

Winter Activity Book



5th Grade

Name: _____

Winter Fun Facts

Read the fun facts carefully. You will need them for the activities!

Astronomical winter lasts from the solstice (December 21/22) to the spring equinox (March 20/21), when day and night are equal again.



Snowflakes start as water vapor freezing around a tiny dust particle. Water molecules always bond in hexagons, six-sided shapes, which is why every snowflake has six arms.



A snowflake's final shape depends on temperature and moisture as it falls: needles, plates, columns, or the classic star shape.



Fresh snow is up to 95 percent trapped air. That is why snow muffles sound, and why animals dig snow caves to stay warm.



True hibernation is extreme: a groundhog's body temperature can drop to about 40 °F and its heart to 5 beats per minute. Bears stay warmer and can wake, which scientists call torpor.



Permafrost is ground that stays frozen for at least two years in a row. In parts of Alaska it reaches hundreds of feet deep.



Glaciers are slow-moving rivers of ice that form where snow piles up faster than it melts. They store about two-thirds of all fresh water on Earth.



The most snow ever measured in one US season fell on Mt. Baker, Washington, in 1998–99: 1,140 inches, that is 95 feet.



Ski jumping has been an Olympic sport since the first Winter Games in 1924. Jumpers reach speeds of about 55 miles per hour on the ramp.



Activities

You can find all the answers in this book!

1. When does astronomical winter end?

2. How does a snowflake begin?

3. Why do snowflakes have six arms?

4. How much of fresh snow is trapped air, and what does that do?

5. What happens to a groundhog's body in true hibernation?

6. What is permafrost?

7. What do glaciers store?

8. Since when is ski jumping an Olympic sport?

9. Go to mokifun.com and play: Ski Jump.

What was your score? I scored _____ points.

Secret Message

Solve the problems and crack the code!

Activity 1

14 = T

45 = O

80 = C

96 = H

132 = A

① $8 \times 12 =$ _____

② $5 \times 9 =$ _____

③ $2 \times 7 =$ _____

④ $10 \times 8 =$ _____

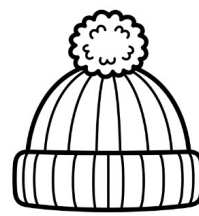
⑤ $5 \times 9 =$ _____

⑥ $10 \times 8 =$ _____

⑦ $5 \times 9 =$ _____

⑧ $11 \times 12 =$ _____

1	2	3	4	5	6	7	8



Activity 2

24 = R

40 = C

60 = M

99 = B

120 = H

132 = D

① $9 \times 11 =$ _____

② $2 \times 12 =$ _____

③ $3 \times 8 =$ _____

④ $4 \times 6 =$ _____

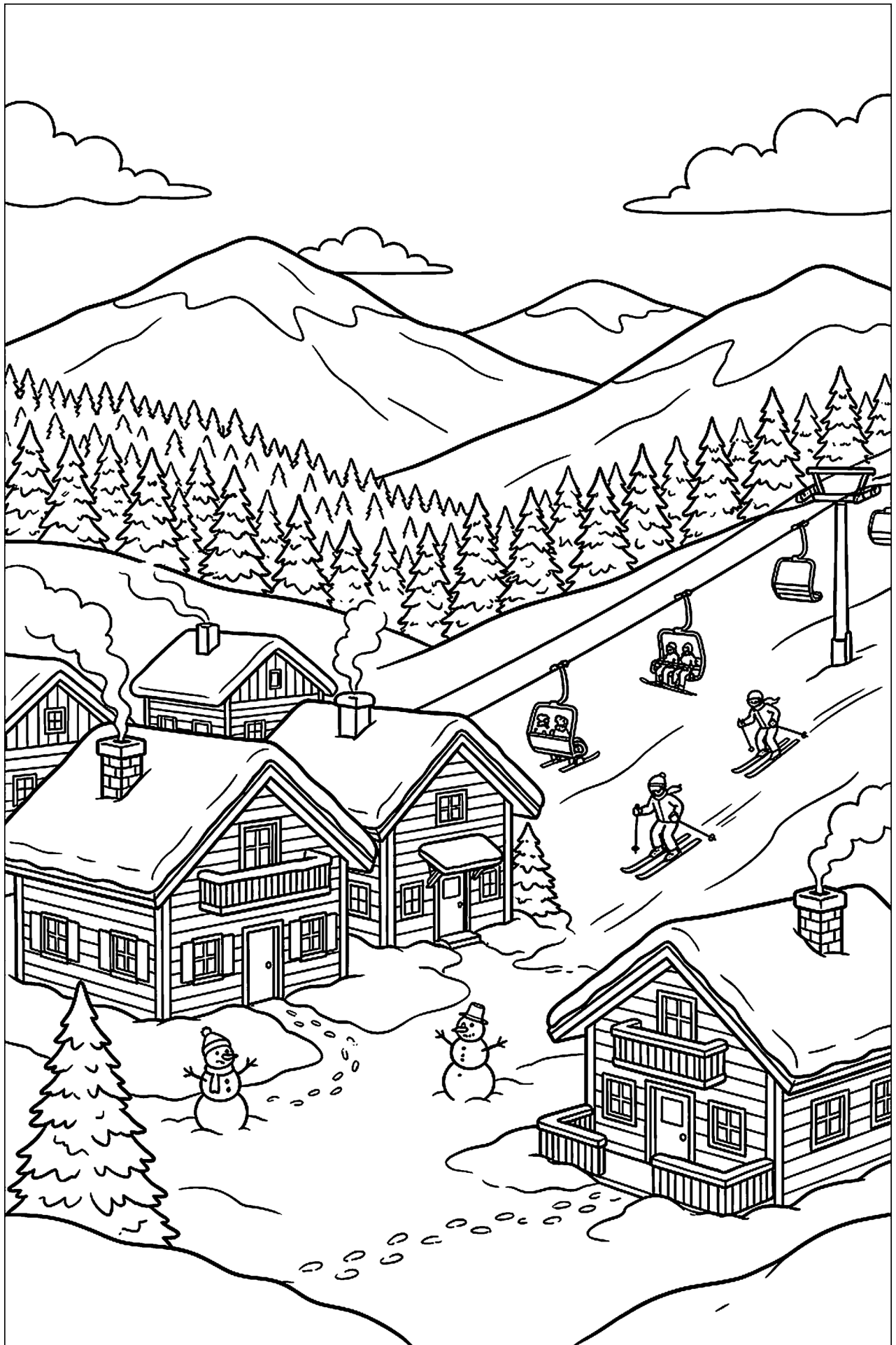
⑤ $5 \times 8 =$ _____

⑥ $11 \times 12 =$ _____

⑦ $10 \times 12 =$ _____

⑧ $5 \times 12 =$ _____

1	2	3	4



Word Scramble

Unscramble the letters. All the words are about winter!



S E O S N A →

W N A N S M O →

B W L N A L S O →

I E T M T N →

U Y L F R R →

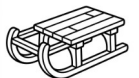
I B O E F S R T T →

I E A L E R C F P →

A A E L H N A V C →

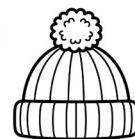
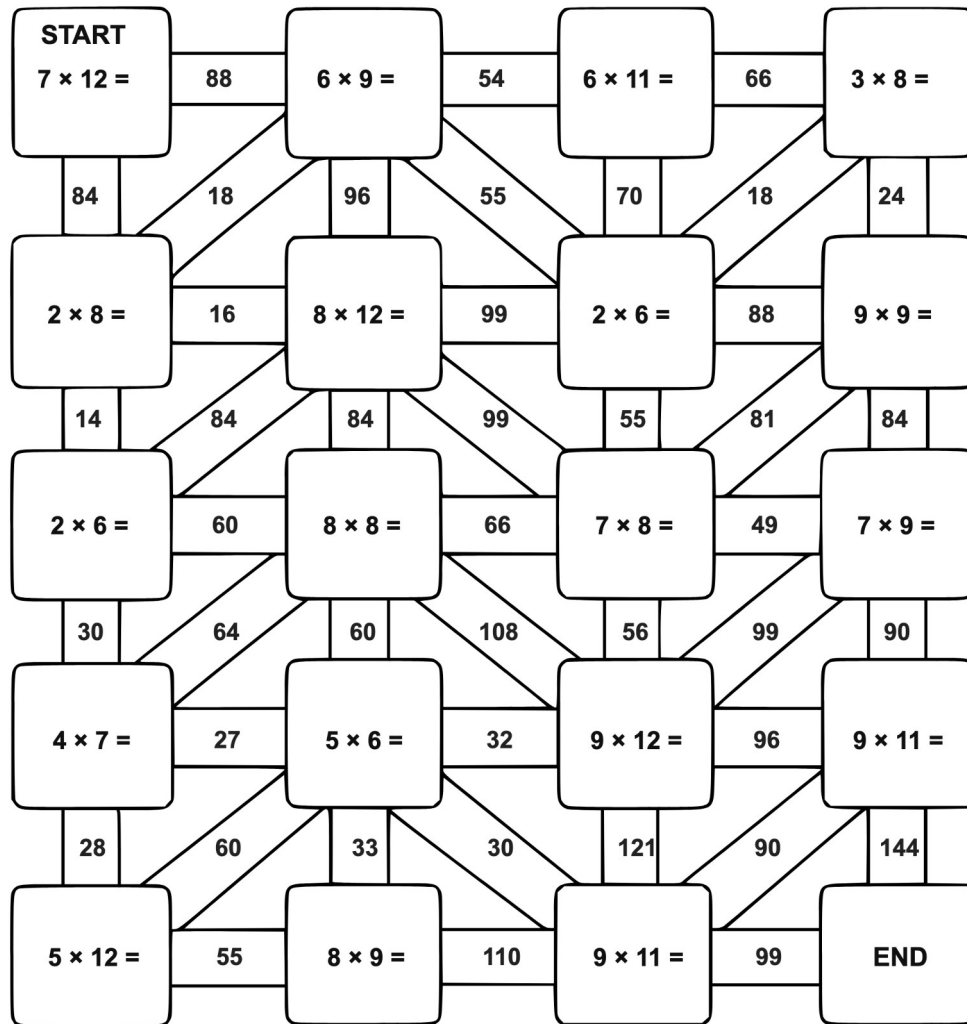
T N R E B H A I E →

L A Z D R Z I B →



Multiplication Maze

Solve the problems and color the correct path from start to end.



Activity

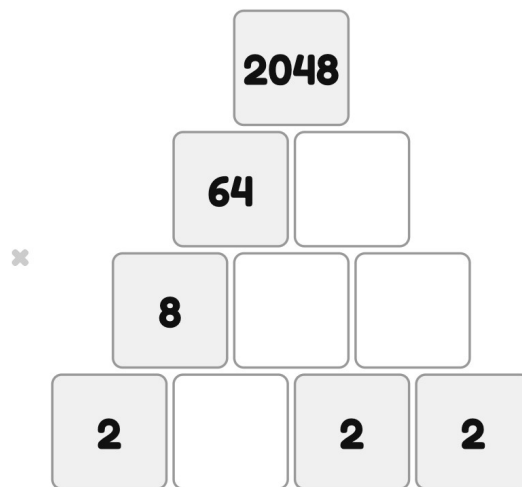
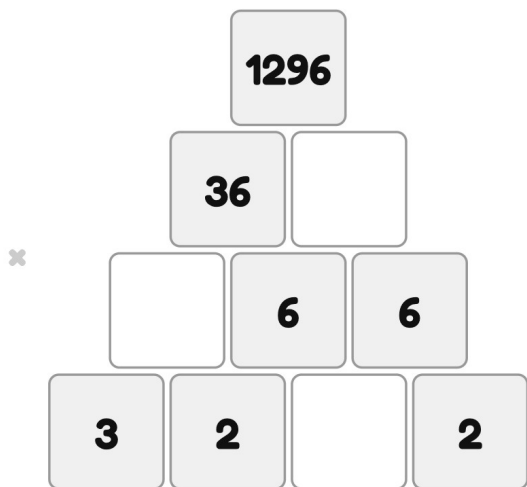
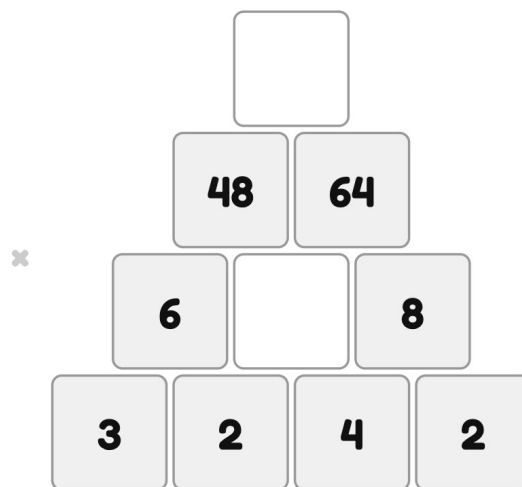
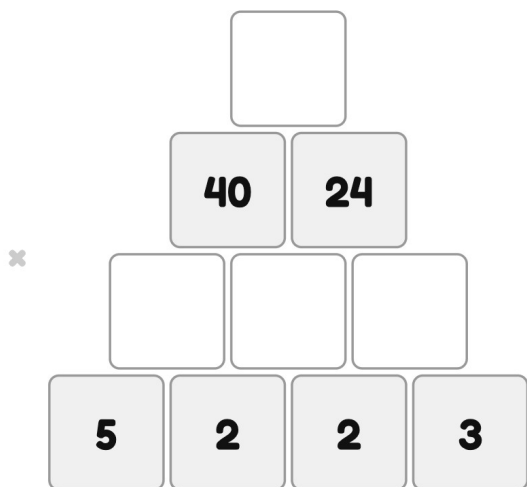
Go to mokifun.com and play: Math Monkey

How many problems did you get right?

My score: _____

Math Pyramid

Each box is the product (x) of the two boxes below it. Fill in the empty boxes.



Word Search

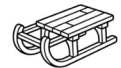
Find all the words. The leftover letters spell the secret word.



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



ice	ski	hat	scarf
skate	storm	igloo	boots
glove	cocoa	winter	mitten
freeze	shovel	candle	snowman
penguin	january	blizzard	snowball
earmuffs			



Solution: _____



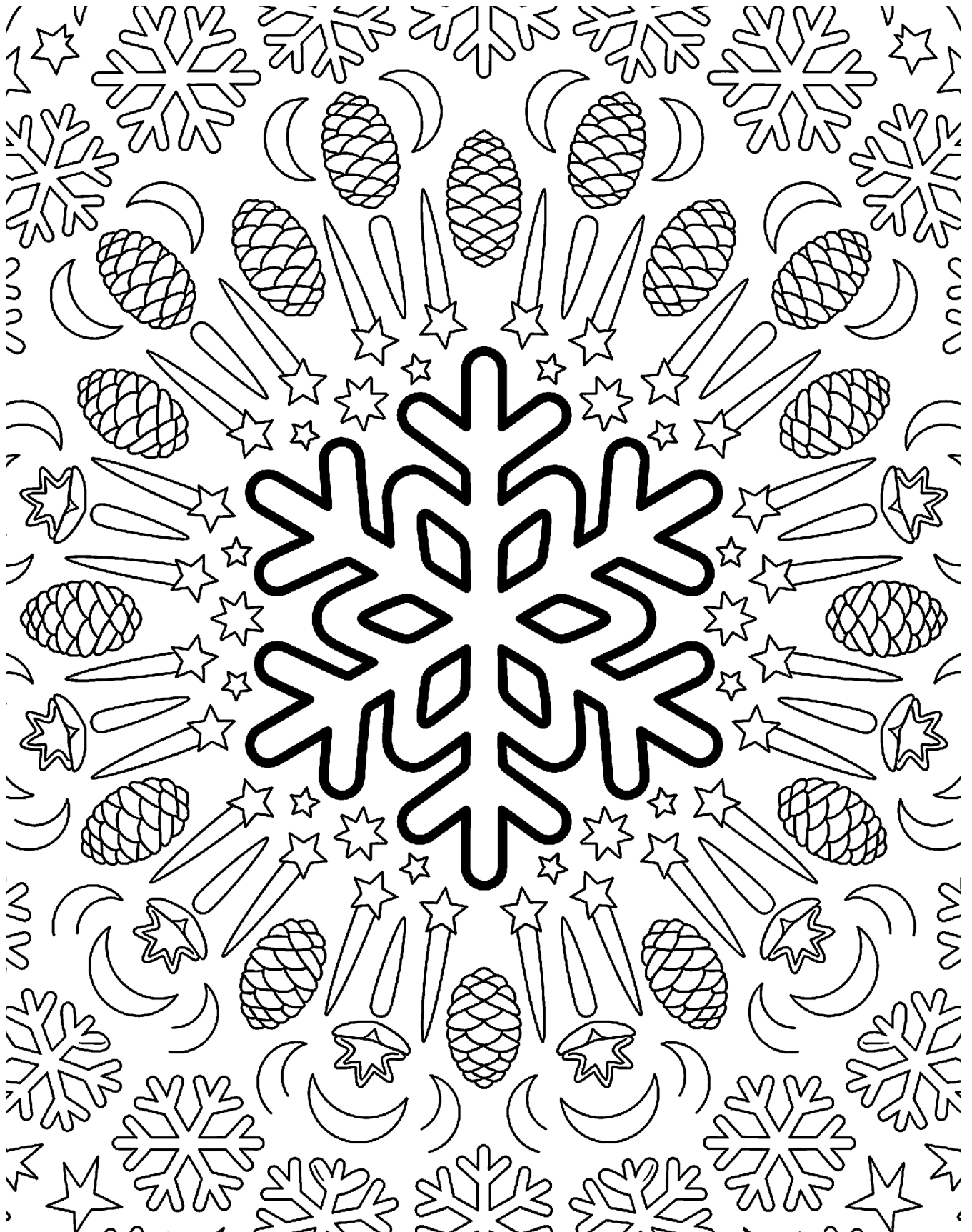
Activity

Go to mokifun.com and play: Word Race

How fast can you find the words?

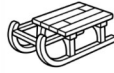
My score: _____

Mandala



Sudoku

Every digit from 1 to 9 appears once in each row, column, and box.



Puzzle 1

			2		9	3	5	
3			7	1				9
	6				3			7
			3					6
7			8			5		3
5	3	6			2	8		
	5			8		7		2
2	1		4				6	
9					5			

Puzzle 2

3			6			1		8
	6		1					5
8	1	7		3				9
							8	7
		8	7		3	6	2	
	4		2		5	3		
			4	5	1			
5	9					8		
		1			9			3

Puzzle 3

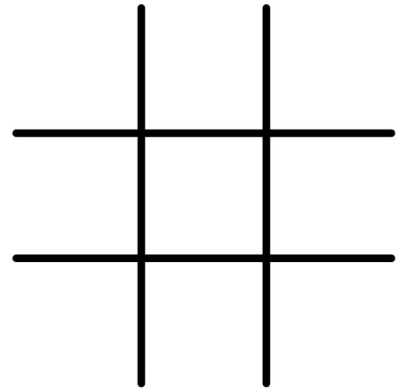
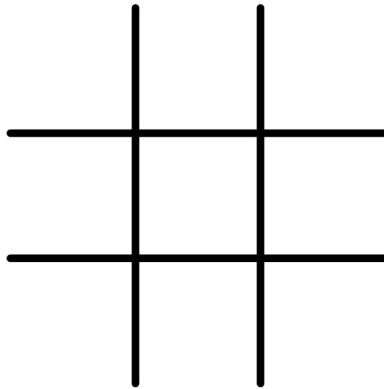
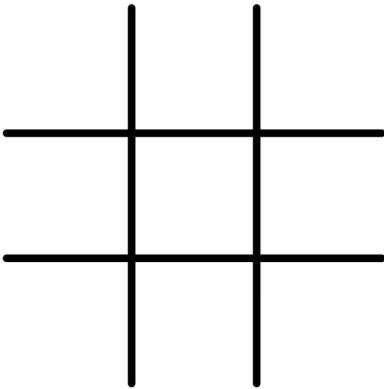
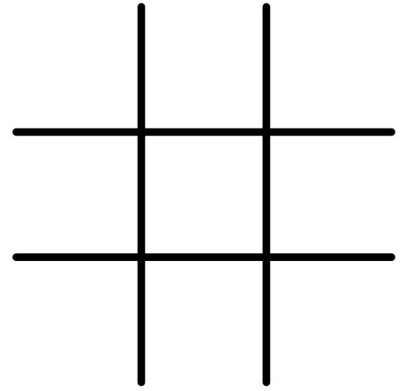
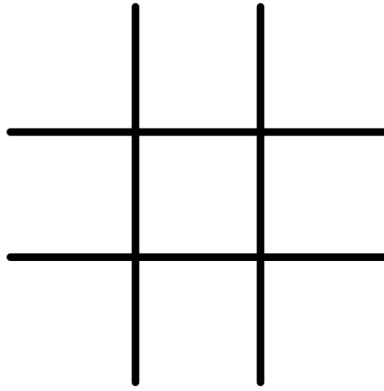
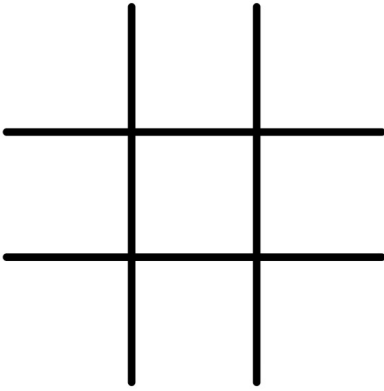
4						3		
3	8	5				1	7	2
		2			5		4	
				9		5	3	
1		7		8		2	6	
	9	6	2		7			4
7		3				4	2	
	1							
			4		1			3

Puzzle 4

			2	3		6		9
9	5	6				2	3	1
						7		4
8	6		4			1		
2			1	6		3		7
		1			5			
5			6		2			8
	7				9			6
				8			7	

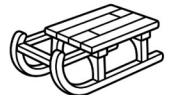
Tic-Tac-Toe

A game for two. Who wins the most games?



How to play Tic-Tac-Toe (2 players)

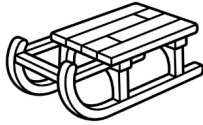
1. One player uses X, the other uses O. Take turns marking one square.
2. The first player to get three in a row – across, down, or diagonally – wins the game.
3. Board full and no three in a row? It is a tie. Play six games: who wins the most?



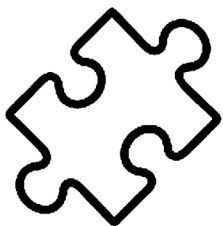
Picture Puzzle

The numbers tell you how many squares in a row to color. What picture appears?

See "2 1"? Color 2 squares, leave at least 1 empty, then color 1 more.

[illegible]

FUN GAMES!



PUZZLES



MAZES



RACE



COLORING