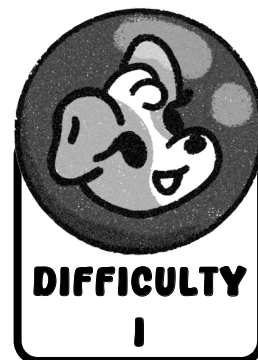
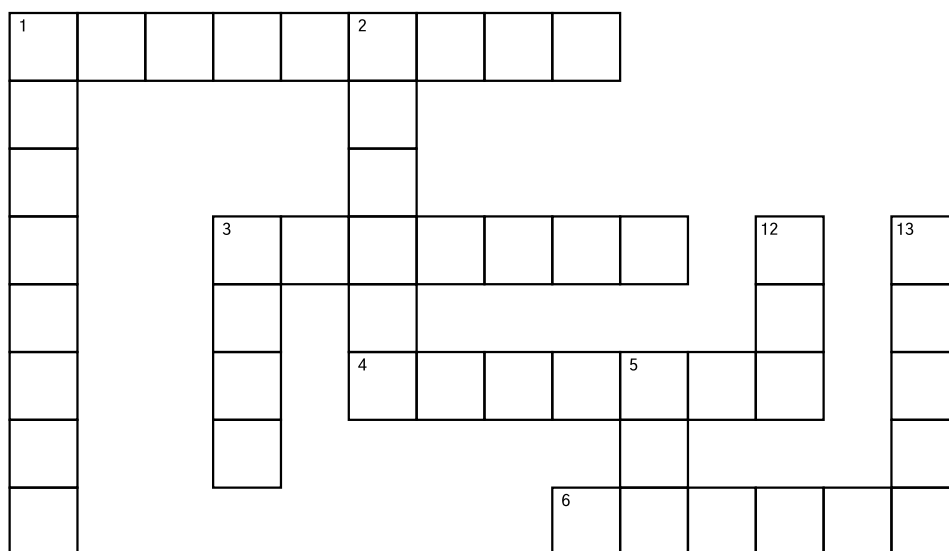


CROSSWORD



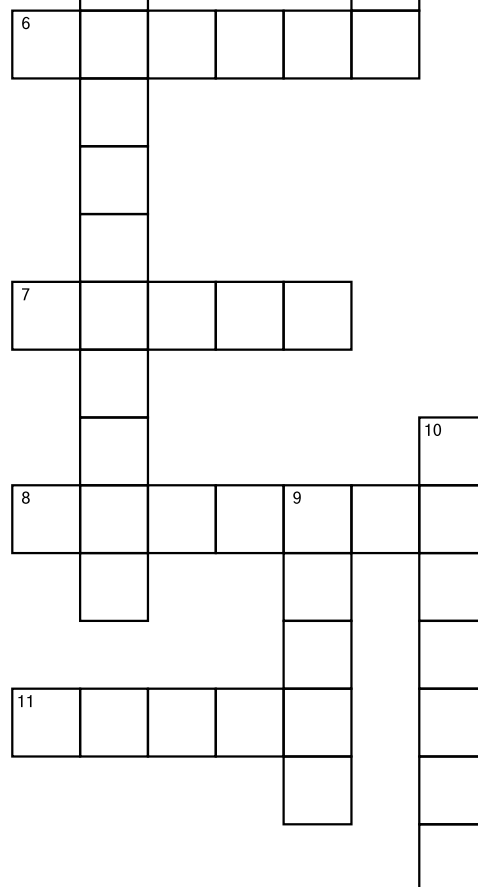
Across:

1. The first meal you eat in the morning after waking up.
3. A surprise gift you give or get on a special day.
4. A picture you make with crayons, pencils, or markers.
6. The people who live with you and love you the most.
7. A fun event with music, games, and sometimes cake.
8. A word you say when someone is leaving or going away, could be you who's doing so.
11. When you are feeling nervous but still decide to do something, you're being...

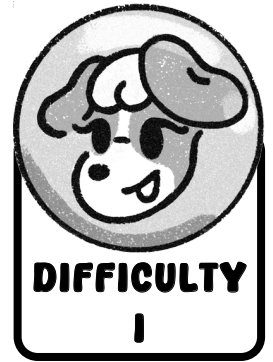


Down:

1. A bag you carry on your back with books and snacks.
2. A special person you meet outside your family and have a connection with, you may share your time playing and talking together
3. A little puppy with big feelings who stars in our story.
5. What you use to play, invent, and create new things.
9. Square or rectangle containers made of cardboard used to pack things.
10. The person at school who helps you learn.
12. When you wrap your arms around someone to show you care.
13. A tale with characters and events that you read or tell.



WORDSEARCH



MARKERS

PLUSHIE

PENCIL

SCHOOL

FOLDER

WINDOW

RIBBON

CUBBY

NOTEBOOK

JOURNAL

PLAYGROUND

CLASSROOM

SNEAKERS

PAINTING

LUNCHBOX

S	V	H	H	T	J	O	T	Z	D	A	C	Q	T	G
O	C	D	X	X	S	R	E	K	A	E	N	S	G	K
W	M	L	H	F	I	T	Y	P	B	G	P	C	G	X
V	O	Y	A	H	H	Y	O	N	J	P	G	K	G	K
P	W	D	B	S	H	V	O	U	L	L	O	N	R	P
A	Z	J	N	I	S	B	X	A	B	O	V	O	E	L
I	A	R	M	I	B	R	Y	O	B	U	S	S	D	U
N	K	X	H	I	W	G	O	E	B	R	M	Q	L	S
T	G	J	R	K	R	P	T	O	E	H	Z	Y	O	H
I	Z	Q	H	O	O	O	X	K	M	T	C	O	F	I
N	V	N	U	J	N	T	R	P	B	A	I	N	H	E
G	D	N	M	K	J	A	C	U	B	B	Y	U	U	P
K	D	W	H	J	M	Q	R	C	V	U	B	P	K	L
I	P	E	N	C	I	L	L	O	O	H	C	S	M	M
G	S	F	G	Q	J	J	O	U	R	N	A	L	N	G

PIPA'S SECRET REFLECTION...



Can you figure out what the secret message says?

A	B	C	D	E	F	G	H	I	J	K	L	M
26	25	24										
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
										3	2	1

$\overline{8}$ $\overline{12}$ $\overline{14}$ $\overline{22}$ $\overline{7}$ $\overline{19}$ $\overline{18}$ $\overline{13}$ $\overline{20}$ $\overline{8}$ $\overline{12}$ $\overline{13}$ $\overline{15}$ $\overline{2}$
 $\overline{14}$ $\overline{26}$ $\overline{16}$ $\overline{22}$ $\overline{8}$ $\overline{22}$ $\overline{13}$ $\overline{8}$ $\overline{22}$ $\overline{26}$ $\overline{21}$ $\overline{7}$ $\overline{22}$ $\overline{9}$
 $\overline{4}$ $\overline{22}$ $\overline{8}$ $\overline{18}$ $\overline{7}$ $\overline{4}$ $\overline{18}$ $\overline{7}$ $\overline{19}$
 $\overline{7}$ $\overline{19}$ $\overline{22}$ $\overline{14}$ $\overline{26}$ $\overline{4}$ $\overline{19}$ $\overline{18}$ $\overline{15}$ $\overline{22}$.

LABYRINTH

Follow the path that leads to the right place – but watch out for tricky turns!

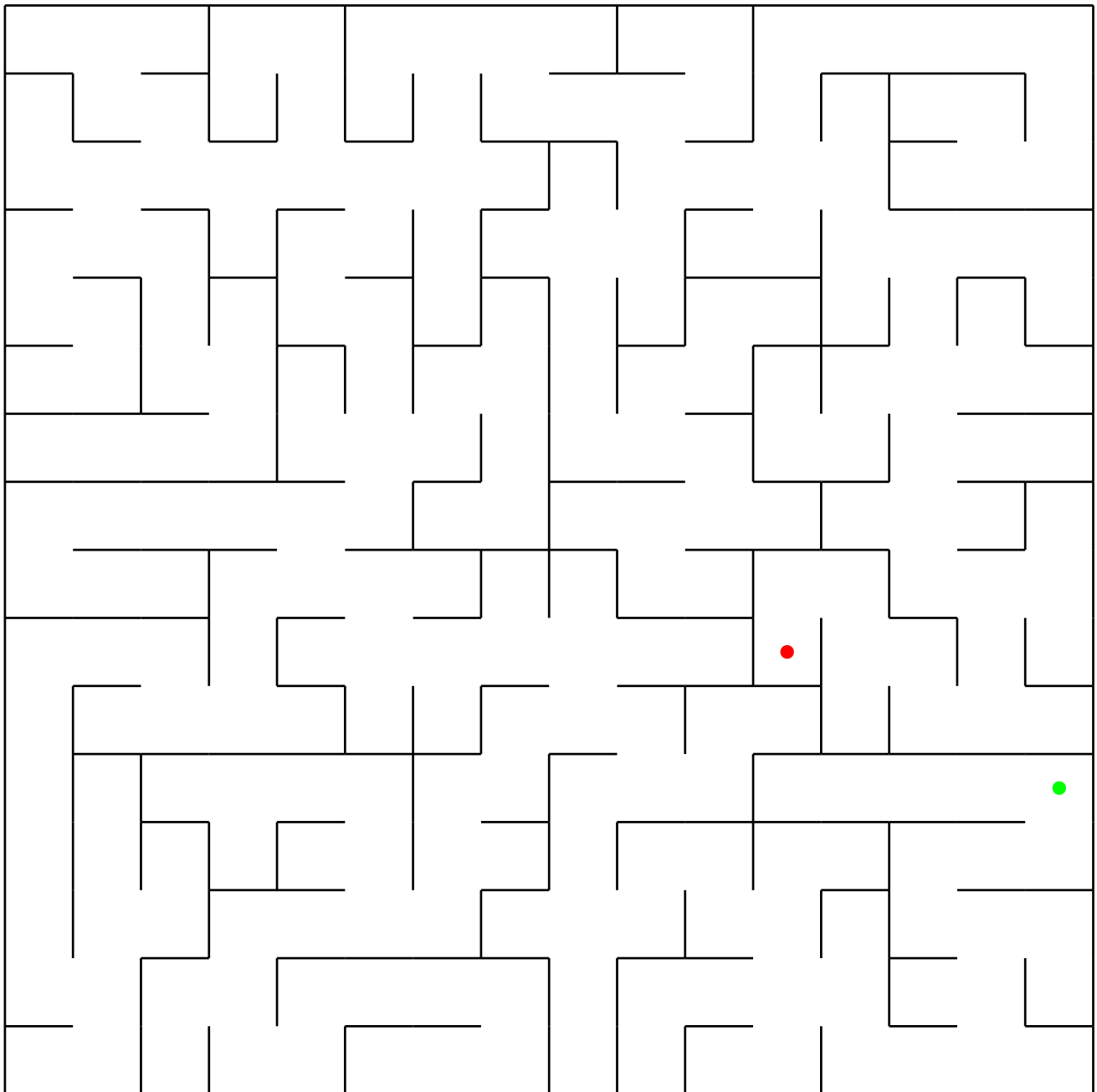
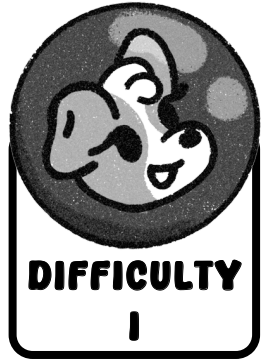


FIGURE-ING OUT



$$\triangle + \triangle + \triangle = 12$$

$$\bigcirc + \bigcirc + \triangle = 7$$

$$\bigcirc + \triangle + \square =$$

$$\diamond + \diamond + \bigcirc = 10$$

$$\triangle + \star + \diamond = 8$$

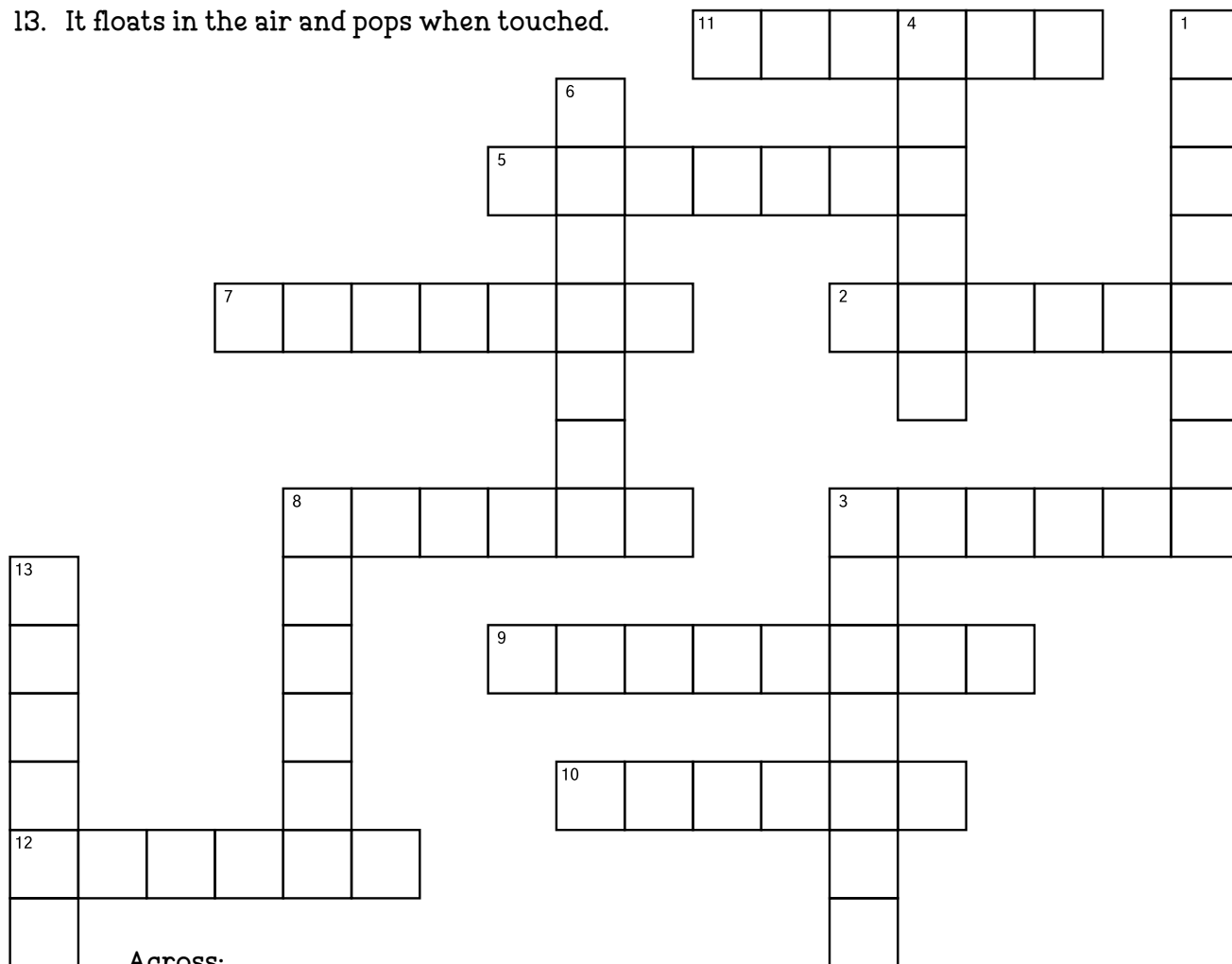
$$\star + \square + \diamond =$$

CROSSWORD



Down:

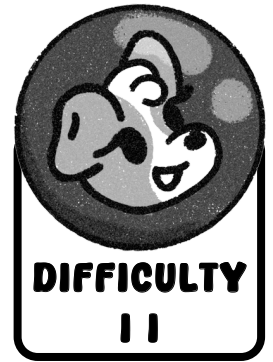
1. A huge hill that touches the clouds.
3. You blow it up for a party.
4. It melts as it gives light with a flame.
6. The animal with the longest neck.
8. You solve it by thinking and fitting pieces together.
13. It floats in the air and pops when touched.



Across:

2. A big ball in space that goes around a star.
3. You press it or use it to close your shirt.
5. Where meals are made and dishes pile up.
7. Clothes made for sleeping.
8. A small place in your clothes to put things.
9. You use it when it's raining.
10. It follows you but disappears in the shade.
11. A place with clowns, animals, and big tents.
12. You climb it to reach something high.

WORDSEARCH



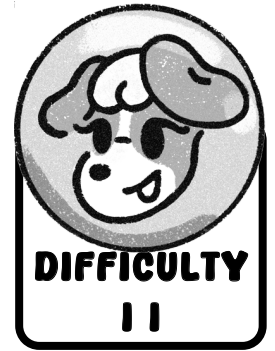
LADDER
CASTLE
JACKET
ISLAND
MIRROR

BUTTON
RAINBOW
WHISTLE
LANTERN
BASKET

ROCKET
CLOUD
ACORN
CHALK
TRAIL

T	G	J	B	S	N	A	L	S	Z	D	T	J	L	I	N
R	B	R	H	W	G	B	E	F	W	N	S	I	I	W	W
F	O	L	H	Y	Q	E	J	H	C	A	R	L	Z	T	C
G	C	M	K	I	S	S	I	L	E	L	A	E	T	W	C
Y	H	I	T	T	X	S	O	O	I	S	Y	E	T	O	R
K	A	L	F	A	T	U	J	H	U	I	K	Q	L	B	V
C	L	O	K	L	D	H	N	A	U	C	T	X	A	N	U
X	K	L	E	F	Q	O	T	I	O	U	M	X	D	I	G
X	C	O	W	D	T	R	E	R	T	O	A	N	D	A	F
D	G	M	Q	T	X	X	Z	L	A	T	S	V	E	R	K
A	B	J	U	L	J	X	R	R	T	I	N	K	R	Y	N
C	A	B	A	S	K	E	T	O	G	S	L	E	T	K	W
H	A	C	O	R	N	I	H	P	R	Z	A	T	I	S	S
O	T	E	K	C	A	J	I	P	B	R	T	C	N	D	S
R	F	P	S	N	R	E	T	N	A	L	I	L	J	O	K
P	X	B	U	S	D	T	Q	D	O	T	H	M	U	S	R

PIPA'S SECRET REFLECTION...



Can you figure out what the secret message says?

A	B	C	D	E	F	G	H	I	J	K	L	M
1	26	2	25	3	24	4						

N	O	P	Q	R	S	T	U	V	W	X	Y	Z

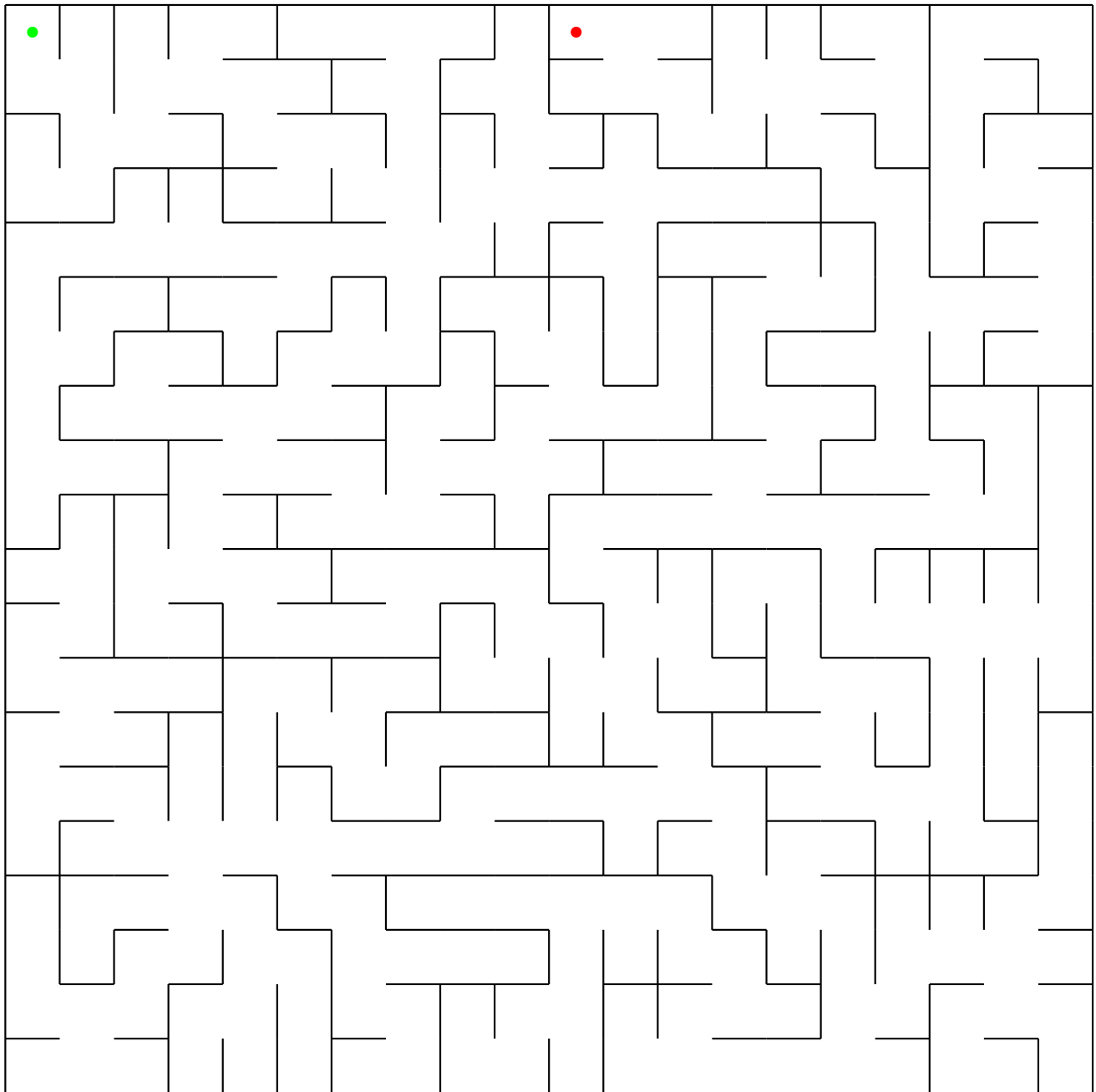
8 14 1 15 15 8 7 3 11 8 2 1 13

8 7 18 15 15 7 1 16 3 6 12 6

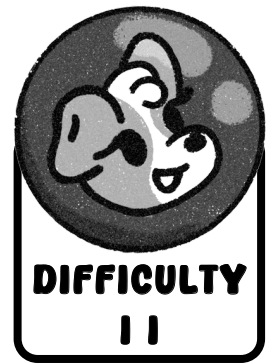
8 12 14 3 5 23 3 9 3 13 3 5

LABYRINTH

Follow the path that leads to the right place – but watch out for tricky turns!



8		4	= 21
3	7		= 21
	5	6	= 21
= 21	= 21	= 21	= 21



MAGIC BOXES

An ancient Puzzle where, no matter what direction you sum, the sum is always the same.

Can you figure out the missing numbers?

9	10		= 24
		12	= 24
	6		= 24
= 24	= 24	= 24	= 24

15 =	6		8
15 =		5	
15 =		9	4
15 =	15 =	15 =	15 =

CROSSWORD

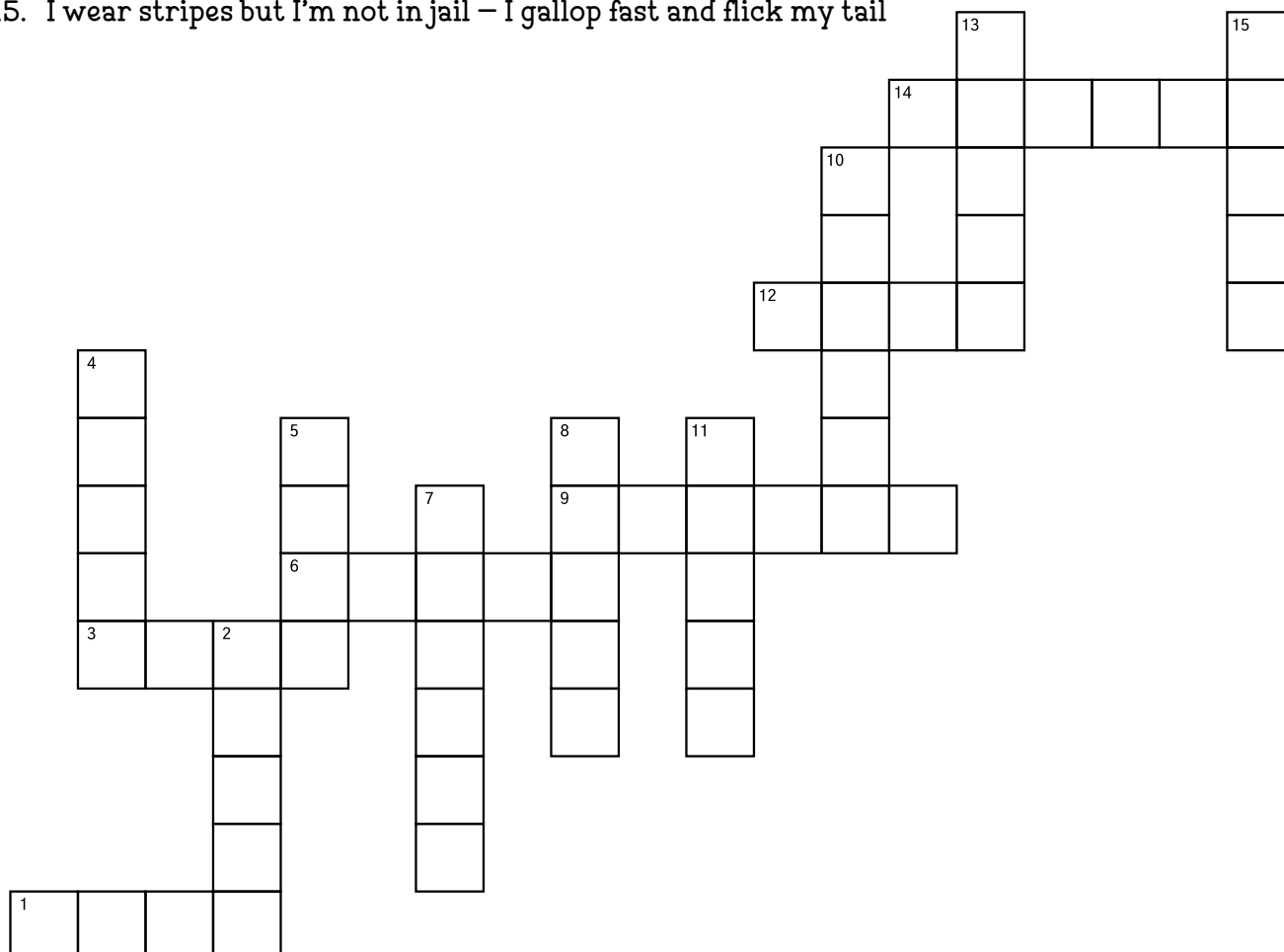


Across:

1. I light the night but I don't burn – I change my shape with every turn
3. I dance with the wind but I need a string to stay close
6. I live by the sea and hide something small – you'll hear the ocean if you call
9. I'm full of flowers and buzzing bees – I grow with water sun and breeze
12. I'm not a spoon I have four feet – I help you eat what's hard to eat
14. I help you cross when water's too wide – I stay still while you ride

Down:

2. I follow tracks and never steer – my cars pull close and whistle clear
4. I tell you when it's time to go – I have two hands but no hello
5. I help you smell cookies and flowers too – I stick out and sniff for you
7. I make marks but I'm not a pen My head disappears now and then
8. I'm made of snow not bricks or wood – and I keep you warm like a house should
10. I live by the sink I'm yellow and squishy – I clean not stink
11. I sweep the ground without a sound – my bristles brush all dirt around
13. I'm bigger than a car and carry a load – I rumble and roll down the road
15. I wear stripes but I'm not in jail – I gallop fast and flick my tail



WORDSEARCH

BUBBLES
TREASURE
VILLAGE
FURNACE
LANTERN

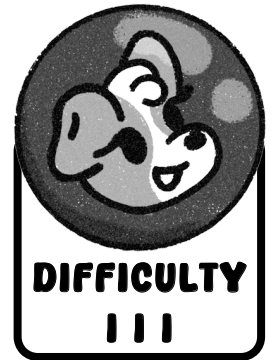
ROOSTER
PILLOW
MARKER
ANCHOR
CANDLE

GUITAR
CANYON
PLANET
LADDER
TIGER



K	X	G	K	P	S	V	D	N	G	M	W	O	H	P	S	A	N
Z	Z	K	X	G	N	I	M	I	B	H	M	R	F	L	C	G	K
D	O	R	H	O	C	L	F	V	H	J	Y	B	A	S	N	H	T
C	E	D	T	J	R	L	M	N	T	O	H	N	B	S	E	I	N
V	W	X	P	I	P	A	K	Q	L	U	T	G	E	L	Z	O	R
J	K	R	L	A	G	G	Q	A	X	E	P	L	D	B	Y	L	S
F	X	H	A	B	R	E	H	P	R	M	B	N	L	N	A	O	F
D	M	S	N	X	W	G	R	N	Q	B	A	Z	A	D	I	W	Q
W	D	S	E	N	M	Z	B	W	U	C	A	C	D	L	K	S	K
O	R	L	T	Z	R	A	X	B	L	Y	M	E	P	B	N	B	R
K	O	A	E	I	R	E	R	C	U	E	R	E	F	C	K	H	W
F	O	N	C	S	W	Z	R	K	A	G	R	G	U	I	T	A	R
I	S	D	A	W	M	O	X	P	E	F	B	U	U	M	P	R	L
G	T	G	N	R	M	M	L	I	V	R	E	J	S	F	Z	T	O
D	E	C	R	T	N	M	G	L	J	N	R	L	E	A	I	P	T
B	R	M	U	R	C	U	N	F	I	D	W	Q	G	F	E	S	B
V	D	R	F	M	T	N	U	N	L	P	Z	J	Q	U	O	R	A
Z	T	V	K	V	V	Z	R	O	H	C	N	A	J	S	L	Q	T

PIPA'S SECRET REFLECTION...



Can you figure out what the secret message says?

Hint: Look at the numbers and the X-O pattern.

X	-	O	-	X	-	X	-	O	-	O	-	X	-	O	-	X	-	X	-	O	-	O	-	X
A	B	C	D	E	F	G	H	I	J	K	L	M												
1	26	2	3	25	24																			

O	-	X	-	X	-	O	-	O	-	X	-	O	-	X	-	X	-	O	-	O	-	X	-	X
N	O	P	Q	R	S	T	U	V	W	X	Y	Z												

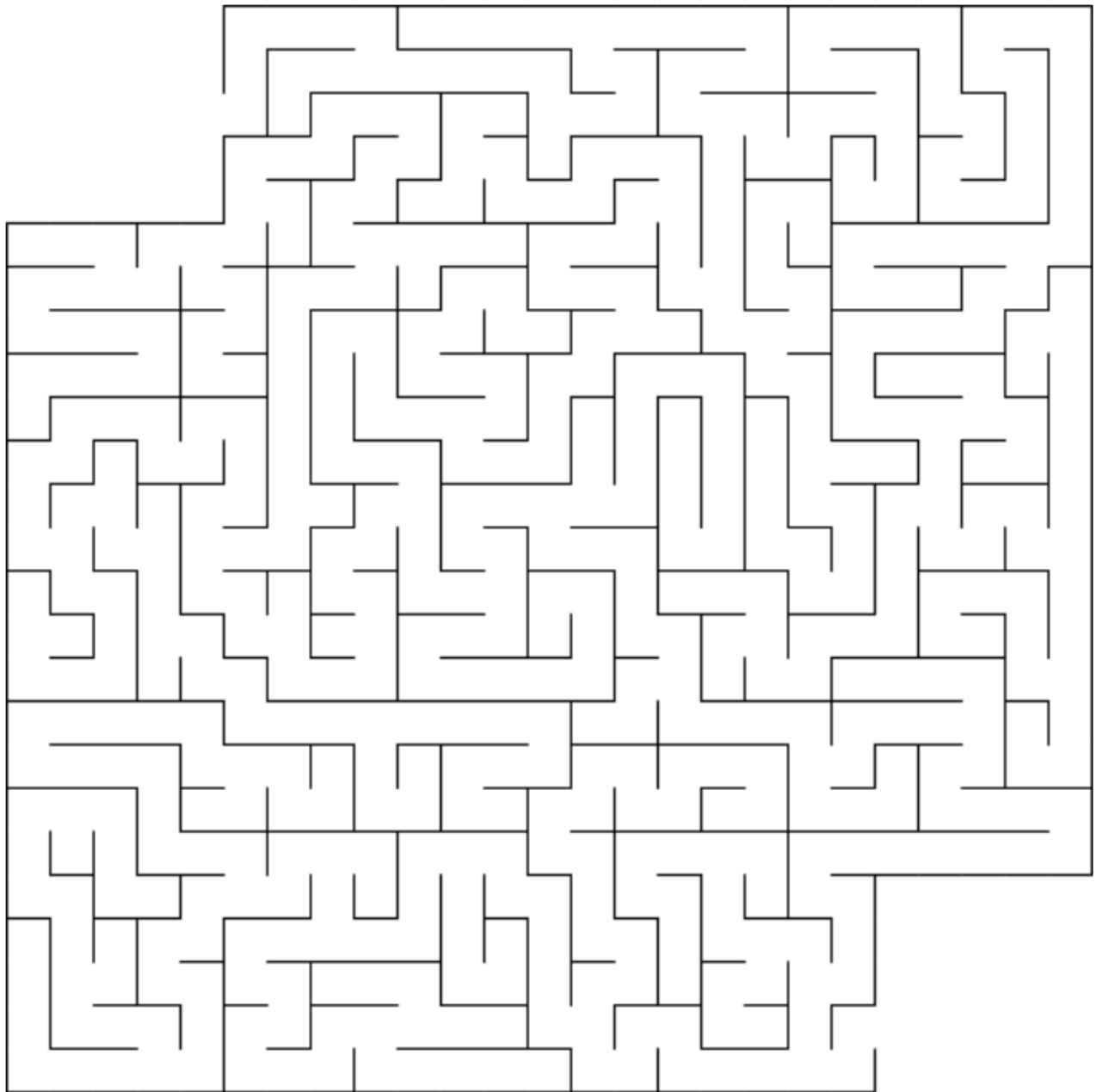
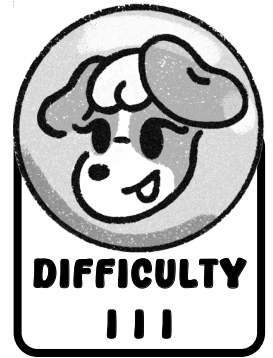
1 20 10 12 25 18 10 8 20 21 13 2 8 7 25

1 24 17 25 18 4 8 8 3

9 11 25 10 17 5 8 20 10

LABYRINTH

Follow the path that leads to the right place – but watch out for tricky turns!





You can only write the numbers 1, 2, 3 & 4.

In each section, there's a final sum, the numbers you write must add to that number.

Numbers cannot repeat in each row or column, that means that each row and column must have all numbers from 1 to 4.

EXAMPLE: & Solution

8+	4	3	1	7+	2
4+	3	6+	4	2	1
1	5+	2	3		4
3+	2	1	7+	4	3

4	3	1	2
3	4	2	1
1	2	3	4
2	1	4	3

Puzzle #1

3+	7+		4+
	6+		
7+		9+	
4+			

Puzzle #2

6+		4+	
7+	3+		6+
	4+		
3+		7+	

Puzzle #3

5+		5+	
5+	6+		7+
	6+		
		6+	

Puzzle #4

7+		6+	
7+	3+		
5+			



ELECTRO-MAGNETIC FIELDS

$$\begin{aligned}
 \int_m dx' K(x_m, x') &= 2 \int_{x_m}^{x_m + \Delta x/2} dx' K(x_m, x') = 2 \int_0^{\Delta x/2} dx' K(x_m, x' + x_m) \\
 &\simeq \frac{i}{2} \int_0^{\Delta x/2} dx' \left[1 + i \frac{1}{\pi} \ln \left(\frac{\gamma}{2} k x' \sqrt{1 + f'^2(x_m)} \right) \right] \\
 &= \frac{i \Delta x}{4} \left\{ 1 + i \frac{2}{\pi} \ln \left(\frac{\gamma k}{4e} \Delta x \sqrt{1 + f'^2(x_m)} \right) \right\},
 \end{aligned}$$

where $\ln(e) = 1$.

We can therefore cast the integral equation into a matrix equation of the form:

$$\sum_{n=1}^N A_{mn} U_n = b_m,$$

where

$$\begin{aligned}
 U_n &= U(x_n) \text{ is the unknown,} \\
 b_m &= b(x_m), \\
 A_{mn} &= \begin{cases} \Delta x K(x_m, x_n) & \text{for } m \neq n \\ \frac{i \Delta x}{4} \left\{ 1 + i \frac{2}{\pi} \ln \left(\frac{\gamma k}{4e} \Delta x \sqrt{1 + f'^2(x_m)} \right) \right\} & \text{for } m = n \end{cases}
 \end{aligned}$$

The system can now easily be solved numerically.