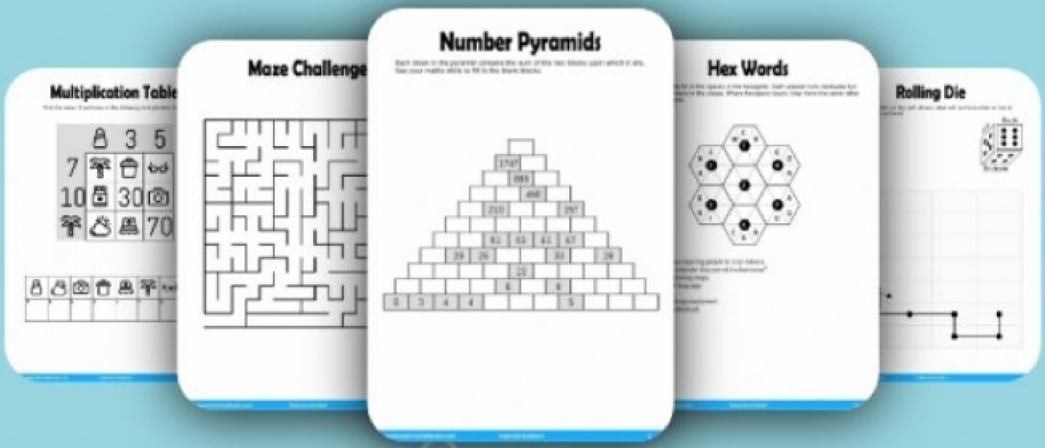
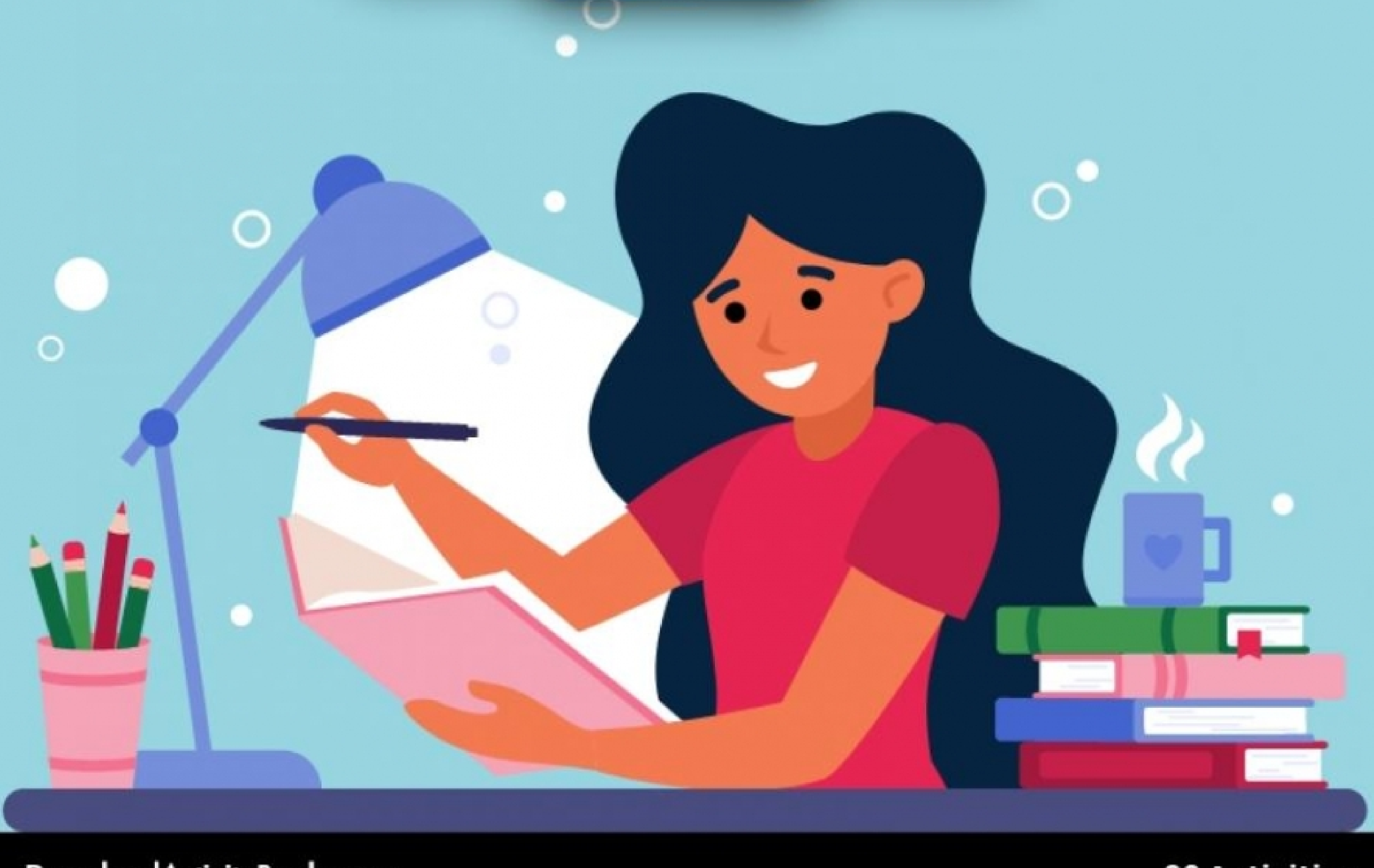
Teens

activities

VOLUME 58


Multiplication Table
Maze Challenge
Number Pyramids
Hex Words
Rolling Die



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30 Activities

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Teens Activities
Volume 58

7 February 2023

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Trancipher

Consider the following three vertical blocks of letters as transparencies. When you will overlay them on each other, only some letters will be visible, while the others will be blocked by the black boxes. Combining all the visible letters will yield the hidden message. You have finished the puzzle when you have decoded the full message.

	1	2	3	4	5
1	Z	T	A	I	R
2		W	Y	I	L
3	L	K	E	K	F
4		■	R	E	T
5	U	R	U	V	N
6		■	A	N	K
7	D		K	■	■
8	S	I	■	D	B
9	■	■		W	■
10	■	I	K	L	L
11	M	I	T	N	■
12		B	E		■
13	A	H		M	F
14	H	Z	■	I	L
15	■	L	R	K	I
16	O	N	M	·	■

	1	2	3	4	5
1	■	H	■	I	■
2		W	■	I	L
3	L	■	Q	■	T
4		O	R	E	T
5	U	R	■	G	N
6		F	A	N	■
7	D		G	K	D
8	■	I	X	W	■
9	W	M		W	F
10	J	I	P	L	L
11	■	■	■	■	S
12		B	E		Y
13	A	P		M	V
14	■	W	W	I	L
15	Y	L	■	X	I
16	O	N	D	·	V

	1	2	3	4	5
1	T	■	I	I	R
2		W	H	I	L
3	L	Q	■	A	■
4		Y	R	E	T
5	U	R	O	■	N
6		D	A	N	T
7	D		■	F	D
8	I	I	Y	■	C
9	C	Z		W	F
10	G	I	■	L	L
11	V	O	W	S	S
12		B	E		I
13	A	■		M	■
14	I	■	G	I	L
15	S	L	O	■	I
16	O	N	■	·	J

Secret Number

Guess the secret number using the clues provided.
(Ignore negative sign, if any)

#1	Square-root of 81	
#2	#3 times 10; then add 5	
#3	Square of #1; then add 5	
#4	Digits of #9 sorted in ascending order	
#5	Square root of the product of 2 and #10	
#6	#5 minus the digits sum of #10	
#7	#8 times the digits product of #3	
#8	#11 plus the digits sum of #2	
#9	#6 plus the digits product of #2	
#10	Last two digits of #7 plus last two digits of #11	
#11	Digit product of #2	
#12	#4 times the digits sum of #2	SECRET NUMBER

Bubble Fives

Use the letters from the box above the grid to complete the partially filled grid so that it contains six 5-letter words. Use each letter in the box only once as you complete the grid.

P T E E H I A E

A A A T R H S L

	R			E
	■	L	■	
		P		
	■		■	
	H			

Words Transformer

Change the word at the top to the word at the bottom by changing one letter at each stage to form a new word every time. The middle word must also be formed as you progress through the steps.

M	E	S	H
M	U	T	E
M	I	T	E

Letters Knocker

Each row in the following contains a clue for a four-letter word, plus one extra letter. The letters of the word are scrambled, written next to the clue. Cross out all the letters of each answer, and you will be left with one letter. Reading the extra letters from top to bottom will spell a hidden word.

1. Feast for a pig.	S	P	C	O	L
2. Drawn-out tale.	N	O	A	Y	R
3. Female with fantastic features.	A	N	F	E	C
4. Sandwich type with no bread.	R	W	A	F	P
5. Library purchase.	B	O	L	O	K
6. Watery defense.	I	O	A	T	M
7. Jovian feature.	C	G	N	I	R
8. Picked-up feeling.	V	T	E	I	B

Numbers Fill In

The numbers required for this puzzle are listed in length order. Use each one only once to fit the interlocking numbers into the puzzle. A few numbers are already filled in to get you started.

^{1}		^{2}		^{3}		■	^{4}	^{5}4		^{6}		^{7}
	■		■		■	^{8}	■	6	■		■	
^{9}							■	^{10}4				
	■		■		■		■	5	■		■	
^{11}					■	^{12}5	7	8	1	6	9	3
	■	■	■		■		■	■	■		■	
■	^{13}	^{14}						^{15}				■
^{16}	■		■	■	■		■		■	■	■	^{17}5
^{18}				^{19}			■	^{20}		^{21}		4
	■		■		■		■		■		■	8
^{22}5	1	2	4	1	■	^{23}						7
	■		■		■		■		■		■	1
^{24}						■	^{25}					1

5 digits:

35564
42391
~~51241~~
49568
45184
54416
~~46458~~
97173

6 digits:

146725
769224
177641
179743
779744
548833
~~548711~~
332591

7 digits:

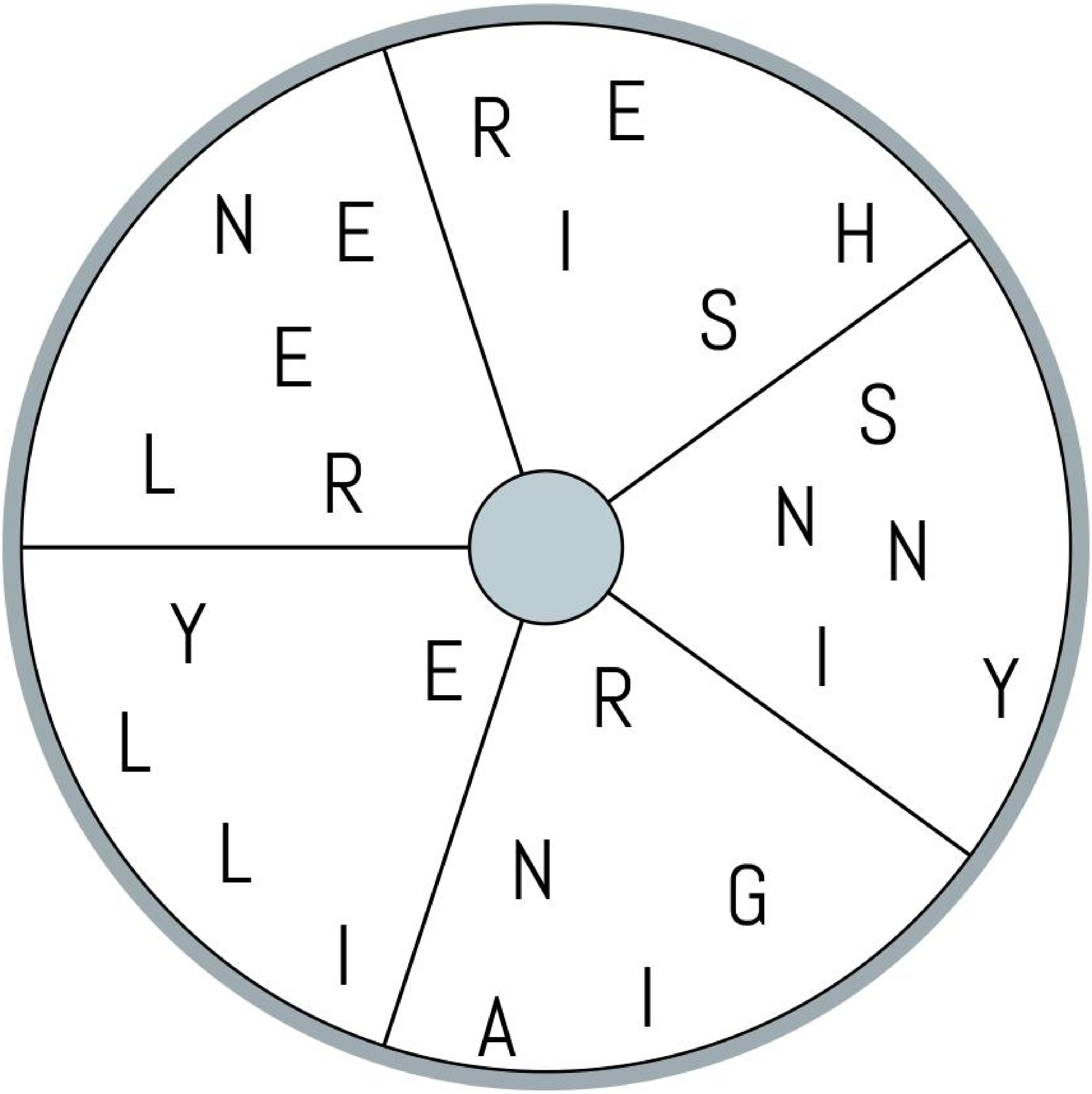
9916624
3466423
~~5781693~~
8349497
1169219
6736437
2268147
7453663

11 digits:

11677736733
74555783285

Hit The Spot

Each group of letters in the five segments below, when combined with the shared unknown center letter, will spell out five words. What are the words and what is the center letter?


R
E
I
H
S
N
E
E
L
R
S
N
N
I
Y
Y
L
L
I
E
R
N
G
A
I

Word Hunt

To find the number of times the given word can be found in various directions.

→	↑	↖	↗
←	↓	↙	↘

O O O R O I C C R O O O D O O D C R D O
I R R C C R C O O R R R O O D R O D C R
O I C R R R I R O D I R R O C R R O I D
C C I C R C I C O R R I D O R R R O D C
O O D O D R R O D I R R O C O R R I O I
C R D R D C C R R I O R D C I O I R O O
C D R R D D I R R D D R I D R D R R O O
I R R I R C I I I O I O O O I I R O O C
O C O D R R O R D O O R I I D R C D C R
O R C O O R R R I R I C C O R R O I R O
O D R R C O C O I O C O R I R O O R O O
R R O O C D O C R R R R R R O C R R D O
O R R R R I R I D O O R C R C I O O I R
C O R R R R R O R O C I R C R R D C R R
D C O I I R I O R R D D O D R O I R R R
O R C R O O D R R R O O R O D I R R O C
R R D R D C O D R R D R O R R R R R C O
C R R R D R R R I D R R R O O R O D O O
R D R C C R O O O C I O O D D R C I R D
I R R I R R R O D R O D I R R O C C R R

CORRIDOR

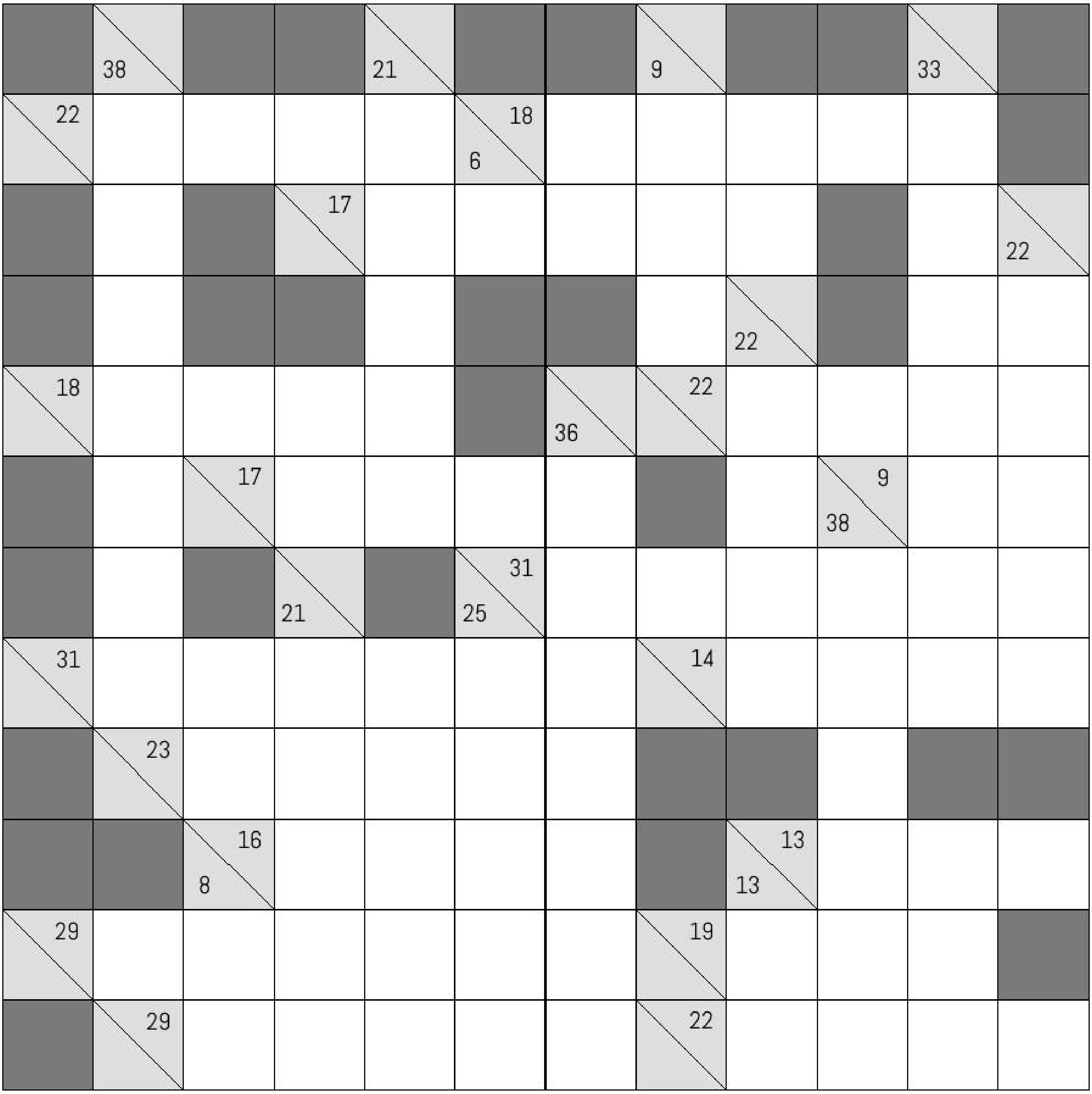
Words Thorax

In the middle of the grid, write two letters that will complete two six-letter words, reading across. When you finished, the sets of entered letters should also spell two words, one on the left and the other on the right, reading from top to bottom.

AU			ST
FI			RE
GA			ER
CO			ER
EM			LS
CH			RS
CA			ED
DE			ED
EN			AR
IN			ED

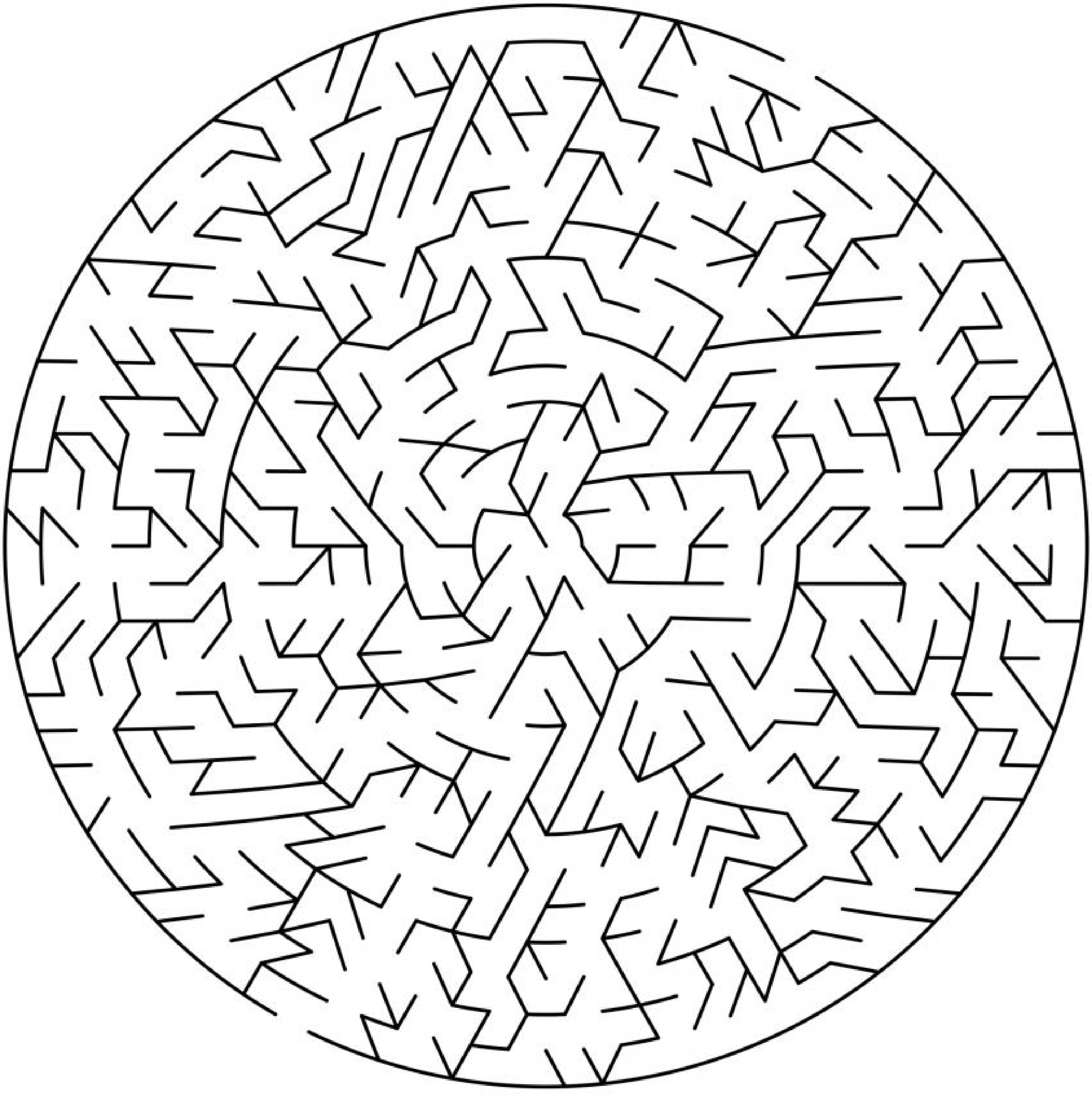
Kakuro

Place a number from 1 to 9 in each empty box. The sum of each vertical or horizontal block equals the number at the top of or to the left of that block, respectively. Numbers may be used only once in each vertical or horizontal block.



■	38\	■	■	21\	■	■	9\	■	■	33\	■
\22					6\18						■
■		■	\17						■		22\
■		■	■		■	■		22\	■		
\18					■	36\	\22				
■		\17					■		38\9		
■		■	21\	■	25\31						
\31							\14				
■	\23						■	■		■	■
■	■	8\16					■	13\13			
\29							\19				■
■	\29						\22				

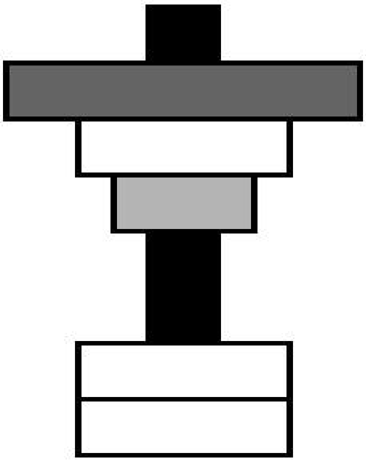
Maze Challenge



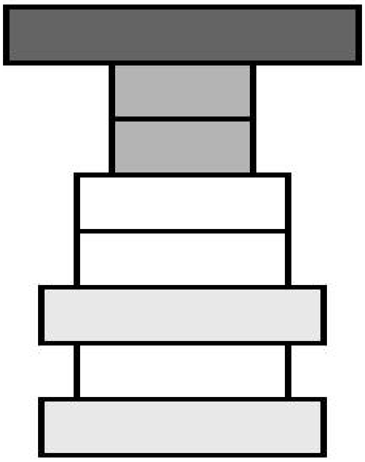
Top View

Work out which stack matches the given top view – there may be more than one, so list all you can find.

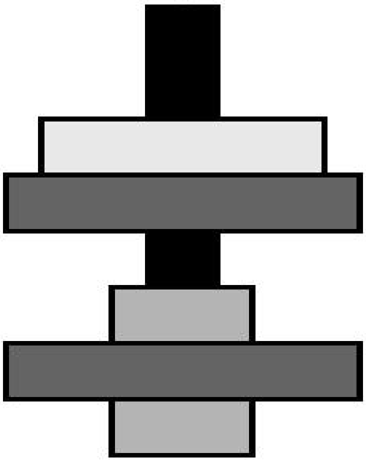
A



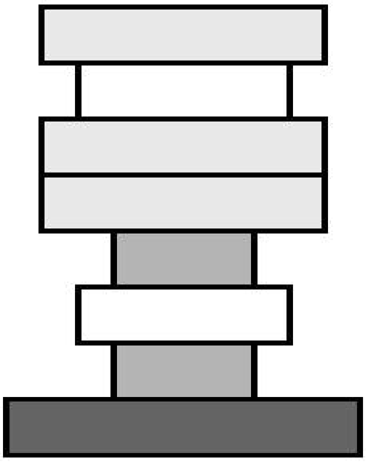
B



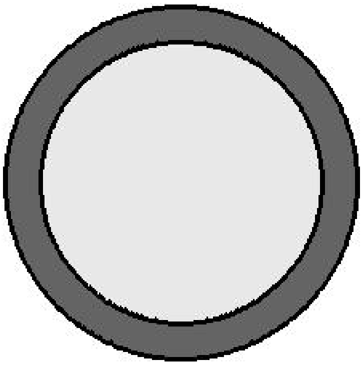
C



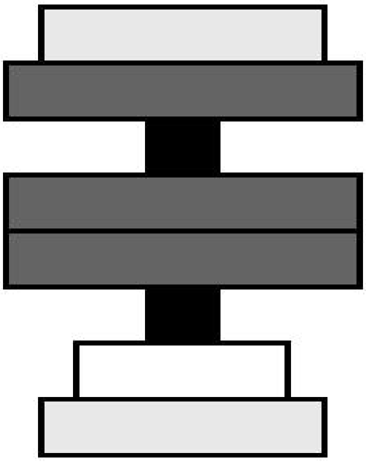
D



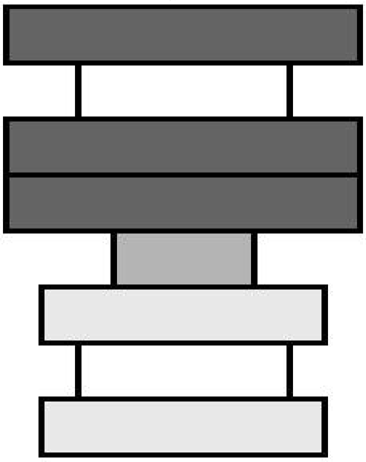
Top View



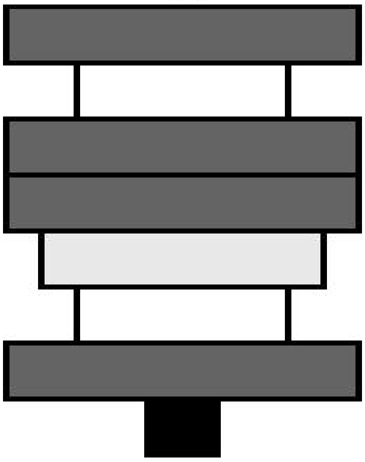
E



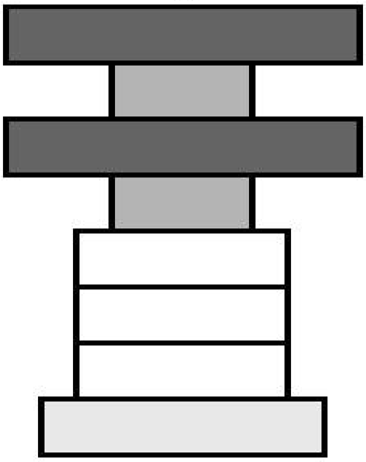
F



G

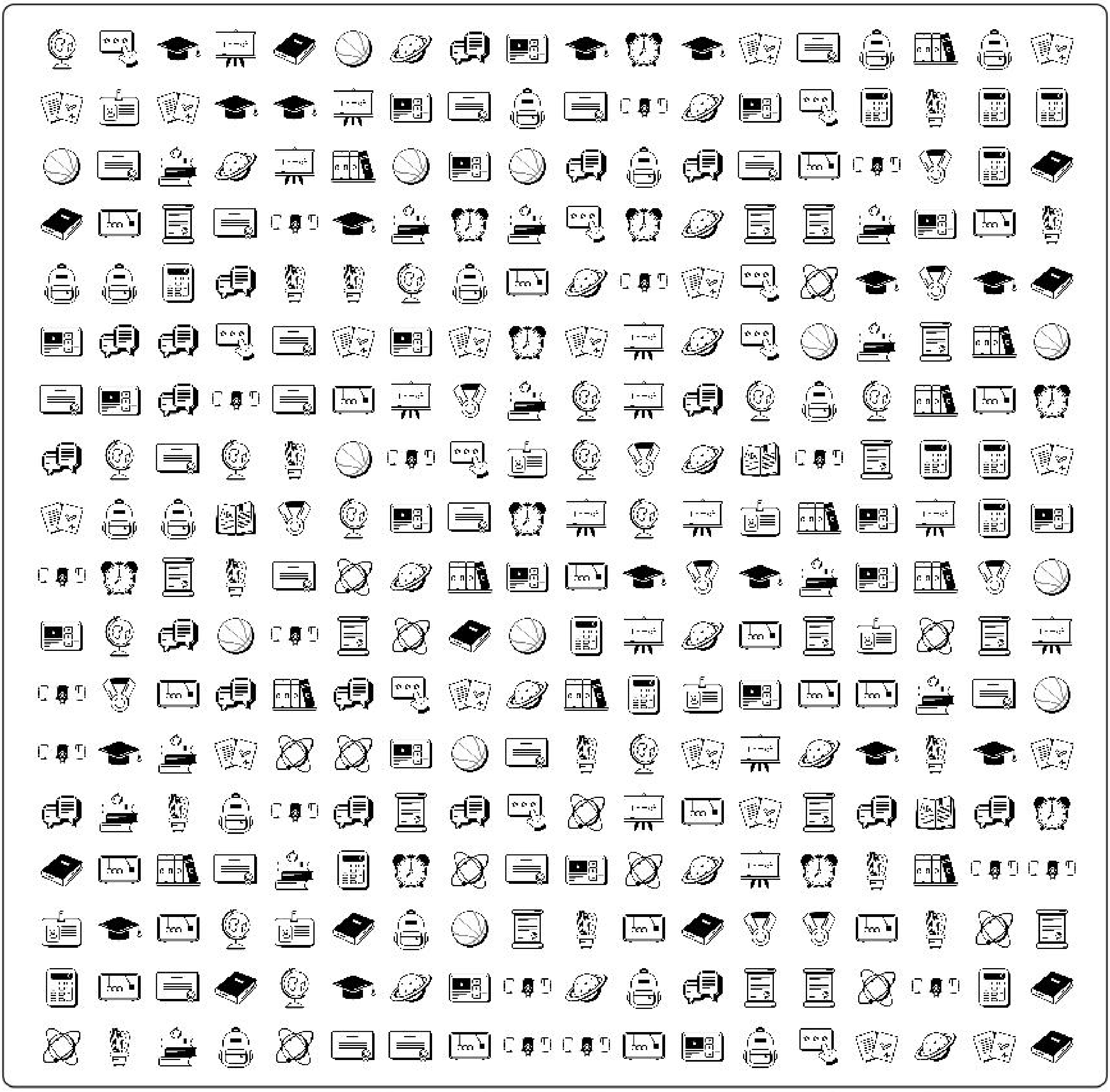


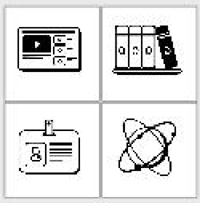
H



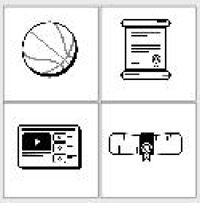
The Spy Quad

Find all the groups of four images shown in the boxes at the bottom of this page in the big box below.

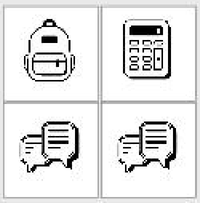




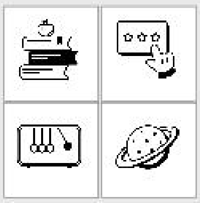
a



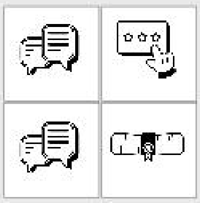
b



c



d



e

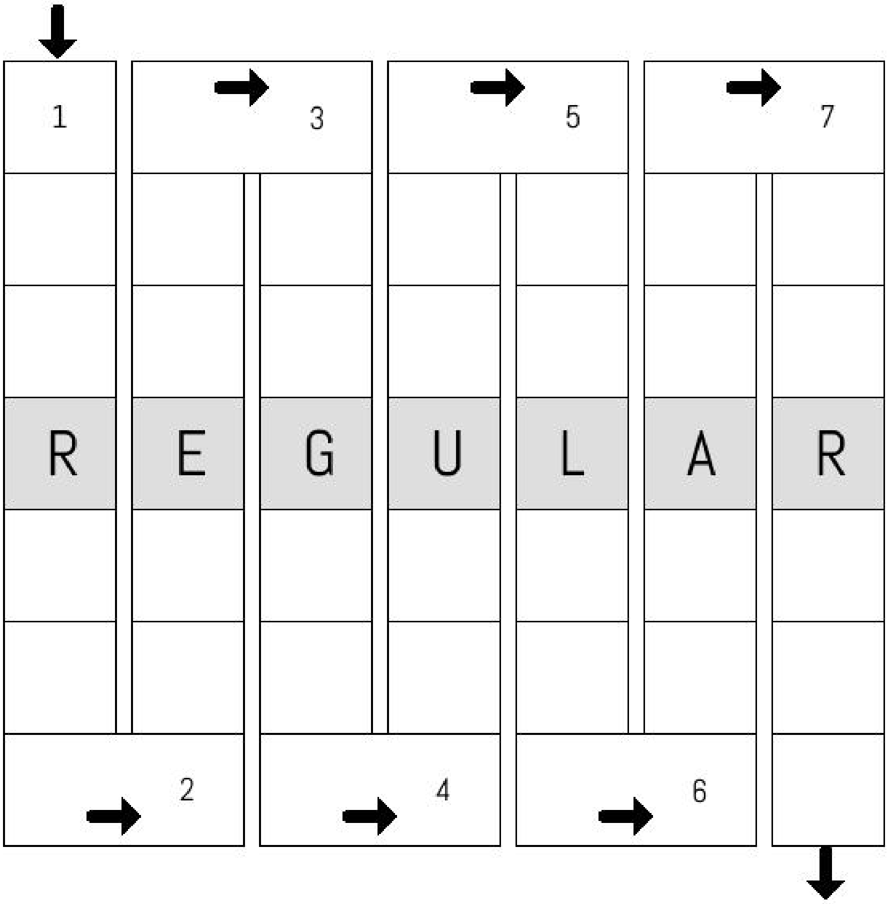
Sudoku

The grid consists of 9 clusters and each cluster has 9 cells. Fill all the cells with the digits (1 to 9) so that no digit is repeated in the same row, the same column or within the same cluster (shown with the heavier black outlines).

	1	2	3	4	5	6	7	8	9
A		4							8
B				4	6				
C	5				9				
D			1					4	3
E			6		5			9	
F	8				7	2			
G		8		5				7	
H		2						3	
I			9						6

Back and Forth

Every answer uses the last letter of the preceding answer as its initial letter. The chain thus formed follows a path down and up through the grid from the top left to the bottom right. Once completed, the center row will spell out the given word.



Clues:

(1) Promising Young Actress.

(2) In The Family.

(3) Jailbird's Exploit?

(4) A Concept However Ahead Of Time.

(5) Another Term For Television.

(6) Hitherto Unknown.

(7) Prepare, As A Fancy Invitation.

Einstein Riddle

To have a single answer in each of the boxes below the person's main description, so that you have a description of them from the options provided.

LECTURER	POLITICIAN	ELECTRICIAN	NURSE	LIBRARIAN
Cheesecake Custard Mochi Pakhlava Pastries	Cheesecake Custard Mochi Pakhlava Pastries	Cheesecake Custard Mochi Pakhlava Pastries	Cheesecake Custard Mochi Pakhlava Pastries	Cheesecake Custard Mochi Pakhlava Pastries
Black Green Orange Yellow Red	Black Green Orange Yellow Red	Black Green Orange Yellow Red	Black Green Orange Yellow Red	Black Green Orange Yellow Red
Birds Cats Hamsters Tortoises Dogs	Birds Cats Hamsters Tortoises Dogs	Birds Cats Hamsters Tortoises Dogs	Birds Cats Hamsters Tortoises Dogs	Birds Cats Hamsters Tortoises Dogs
Biking Dancing Reading Scrapbooking Singing	Biking Dancing Reading Scrapbooking Singing	Biking Dancing Reading Scrapbooking Singing	Biking Dancing Reading Scrapbooking Singing	Biking Dancing Reading Scrapbooking Singing

1. The person who likes to eat custard for dessert also enjoys dancing at the weekend.
2. The person who likes the colour green does not like to eat custard for dessert.
3. The Librarian likes hamsters.
4. The person who likes the colour green also likes to eat pastries for dessert.
5. The Politician does not enjoy biking at the weekend.
6. The person who enjoys reading at the weekend does not like to eat pastries for dessert.
7. The person who enjoys reading at the weekend does not like to eat custard for dessert.
8. The Politician does not enjoy scrapbooking at the weekend.
9. The Politician does not like to eat custard for dessert.
10. The person who likes hamsters also likes to eat custard for dessert.
11. The Politician does not like dogs.
12. The person who likes the colour green does not enjoy biking at the weekend.
13. The person who likes the colour green does not like to eat cheesecake for dessert.
14. The Electrician enjoys reading at the weekend.
15. The Politician does not like the colour orange.
16. The Lecturer likes cats.
17. The person who enjoys singing at the weekend does not like to eat cheesecake for dessert.
18. The person who likes to eat mochi for dessert also likes tortoises.
19. The Politician does not enjoy dancing at the weekend.
20. The person who enjoys reading at the weekend does not like to eat cheesecake for dessert.
21. The person who likes to eat custard for dessert also likes the colour black.
22. The person who enjoys reading at the weekend also likes the colour red.
23. The Nurse likes the colour green.
24. The person who enjoys reading at the weekend does not like to eat pakhlava for dessert.

Number Search

08	06	06	00	09	08	08	05	08	02	01	02	05	00	07
06	08	08	04	01	02	03	04	09	08	01	09	05	02	02
01	05	01	07	07	04	03	05	08	07	04	04	00	01	02
04	04	01	02	00	00	05	01	03	00	09	02	08	06	09
09	04	07	03	01	09	07	05	08	06	00	07	02	06	08
08	07	08	03	02	09	06	01	04	06	08	05	08	07	09
00	04	08	09	05	00	03	01	01	03	04	00	07	03	04
07	00	06	05	07	08	07	06	04	02	02	03	05	02	02
04	07	00	05	04	09	02	00	07	03	04	07	02	04	07
04	02	08	08	02	05	09	08	05	06	08	07	09	02	09
04	00	04	09	04	01	04	05	04	03	01	04	02	03	01
06	04	04	01	05	01	01	02	09	05	08	04	05	03	05
01	00	02	03	09	09	01	00	09	05	00	05	09	09	00
05	08	08	03	09	08	07	00	04	09	01	01	08	00	04
01	01	06	01	01	06	07	06	03	02	05	02	08	05	00

Identify the number that is not present in the grid above: →↘↓↙←↑

660988
223522
358744
766120
257424

474072
852006
675455
475499
508287

891331
911598
844286
427437
206162

Number Series

Find the next number in the series.

2

8

20

44

92

Scramble In The Gap

Using the list of scrambled words below, fill in the gap in each row of the grid to make a word reading across.

					S	T	A	N	D
					A	T	O	R	Y
V	A	R	I	E					
A	D	R	E	N					
					N	A	N	C	E
					V	I	S	O	R
I	M	P	E	C					
					S	C	O	R	E
O	V	E	R	W					
					H	A	D	O	W

RSPEU
GTAED
BLARO
SOFER
GEHTI
UDNER
DNGAR
ALIEN
CEABL
OPEVR

Form-A-Word

From the pair of words on the left, take a group of three letters from the first and three from the second to make a new six-letter word, which you can write in the "New Word" space on the right. Do not rearrange the letters. When you have completed the puzzle, the letters in the shaded boxes will reveal a hidden word.

	New Word					
BARRIER / WEEST	▨					
ASPEN / BIRETTA		▨				
VINTAGE / MAKEUP			▨			
GROWTH / SUNDRY				▨		
GAMUT / PRIVATE					▨	
PADRE / MUDDLE						▨

Scramble Square

Write the solutions to the list of clues (which are all words in which the letters have been disarranged) in the numbered rows of the grid. The letters in the shaded boxes, reading downwards, will form a hidden word.

1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

1. NEAOECPVNR
2. HOPYIPOHSL
3. ETESRQUINA
4. EDGRNYULNI
5. ETCCPAACNE
6. ELOIHCRETP
7. ALASELMNLO
8. RINETEAMLC
9. NSLTOERIUO
10. DASBRSIYUI

Make Number

09	04	07	08	05	08	07	09	02	01	08	09
04	02	03	07	01	09	05	03	00	00	05	04
02	12	08	05	08	07	06	08	06	09	08	01
01	09	03	01	09	08	08	08	06	08	00	07
21	03	07	01	01	00	02	00	07	04	00	02
08	01	03	24	01	05	00	08	09	08	04	07
05	02	01	24	22	00	04	05	08	06	04	02
06	01	03	00	04	09	09	04	06	06	05	09
06	12	02	20	01	03	03	01	06	05	08	07
04	08	05	08	06	00	08	23	01	06	07	08
00	09	04	04	00	08	03	09	03	00	22	02
05	08	09	02	01	03	09	07	02	06	01	01

How many pairs or triplets make 24 when added or multiplied in a horizontal or vertical line?

- Additive doublets: Sum of two numbers is 24
- Additive triplets: Sum of three numbers is 24
- Multiplicative doublets: Product of two numbers is 24
- Multiplicative triplets: Product of three numbers is 24

24

Word Knocker

Use the listed clues to eliminate words from the following collection. You will be left with one remaining word.

RACKET ATTAIN ROTATE

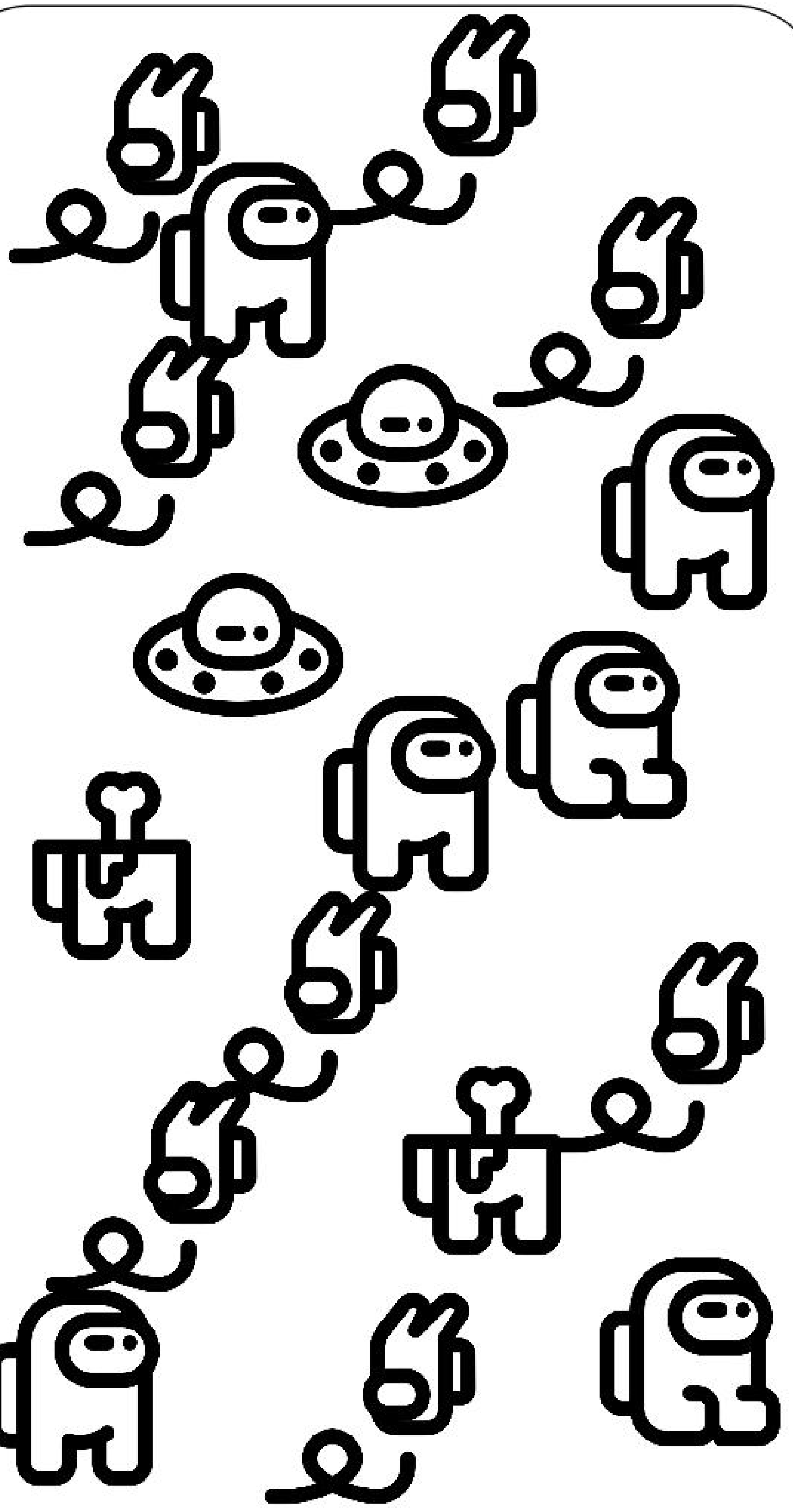
BASTES SIMPLE REPENT

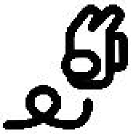
ARCADE ETHICS INVADE

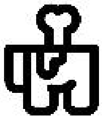
1. System of morality.
2. Be contrite.
3. Video-game hub.
4. Move like mercury.
5. Intrude upon.
6. Brush with liquid.
7. Unpleasant noise.
8. Secure win?

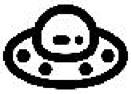
Find and Count

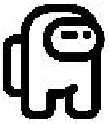
Count how many of each image you can see in the left-hand box.

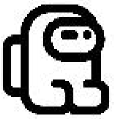












Total: 18

Lock Logic

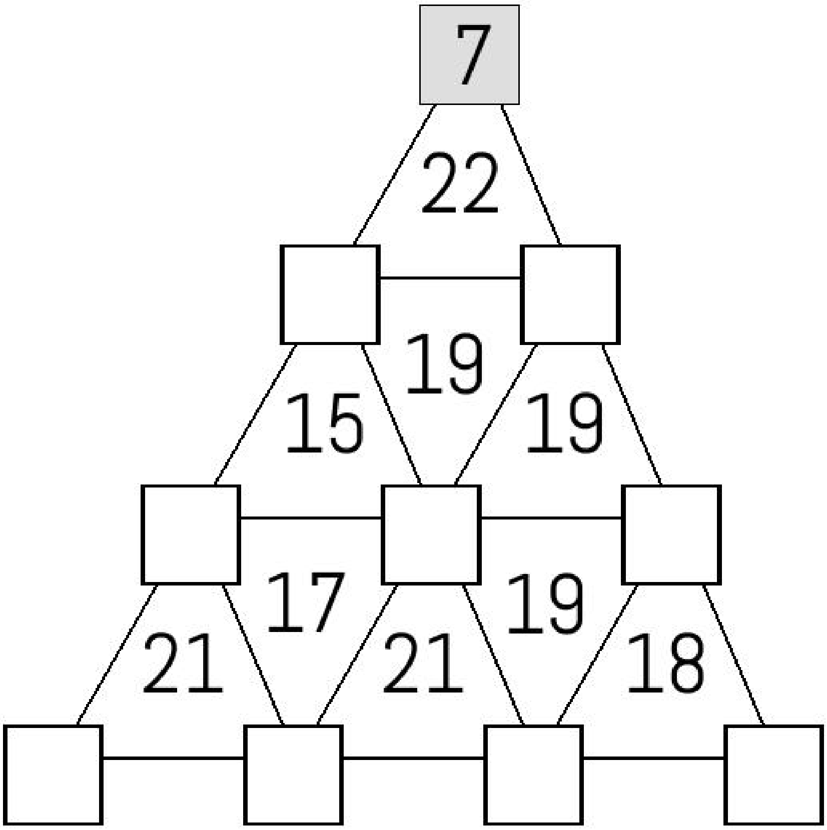
Guess the correct code using the clues provided.

Clues

9	1	6	3	**A**	1 digit is correct but in the wrong place
2	4	7	3	**B**	1 digit is correct and in the right place 2 digits are correct but in the wrong place
6	9	4	7	**C**	1 digit is correct and in the right place 1 digit is correct but in the wrong place
6	8	5	2	**D**	1 digit is correct but in the wrong place
5	7	8	3	**E**	1 digit is correct and in the right place
9	3	4	8	**F**	1 digit is correct and in the right place
1	5	9	2	**G**	2 digits are correct but in the wrong place
8	7	5	9	**H**	1 digit is correct and in the right place
9	3	4	1	**I**	2 digits are correct and in the right place

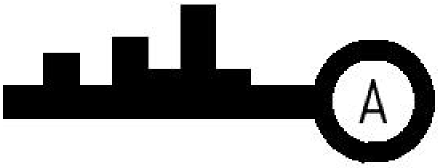
Number Triangles

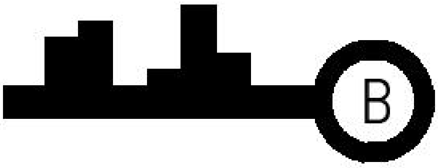
The number in the middle of each triangle is the sum of the numbers at its corners. Use your maths skills to fill in these corner numbers. You can only use single-digit numbers with values between 1 and 9.



Locks and Keys

Find which key belongs to which lock.


A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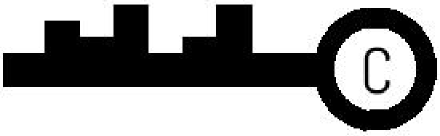
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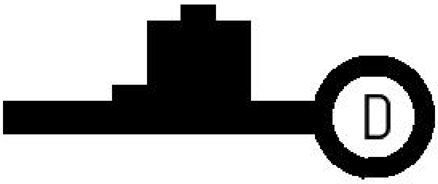
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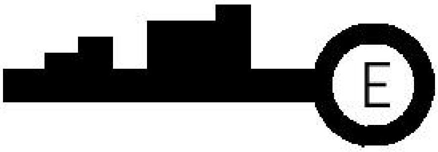
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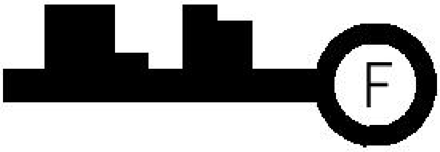
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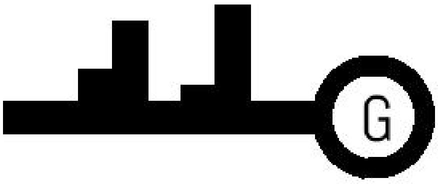
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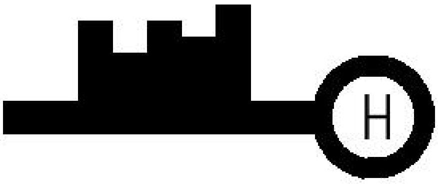
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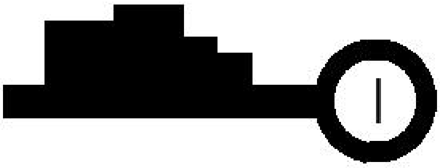
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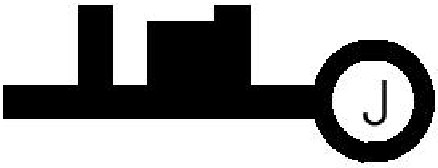
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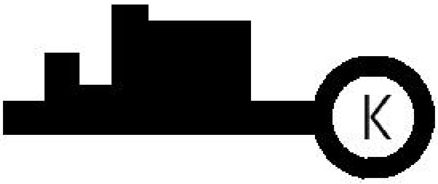
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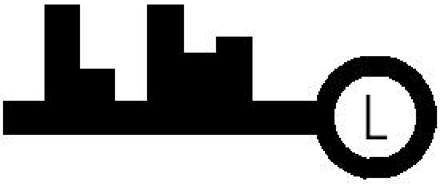
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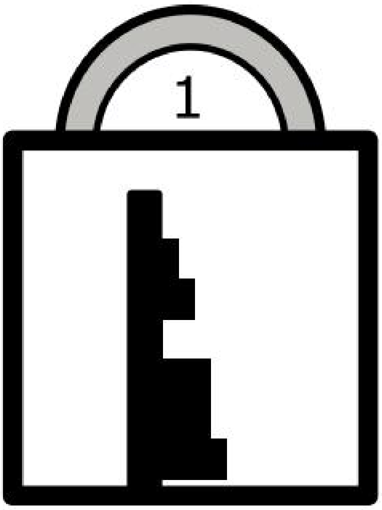
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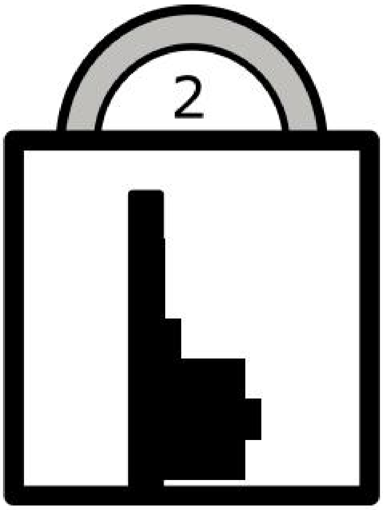
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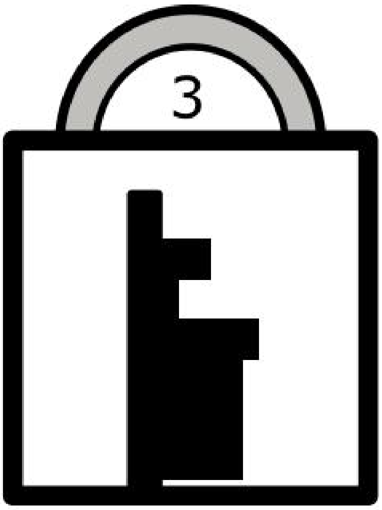
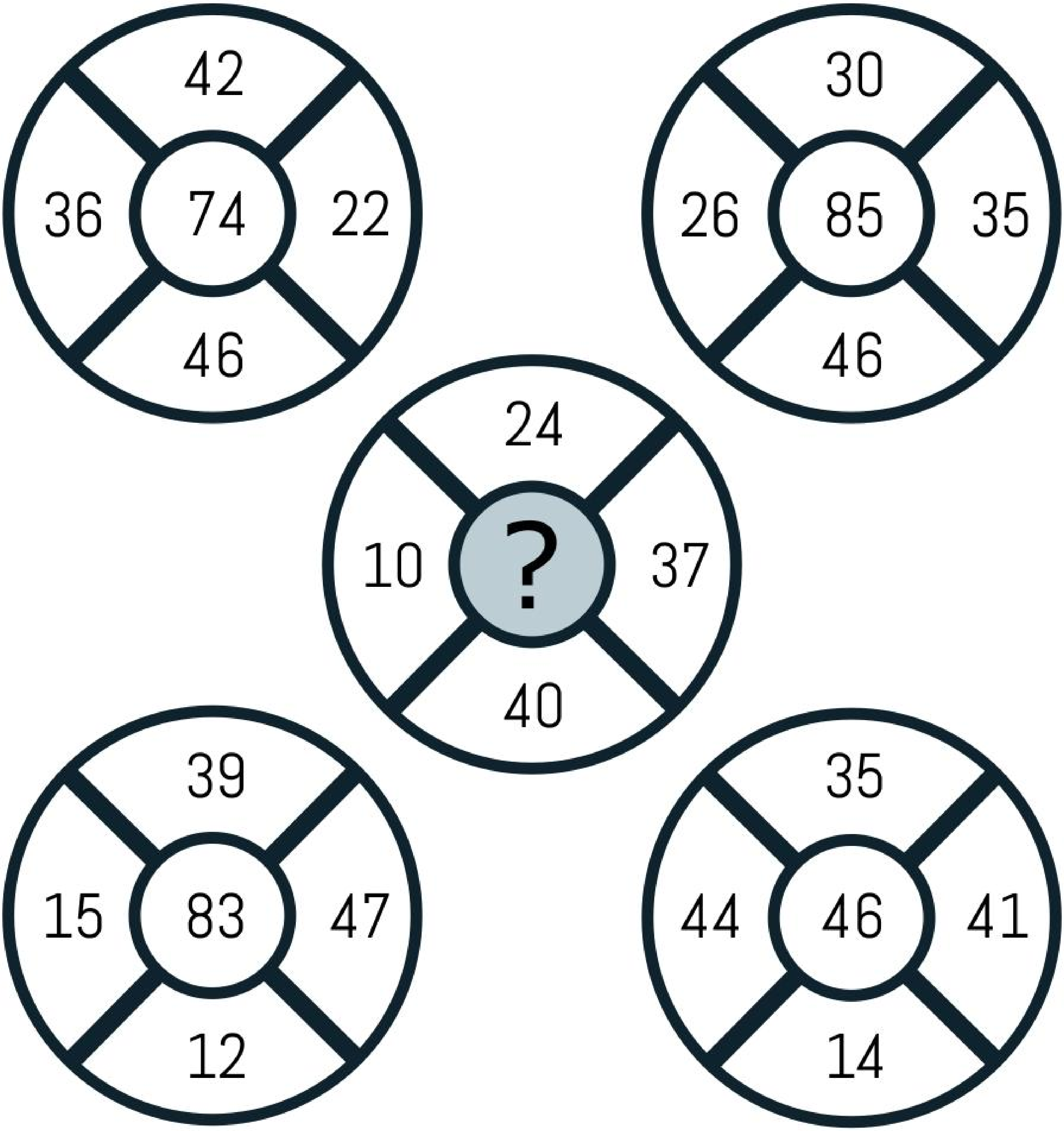

3

Hub Dub

Work out the relationship between the numbers written in the segments and the hub. Using that, find the missing number.


42
36
74
22
46
30
26
85
35
46
24
10
?
37
40
39
15
83
47
12
35
44
46
41
14

WordSub Cryptogram

The cipher key contains the encrypted equivalent of the alphabet. Use this cipher key to decode each character of the encrypted message.

Cipher Key	
A	CITES
B	FLOAT
C	FARED
D	NYMPH
E	CILIA
F	QUEER
G	RAVEN
H	GISMO
I	FUNNY
J	CAROL
K	OVENS
L	BERET
M	PANSY
N	TRACE
O	CRAFT
P	OGLED
Q	VIRUS
R	DEEPS
S	AUDIT
T	PAUSE
U	STICK
V	TRACT
W	YELLS
X	METRO
Y	DRONE
Z	AILED

YELLS	GISMO	CILIA	TRACE		DRONE	CRAFT	STICK

BERET	CRAFT	AUDIT	CILIA		CITES

P									
OGLED	CILIA	DEEPS	AUDIT	CRAFT	TRACE		DRONE	CRAFT	STICK

		V				
BERET	CRAFT	TRACT	CILIA		AUDIT	CRAFT

				,
PANSY	STICK	FARED	GISMO	

			V	I	V	I		
AUDIT	STICK	DEEPS	TRACT	FUNNY	TRACT	FUNNY	TRACE	RAVEN

PAUSE	GISMO	CILIA		BERET	CRAFT	AUDIT	AUDIT

I	
FUNNY	AUDIT

	I			I					.
NYMPH	FUNNY	QUEER	QUEER	FUNNY	FARED	STICK	BERET	PAUSE	

Word Bash

Find the hidden 7-letter word when reading from left to right and top to bottom.

@?$%!$??#@#?%!@&@$??#@$@!$$?@@@$
!&!!@!!%#$%?$&&%#%$%?!??%#??%!#%
&#&!$?&&#$&&#$$%!!#?!@?&$&%@???&
#%&?%%&?!$&$?@!!@$!#%?!@&&#&%@$!
?#?$!%$!!@$!#%!%!!?&!!???@&%$@%#
%%?%@#&#$##??$$!%$&&%%&$?$!$%%?@
@&?$@%?&?#%&&@&$&%@##?&@#&&!$%#&
#@#%&@#&$!$@##&!!?##?!$#?@#$?&@#
!$?&&S$@#!$%$@%$!?&!!##?%&#$$%&$
@&#?!?!#!$!%&&!?%??&@@%?!!#%&@@?
?$&!$&$%#$@@@#!?@?%$@###$&?@!!!!
%?!@&$&@!!#####$#!!%$$??@&@#?##$
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