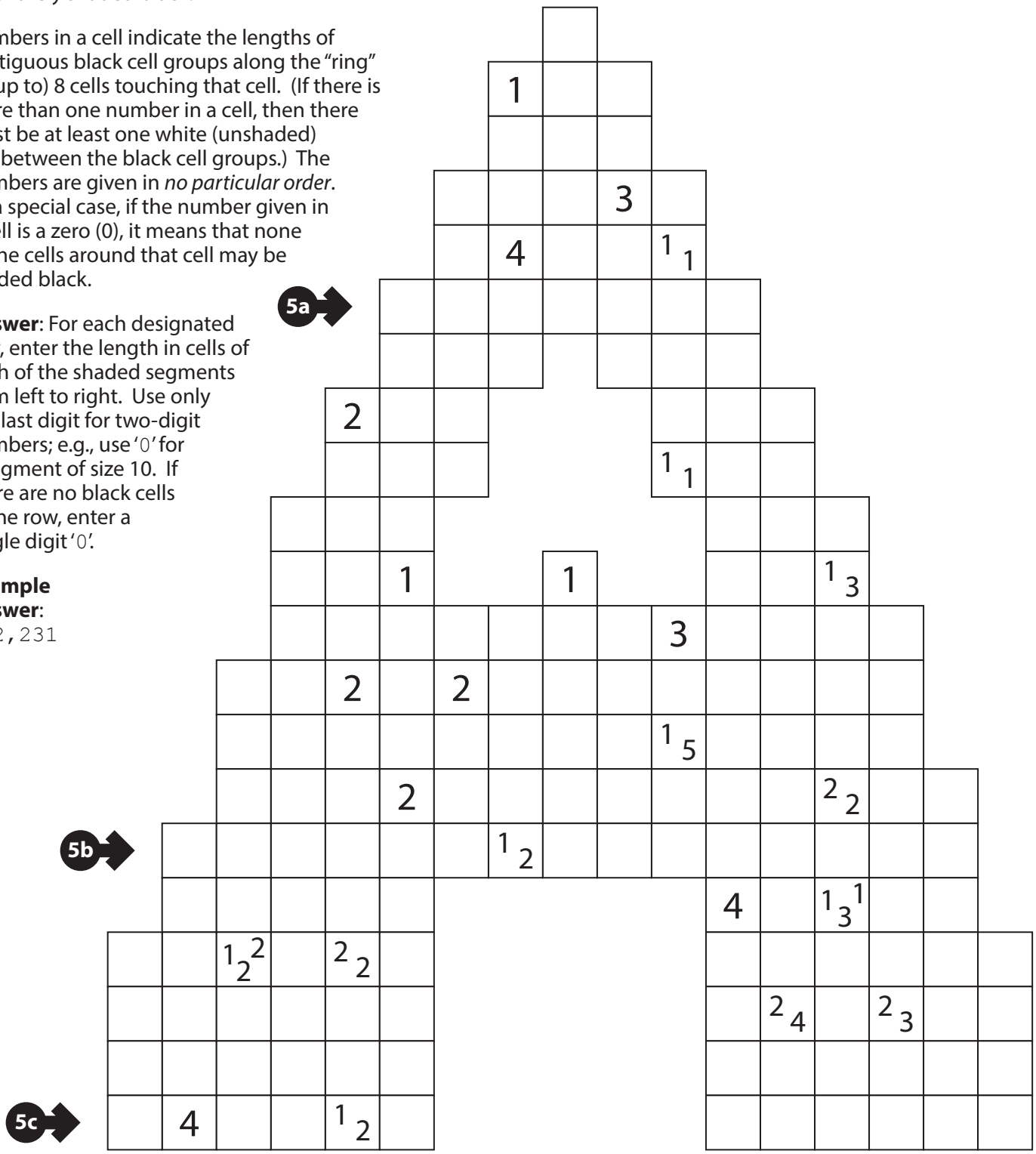


Shade some empty cells black (cells with numbers cannot be shaded). All black cells connect along edges to create a single connected region. (It is permissible for the region to touch itself at a corner, but touching at a corner does not connect the region.) No 2×2 group of squares can be entirely shaded black.

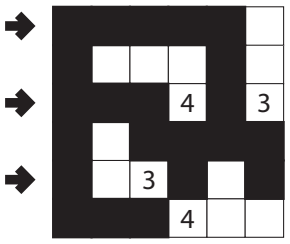
Numbers in a cell indicate the lengths of contiguous black cell groups along the "ring" of (up to) 8 cells touching that cell. (If there is more than one number in a cell, then there must be at least one white (unshaded) cell between the black cell groups.) The numbers are given in *no particular order*. As a special case, if the number given in a cell is a zero (0), it means that none of the cells around that cell may be shaded black.

Answer: For each designated row, enter the length in cells of each of the shaded segments from left to right. Use only the last digit for two-digit numbers; e.g., use '0' for a segment of size 10. If there are no black cells in the row, enter a single digit '0'.

Example Answer:
`212,231`



A6. Nurikabe (75 points)



Shade some cells black (leaving the other cells white) so that the grid is divided into non-overlapping regions; cells of the same color are considered in the same region if they are adjacent along edges. Each given number must be in a white region that has the same area in cells as that number. Each white region must have exactly one given number. All black cells must be in the same region. No 2×2 group of cells can be entirely shaded black.

In the competition puzzle, one cell has been shaded black for you.

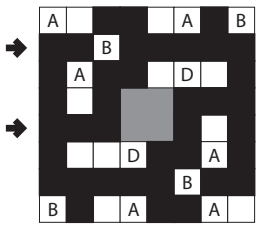
Answer: For each designated row, enter the lengths (number of cells) of the black segments from left to right. If there are no black cells in the row, enter a single digit '0'. Use only the last digit for two-digit numbers; e.g., use '0' for a black segment of length 10.

Example Answer: `5,31,111`

6a 6b 6c

1				10												
	10										3					
																5
						3										
	1			6										2		3
			3		5					5			3			
4																
									2							
			6			4										
	2				5	■										
		6		5									10			
			4											4		
												3				

A7. Symmetric Encrypted Nurikabe (46 points)



Solve the Nurikabe puzzle, with these additional rules:

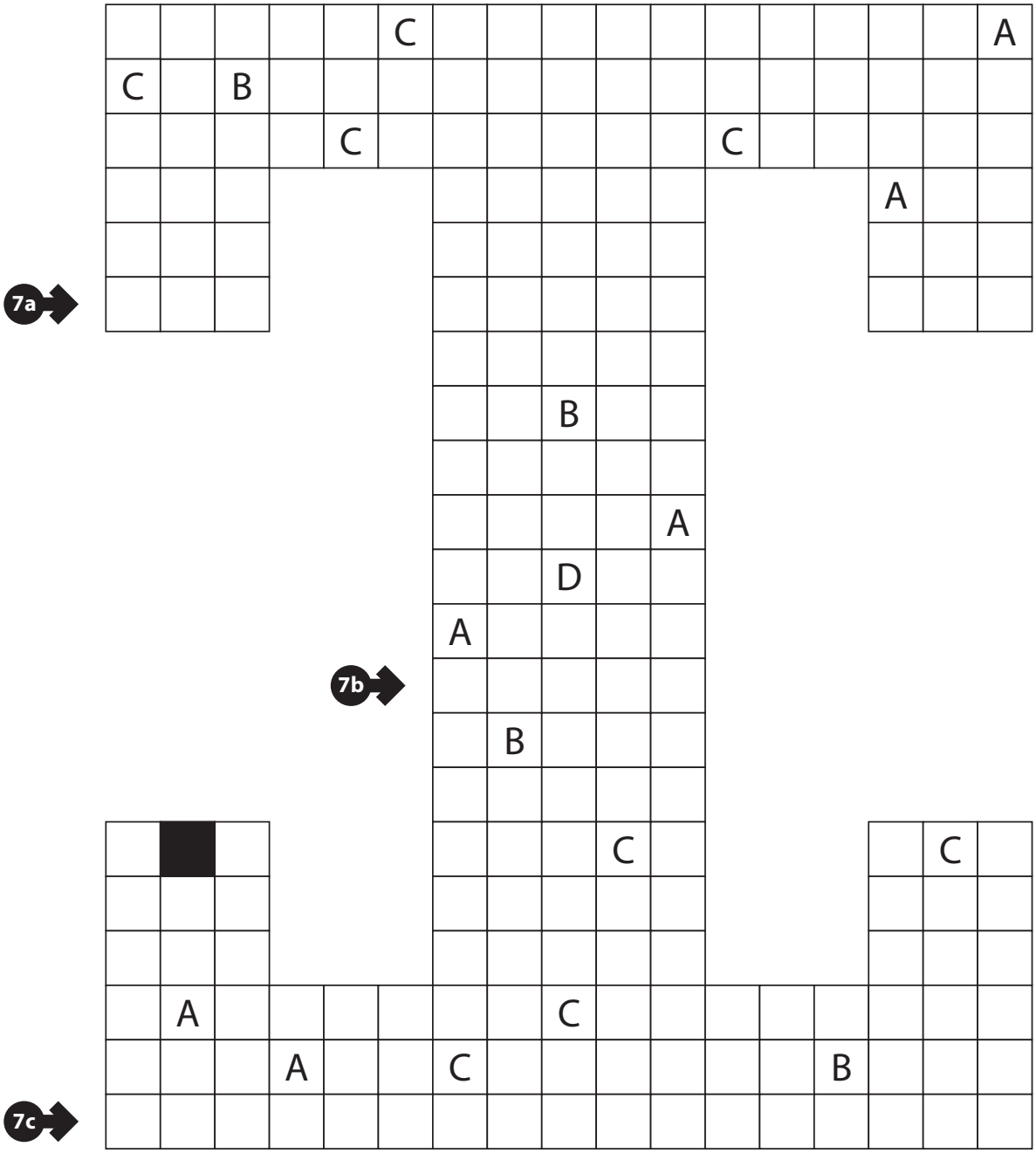
The numbers have been encrypted into letters before being given to you; same letters always stand for the same number, and different letters always stand for different numbers.

The region of black cells is rotationally symmetric (looks the same when rotated 180-degrees). The white regions are not necessarily symmetric.

In the competition puzzle, one cell has been shaded black for you.

Answer: For each designated row, enter the lengths (number of cells) of the black segments from left to right. If there are no black cells in the row, enter a single digit '0'. Use only the last digit for two-digit numbers; e.g., use '0' for a black segment of length 10.

Example Answer: `25,311`

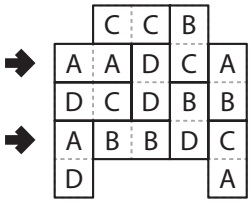


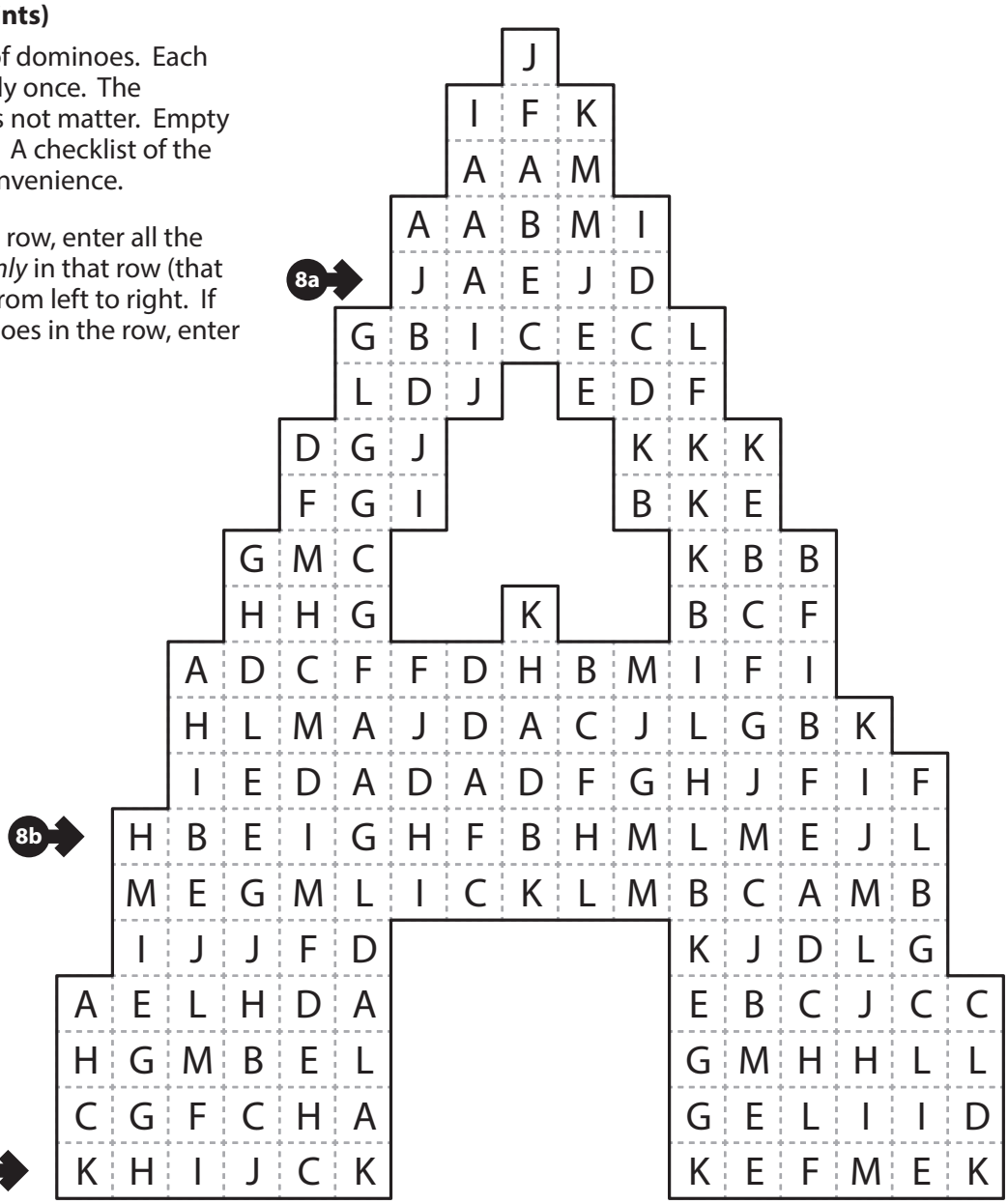
A8. Domino Division (74 points)

Divide the grid into a full set of dominoes. Each domino should be used exactly once. The orientation of the letters does not matter. Empty cells are not part of a domino. A checklist of the full set is provided for your convenience.

Answer: For each designated row, enter all the letters in dominoes that are *only* in that row (that is, the horizontal dominoes), from left to right. If there are no horizontal dominoes in the row, enter a single letter 'X'.

Example Answer: AA, BB





A A

A B B B

A C B C C C

A D B D C D D D

A E B E C E D E E E

A F B F C F D F E F F F

A G B G C G D G E G F G G G

A H B H C H D H E H F H G H H H

A I B I C I D I E I F I G I H I I I

A J B J C J D J E J F J G J H J I J J J

A K B K C K D K E K F K G K H K I K J K K K

A L B L C L D L E L F L G L H L I L J L K L L L

A M B M C M D M E M F M G M H M I M J M K M L M M M