

# Geometry



My Name

**Mathseeds Geometry Grade 3 Student Book**

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# Contents

## Topic 1: 3D objects

Page	Date Completed
1 • Basic 3D objects .....	/ /
2 • Prisms .....	/ /
3 • Pyramids .....	/ /
4 • Cube nets .....	/ /
5 • Nets .....	/ /
6 • Prisms and pyramids .....	/ /
7 • 3D objects .....	/ /
8 • Who am I? problems .....	/ /
9 • 3D games .....	/ /

## Topic 2: Angles

Page	Date Completed
10 • Angles .....	/ /
11 • Right angles .....	/ /
12 • Perpendicular lines .....	/ /
13 • Angle sizes .....	/ /
14 • Comparing angles .....	/ /
15 • Angles in objects .....	/ /
16 • Angle problems .....	/ /
17 • Angles games .....	/ /

# Contents

## Topic 3: 2D shapes

Page	Date Completed
18 • Polygons .....	<input type="text" value="/"/> <input type="text" value="/"/>
19 • Parallel lines .....	<input type="text" value="/"/> <input type="text" value="/"/>
20 • Quadrilaterals .....	<input type="text" value="/"/> <input type="text" value="/"/>
21 • Quadrilateral descriptions .....	<input type="text" value="/"/> <input type="text" value="/"/>
22 • Quadrilateral comparisons .....	<input type="text" value="/"/> <input type="text" value="/"/>
23 • Angles in shapes .....	<input type="text" value="/"/> <input type="text" value="/"/>
24 • Regular and irregular shapes .....	<input type="text" value="/"/> <input type="text" value="/"/>
25 • 2D shape sudoku .....	<input type="text" value="/"/> <input type="text" value="/"/>
26 • Guess my shape game .....	<input type="text" value="/"/> <input type="text" value="/"/>

## Topic 4: Symmetry

Page	Date Completed
27 • Symmetrical or not? .....	<input type="text" value="/"/> <input type="text" value="/"/>
28 • Lines of symmetry.....	<input type="text" value="/"/> <input type="text" value="/"/>
29 • Identify symmetry .....	<input type="text" value="/"/> <input type="text" value="/"/>
30 • Symmetry in shapes .....	<input type="text" value="/"/> <input type="text" value="/"/>
31 • Symmetry problems .....	<input type="text" value="/"/> <input type="text" value="/"/>
32 • Symmetrical pictures .....	<input type="text" value="/"/> <input type="text" value="/"/>

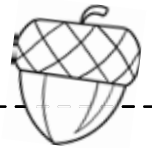
## Topic 5: Location

Page	Date Completed
33 • Location .....	/ /
34 • Compass directions .....	/ /
35 • Directions .....	/ /
36 • Coordinates .....	/ /
37 • Map reading .....	/ /
38 • Make a map .....	/ /
39 • Map problems .....	/ /
40 • Coordinate games .....	/ /

## Resources

Page
41 • Grid paper
42 • 10 x 10 coordinate grids
43 • 10-sided spinner

# In this book



The **Mathseeds** program teaches children the core math and problem solving skills needed to be successful at school.

Each online lesson begins by introducing and modeling a mathematical concept. The child then completes a wide range of activities to practice the new skill. These activities present the content in many different ways, so children learn to use and apply each new skill in a variety of situations.

This book is designed to supplement the online program with more exercises in the core mathematical concepts. Each unit focuses on a topic within the main learning strand, presenting a series of pen and paper activities, word problems, puzzles, and games to practice their skills and understanding.

The topics in this book align with the following components of the State Standards:

**3.G.A.1** Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

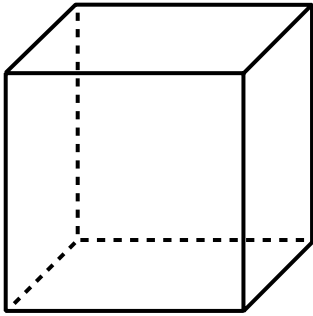


# Basic 3D objects

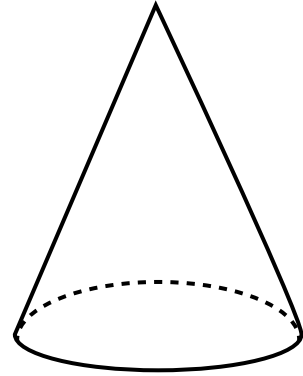
3D objects

1 Name the shapes.

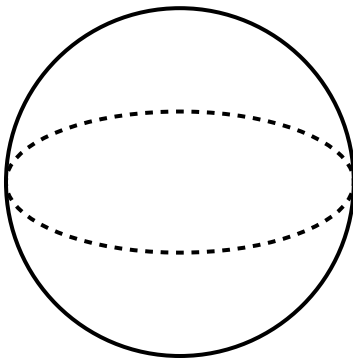
**a**



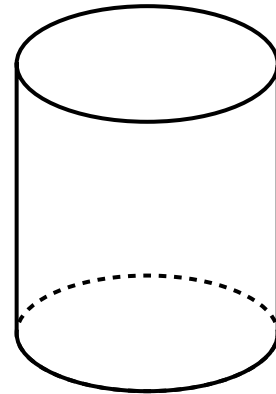
**b**



**c**



**d**



2 Which shapes have a curved surface? \_\_\_\_\_

3 Count the flat faces in these shapes:

**a** \_\_\_\_\_

**b** \_\_\_\_\_

**d** \_\_\_\_\_

4 Count the edges in each shape:

**a** \_\_\_\_\_

**b** \_\_\_\_\_

**c** \_\_\_\_\_

**d** \_\_\_\_\_

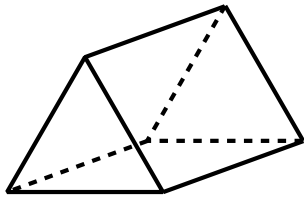
5 Which shape has 8 vertices? \_\_\_\_\_

# Prisms

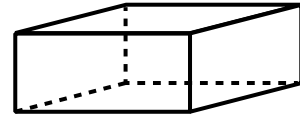
3D objects

**1** Color the end faces of these prisms. **2** Name each prism.

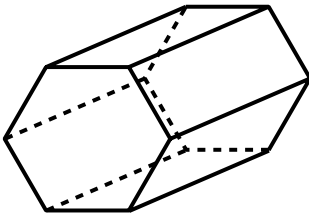
**a**



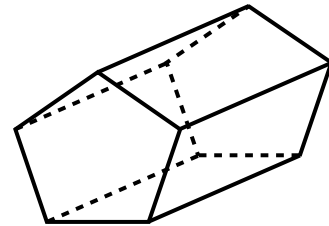

**b**




**c**




**d**




**3** Draw the faces for each prism.

Prism	Faces							
<b>a</b> Triangular								
<b>b</b> Rectangular								
<b>c</b> Hexagonal								
<b>d</b> Pentagonal								

**4** Sometimes the end face of a prism is called a “base”. Color the base shapes in the chart above.

**5** What do you notice about all the other faces?

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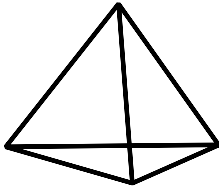


# Pyramids

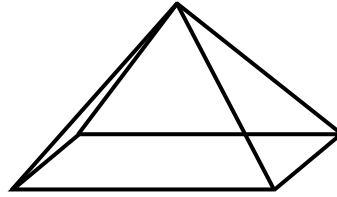
3D objects

**1** Color the bases of these pyramids. **2** Name each pyramid.

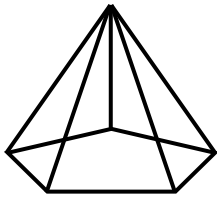
**a**



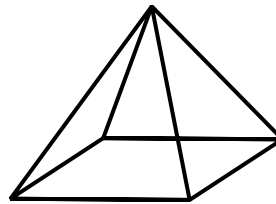

**b**

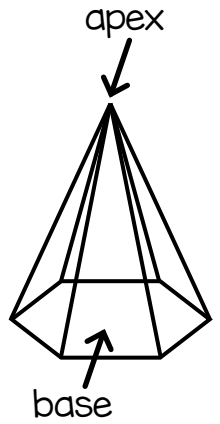



**c**




**d**





**3** What does a pyramid have that a prism does not? \_\_\_\_\_

**4** Draw the faces for each pyramid.

Prism	Faces							
<b>a</b> Triangular								
<b>b</b> Rectangular								
<b>c</b> Pentagonal								
<b>d</b> Square								

**5** Color the base shapes in the chart above.

**6** What do you notice about all the other faces?

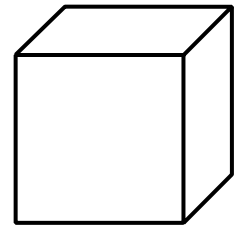
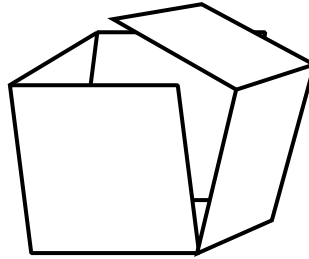
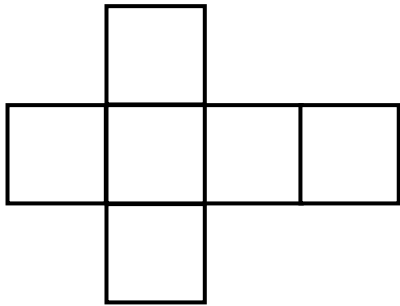
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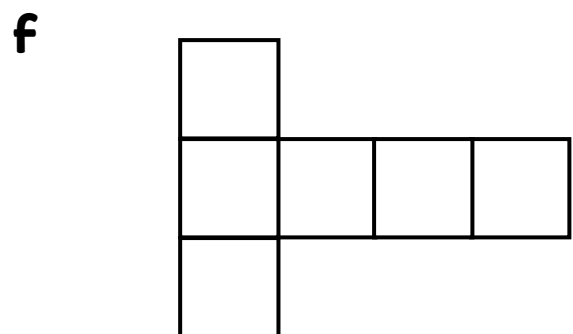
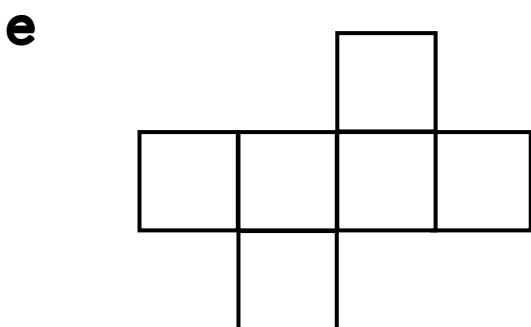
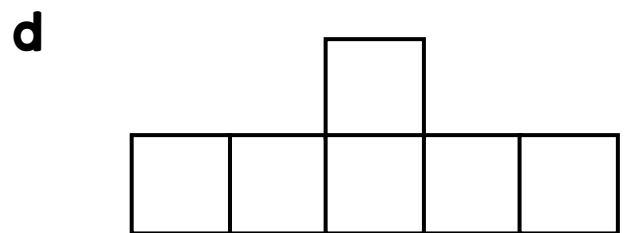
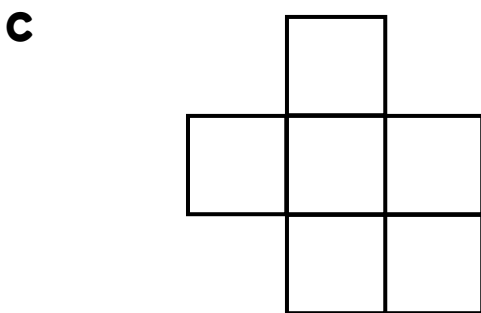
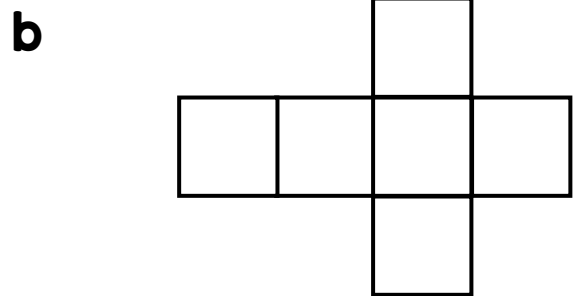
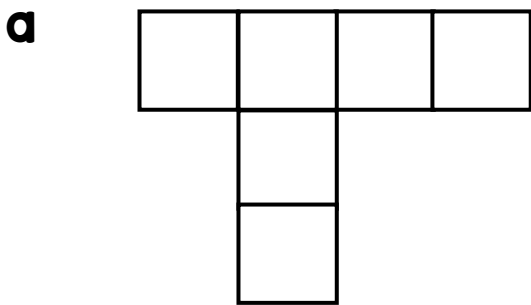
# Cube nets

This is a cube net. It has 6 square faces.  
It folds up to make a cube.



Some of the nets below fold up to make a cube.  
Some do not. Color the cube nets in blue.

Try to imagine folding them up, or you could copy the nets onto spare paper, cut them out and try folding them up.

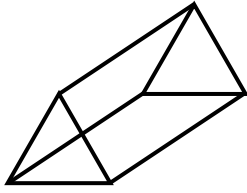


# Nets

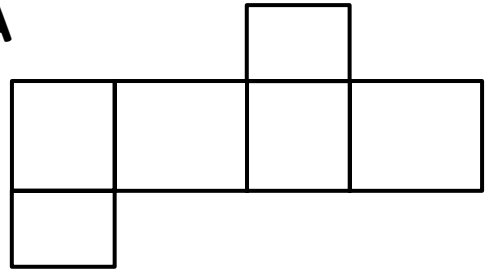
3D objects

1 Name the 3D objects. 2 Match the 3D objects to their nets.

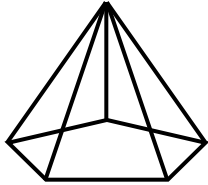
**a**



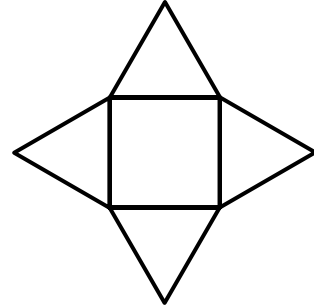
**A**



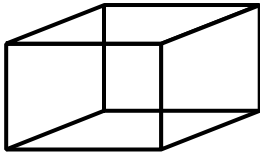
**b**



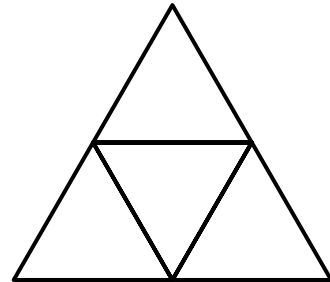
**B**



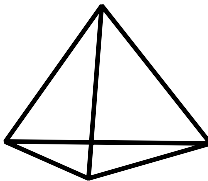
**c**



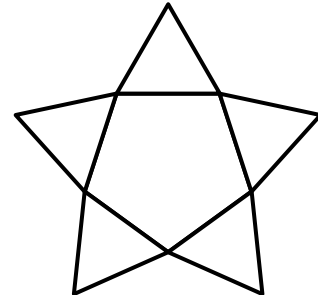
**C**



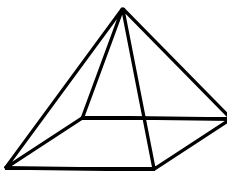
**d**



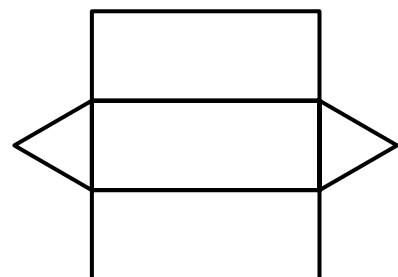
**D**



**e**



**E**



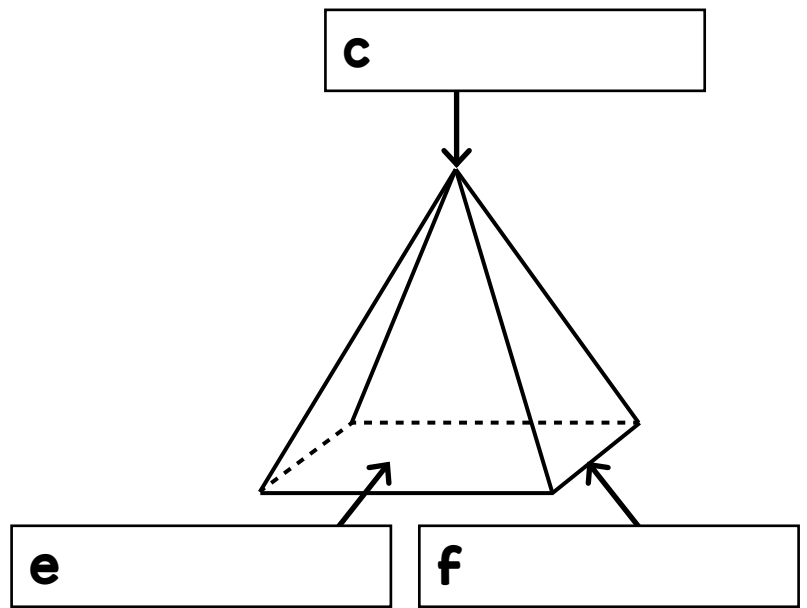
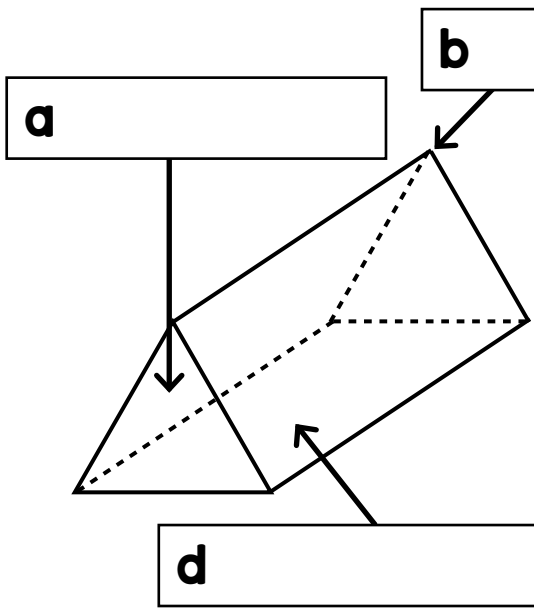
# Prisms and pyramids

3D objects

1 Label the features of these shapes. Use the word bank.

## Word bank

vertex base face apex edge



2 Draw the net for these shapes.

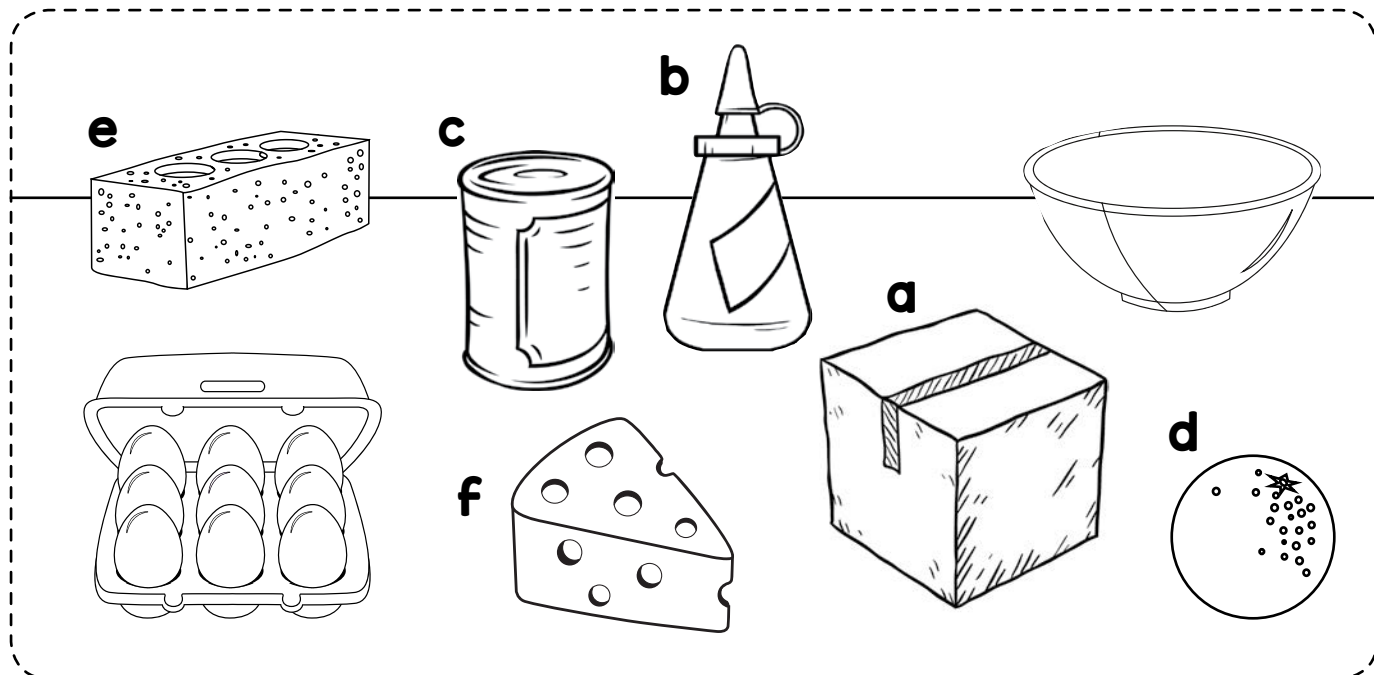
**a** square prism

**b** rectangular pyramid

# 3D objects

3D objects

1 Name the 3D objects in the picture.



**a** \_\_\_\_\_ **b** \_\_\_\_\_  
**c** \_\_\_\_\_ **d** \_\_\_\_\_  
**e** \_\_\_\_\_ **f** \_\_\_\_\_

2 Draw a real-life object for these 3D shapes:

**a** pyramid

**b** cylinder

# Who am I? problems

3D objects

I Use the clues to name and draw each 3D object.

- a** I have an apex and a base.  
I have 1 curved surface  
and 1 flat face.

I am a \_\_\_\_\_.

- b** I have 6 flat faces.  
They are all the same shape and size.  
I have 8 vertices.

I am a \_\_\_\_\_.

- c** I have one curved surface.  
I also have 2 flat faces  
and 2 edges.

I am a \_\_\_\_\_.

- d** I have an apex and a base.  
My sides are all triangles  
and there are 4 of them.

I am a \_\_\_\_\_.

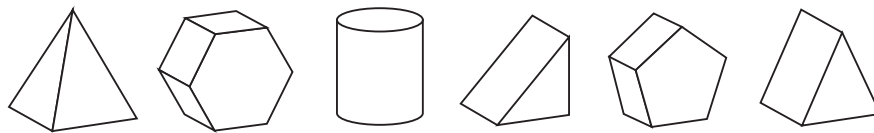
- e** I have 5 flat faces.  
Most of my faces are triangles  
but one is not.

I am a \_\_\_\_\_.



## I SPY

*Play with a group of 4 or more. No equipment needed.*

- 1 One person is the 'spy'. The spy describes an object in the room, using only geometrical terms for 3D objects, e.g. faces, surfaces, curved, flat, edges, apex, base, vertices.
- 2 Everyone else tries to guess what the object is.
- 3 When someone guesses correctly, it is their turn to be the spy. If no one guesses, the spy gets another turn. (Any disputes about the accuracy of the spy's description should be settled by a group vote.)



## 3D BINGO

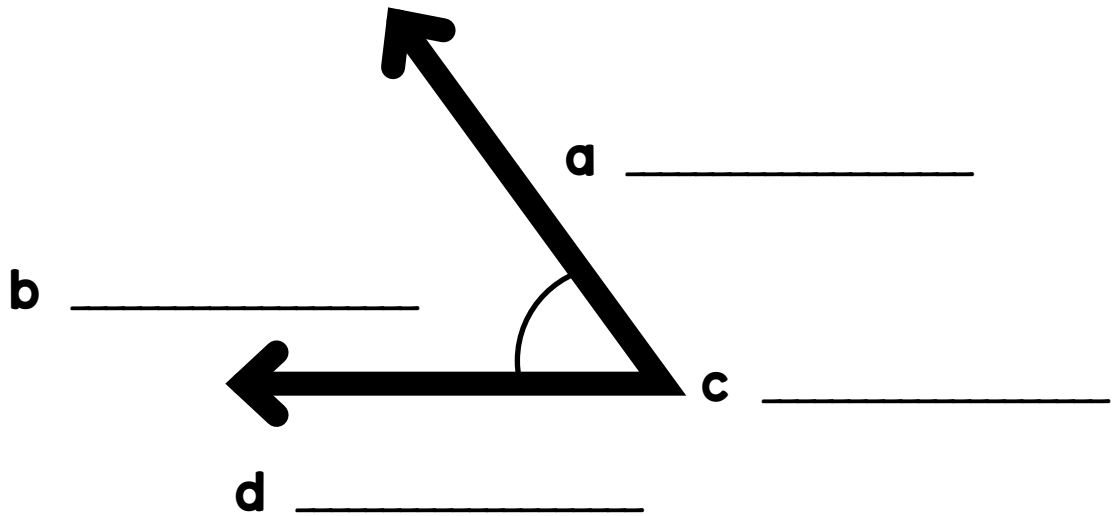
*Play in small groups or as a class. You all need pen  and paper. *

- 1 One person is the 'caller'. They run the game for the players.
- 2 Each player rules up a grid, four columns across and four rows down. In each square draw a 3D object (you can repeat objects).
- 3 The caller calls out a feature of a 3D object, e.g. 'I curved surface, 6 flat faces, 2 edges, an apex, 6 vertices, a square base ...'
- 4 Anyone who has that feature in one or more of the shapes on their grid can cross off 1 shape.
- 5 Repeat steps 3 and 4 until someone has a complete row or column crossed off and calls 'Bingo!' The winner becomes the caller for the next game.

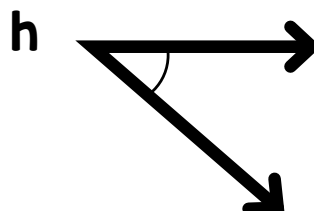
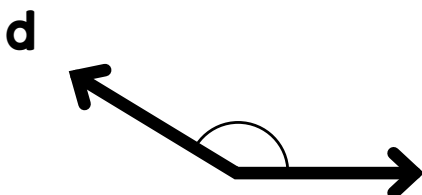
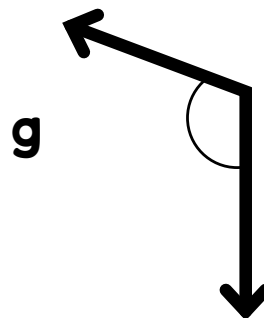
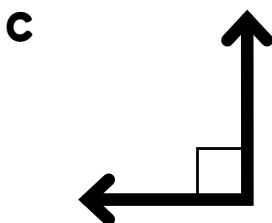
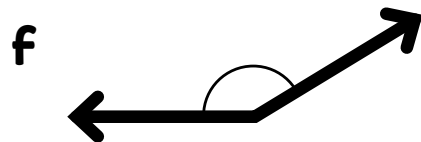
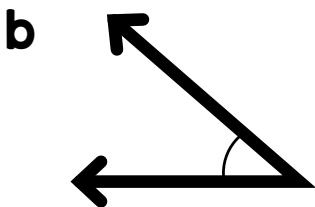
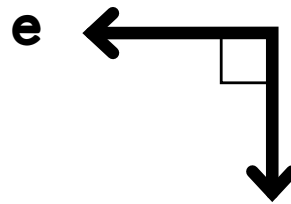
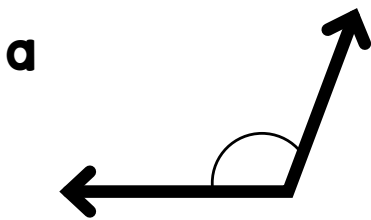
# Angles

1 Name the parts of the angle.

arm  
angle  
vertex  
arm



2 Connect the angles that are the same size.

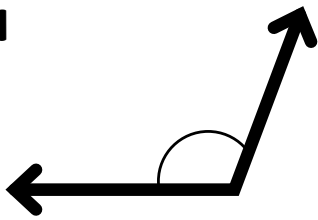




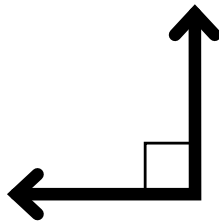
# Right angles

1 Color the right angle red.

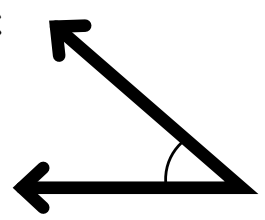
a

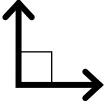


b

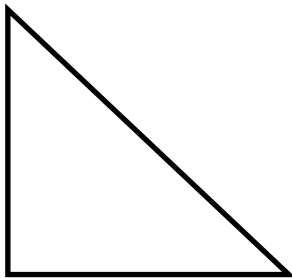


c



2 Draw the right angle symbols in red. Eg 

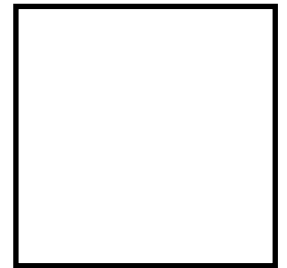
a



b



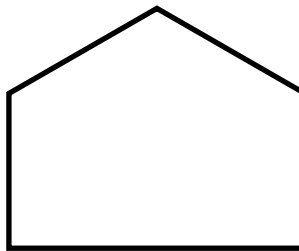
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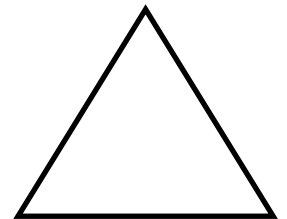
d



e

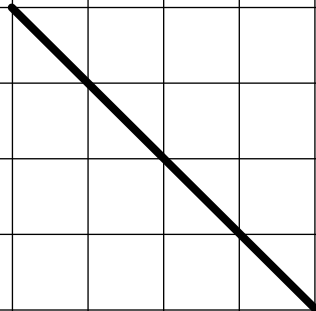


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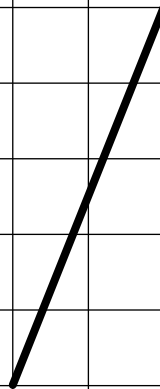


3 Complete these right angle triangles.

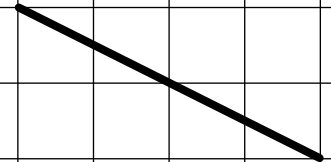
a



b



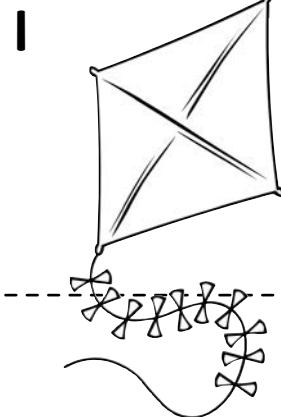
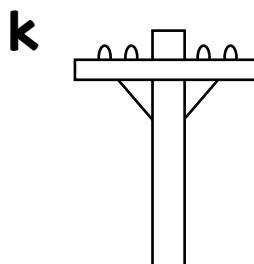
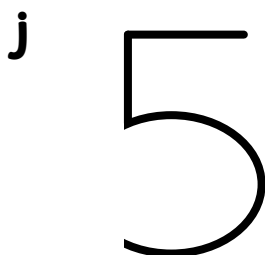
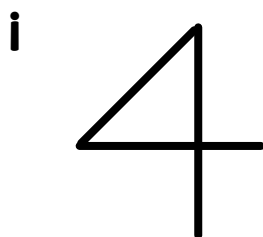
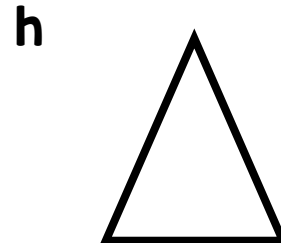
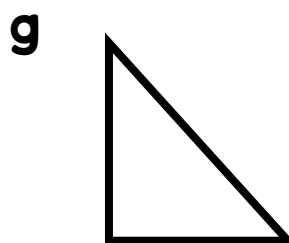
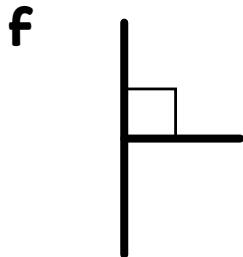
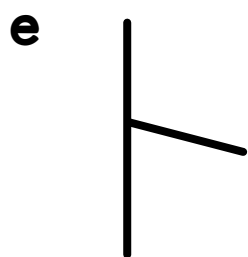
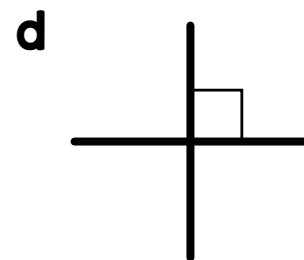
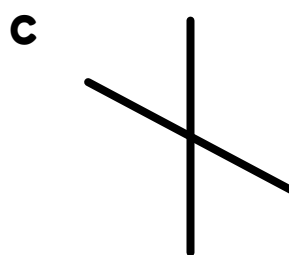
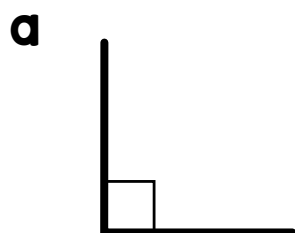
c



# Perpendicular lines

When two lines meet at a right angle, they are called perpendicular lines. Perpendicular lines can extend beyond their meeting point.

1 Circle the perpendicular lines.

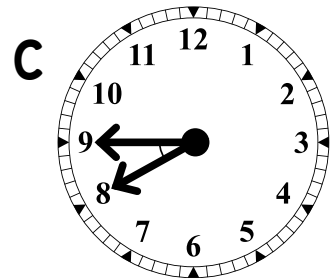
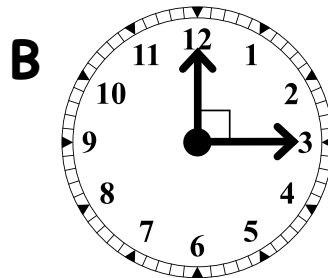
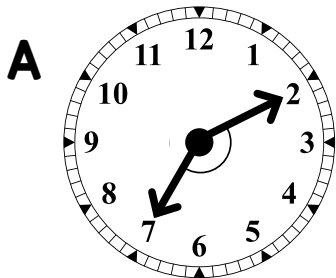


2 Draw a perpendicular line to each given line. Mark the right angles.

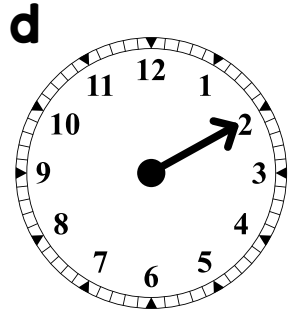
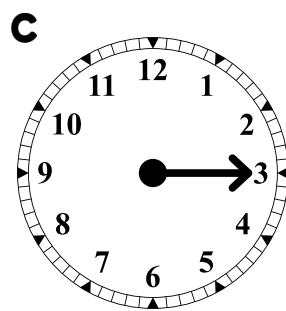
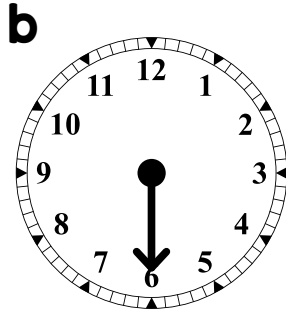
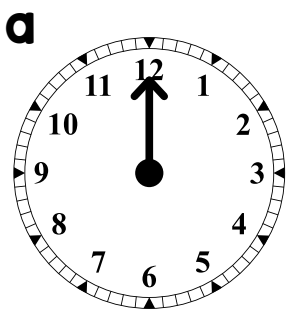
<b>a</b>											<b>c</b>
<b>b</b>											<b>d</b>

# Angle sizes

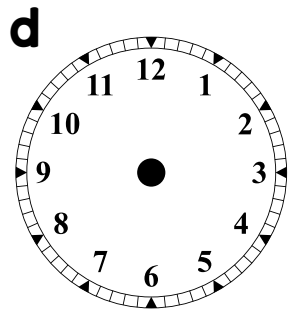
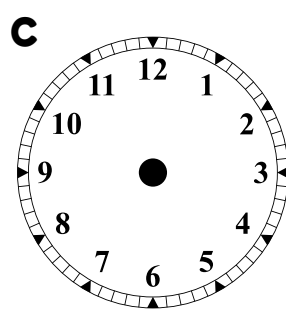
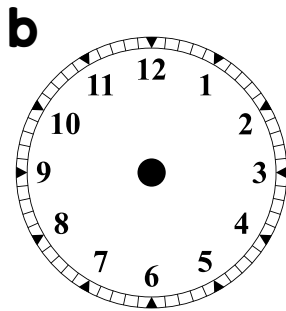
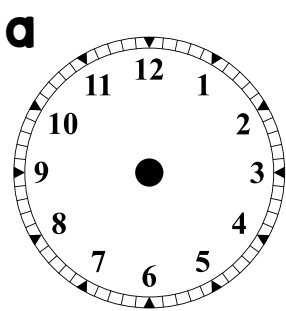
- 1
- a Which is a right angle? \_\_\_\_\_
  - b Which is smaller than a right angle? \_\_\_\_\_
  - c Which is larger than a right angle? \_\_\_\_\_



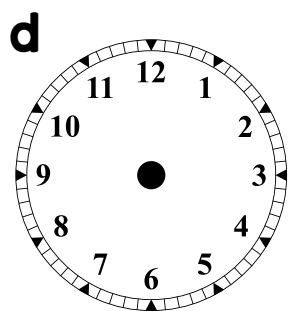
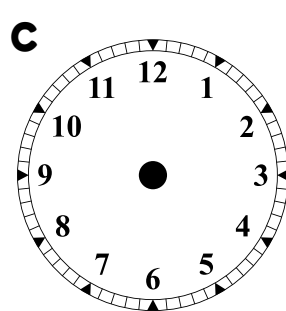
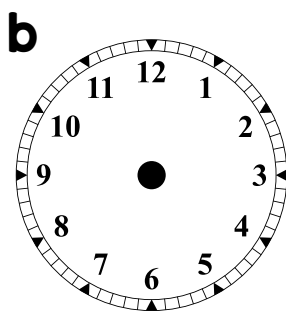
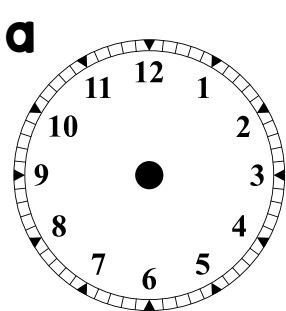
- 2 Draw the missing clock arms. Make 4 different right angles.



- 3 Make 4 angles smaller than a right angle.



- 4 Make 4 angles larger than a right angle.

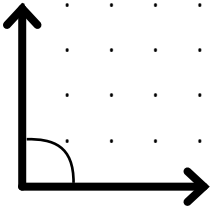
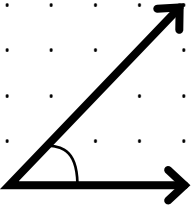



# Comparing angles

Copy the angle.

Draw a larger angle.

Draw a smaller angle.

	<b>1a</b>	<b>1b</b>	<b>1c</b>
	<b>2a</b>	<b>2b</b>	<b>2c</b>
	<b>3a</b>	<b>3b</b>	<b>3c</b>

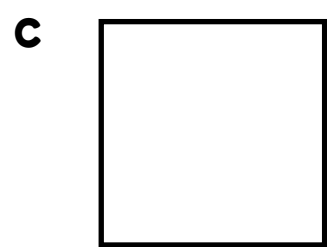
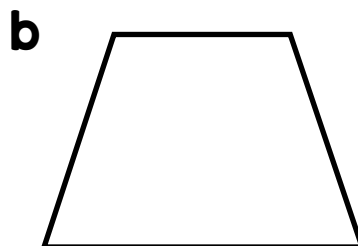
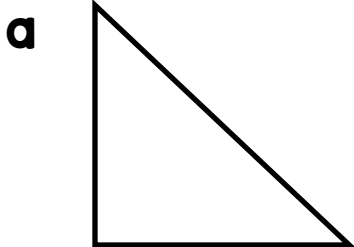
**4** Angle **1a** is a right angle. Which angles are:

**a** smaller than a right angle? \_\_\_\_\_

**b** larger than a right angle? \_\_\_\_\_

**c** Did you draw any other right angles? \_\_\_\_\_

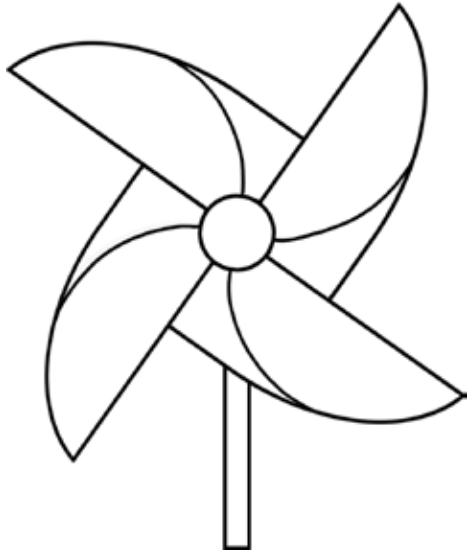
**5** Color right angles red. Color smaller angles blue.  
Color larger angles green.



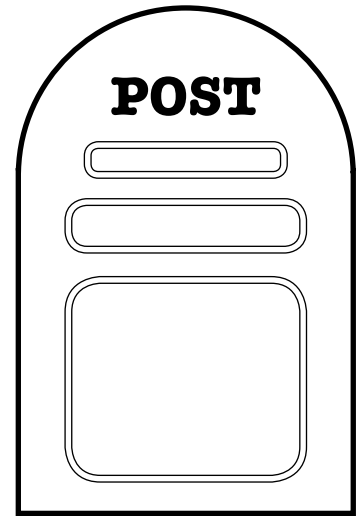
# Angles in objects

1 Mark every right angle in each picture.

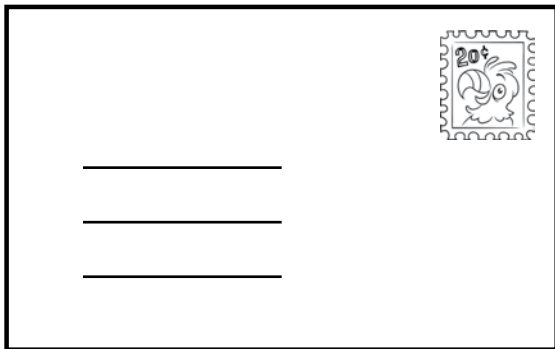
a



b



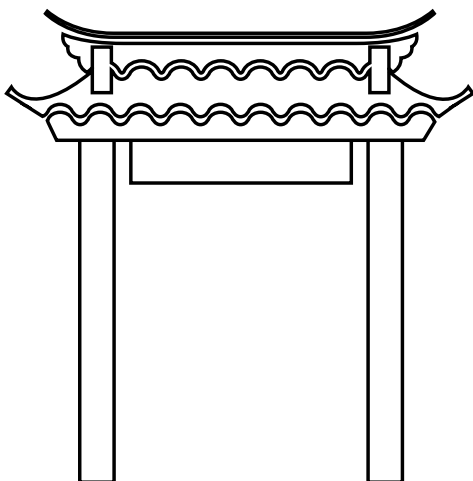
c



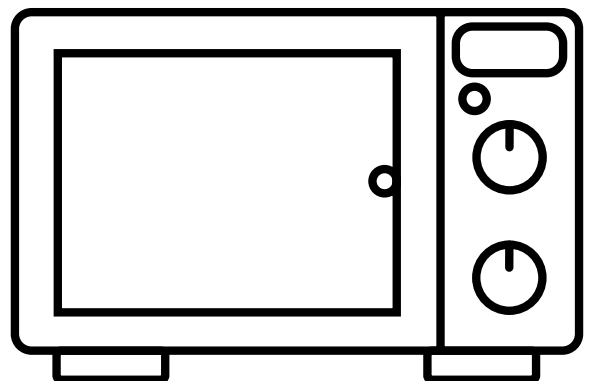
d



e



f



# Angle problems

1 Draw each shape. All sides are straight lines.

**a** Shelly draws a 4-sided shape with 4 right angles.

**b** Sandi draws a different 4-sided shape with 4 right angles.

**c** Marlin draws a 4-sided shape with just 2 right angles.

**d** Mack draws a 3-sided shape with 1 right angle.

**e** Zander draws a 5-sided shape with 2 right angles.

**f** River draws a 4-sided shape with no right angles.



2 Murray draws a picture of a building using all of these shapes. Can you?

## LAST LINES

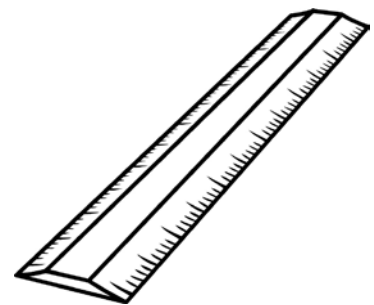
Play in a pair 😊😊 or a trio 😊😊😊. You need a piece of grid paper (see page 41).

- 1 Player A: Draw along one of the grid lines. Your line can be any length, but it must start and end on a corner.
- 2 Player B: Draw along a grid line that is perpendicular to Player A's line. Your line can be any length, but it must start from the previous line or cross it.
- 3 Take turns drawing perpendicular lines until you run out of room. The last person to draw a line is the winner.

## SURPRISE DRAWING

Play in a pair 😊😊 or a trio 😊😊😊. You need a blank piece of paper , a pencil , and a ruler.

- 1 Player A: Draw a straight line of any length on the paper.
- 2 Player B: Draw a straight line coming off the first line at an angle.
- 3 Take turns drawing one line each, making more angles and trying to create a picture of something. Don't talk to each other—you can point, and shake or nod your head to show each other what to do.



Harder version: Repeat the process without any communication—no words, gestures, pointing, nodding, or shaking your head. Can you still make a recognizable picture?

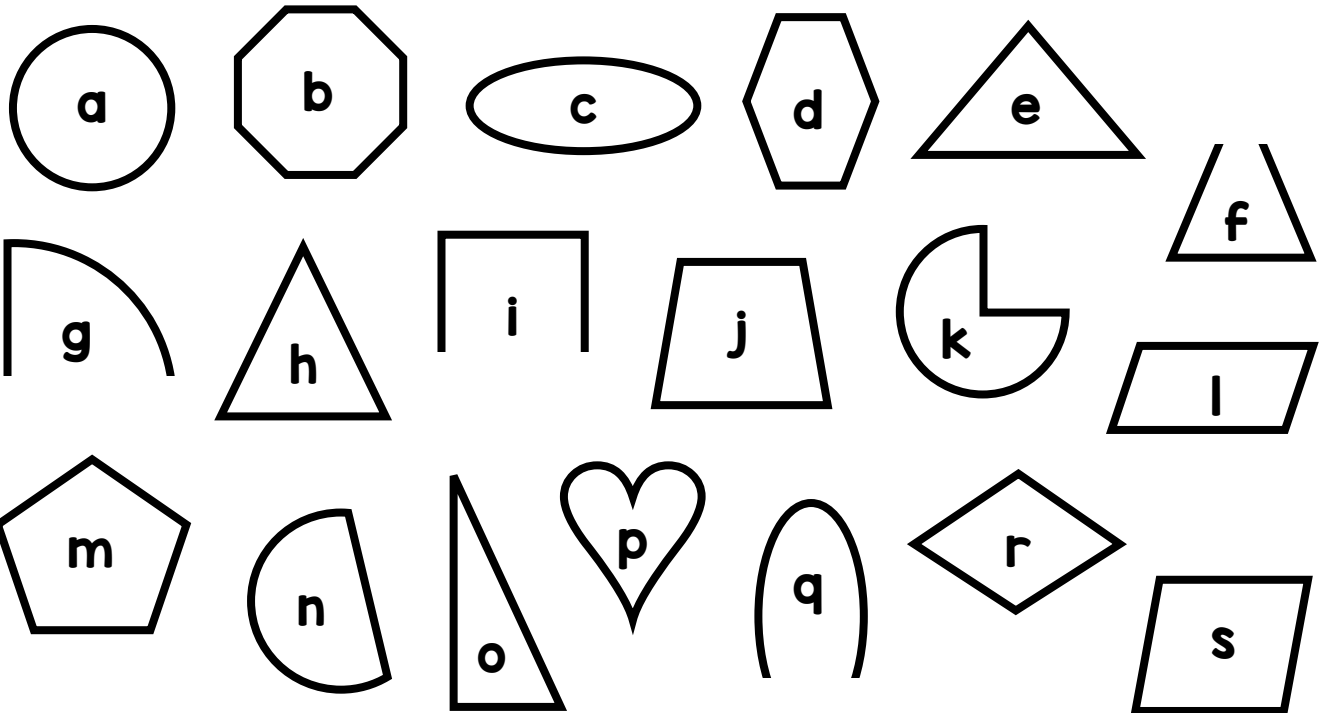
# Polygons

2D shapes

1 Circle the correct words to define a polygon.

A polygon is a flat / solid shape with straight / curved,  
open / closed sides.

2 Color the polygons.



3 Explain why each of these shapes is NOT a polygon.

**a** \_\_\_\_\_

**f** \_\_\_\_\_

**g** \_\_\_\_\_

**k** \_\_\_\_\_

**p** \_\_\_\_\_

**q** \_\_\_\_\_

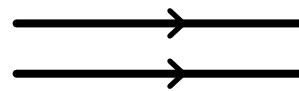


# Parallel lines

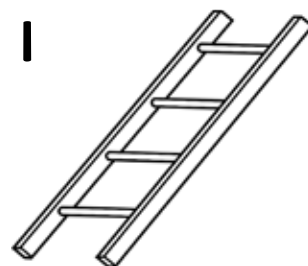
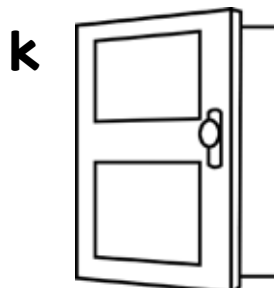
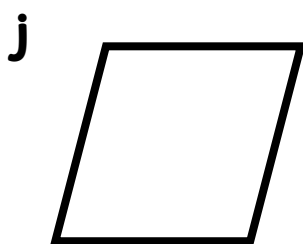
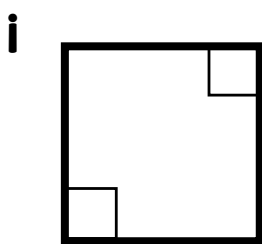
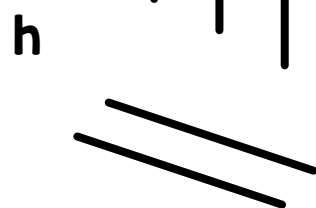
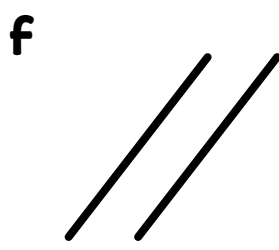
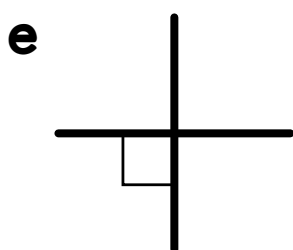
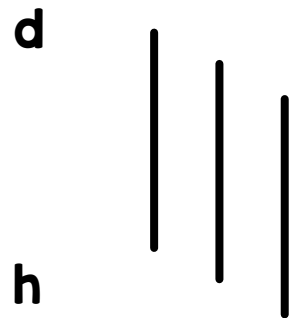
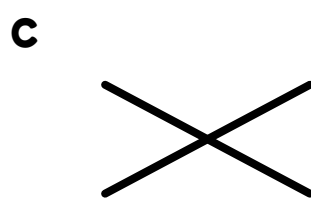
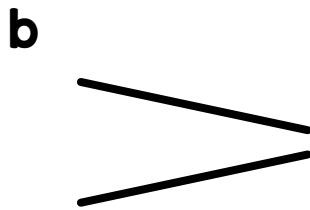
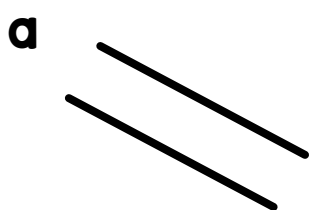
2D shapes

When two lines run next to each other and are always the same distance apart, they are called parallel lines.

Parallel lines never meet. Extend these lines with your ruler to check.



1 Mark all parallel lines with arrow markers.



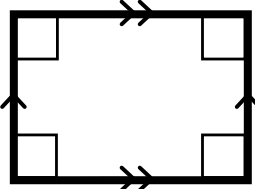
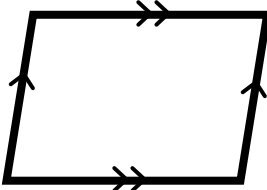
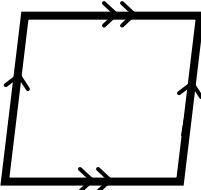
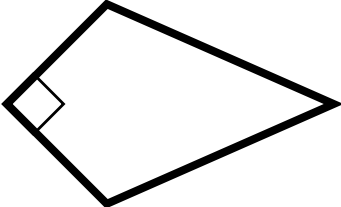
2 Draw a parallel line for each given line. Add arrow markers to both lines.

a		b		c	
d				e	

# Quadrilaterals

2D shapes

Fill in the table.

Shape name	Parallel sides	Right angles	Diagram
rectangle	<b>a</b>	<b>b</b>	
<b>c</b>	2 pairs	4	<b>d</b>
<b>e</b>	2 pairs	<b>f</b>	
rhombus	<b>g</b>	<b>h</b>	
trapezoid	<b>i</b>	2	<b>j</b>
<b>k</b>	0	1	

# Quadrilateral descriptions

2D shapes

1 Complete the definition of a quadrilateral.

solid flat closed open two three four five

A quadrilateral is a \_\_\_\_\_, \_\_\_\_\_ shape  
with \_\_\_\_\_ sides and \_\_\_\_\_ vertices.

2 Draw two quadrilaterals that fit each description.

	Description	Draw two quadrilaterals
<b>a</b>	Two pairs of parallel sides. Opposite sides are equal.	.....
<b>b</b>	Two pairs of parallel sides. All sides are equal.	.....
<b>c</b>	One pair of parallel sides.	.....

3 Draw a quadrilateral with no parallel sides.

# Quadrilateral comparisons

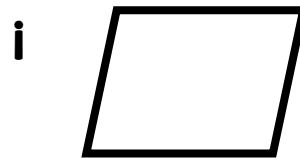
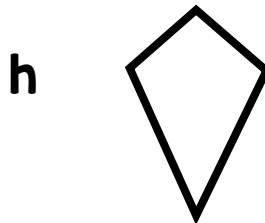
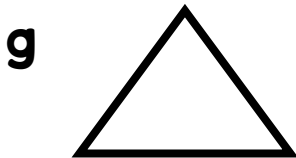
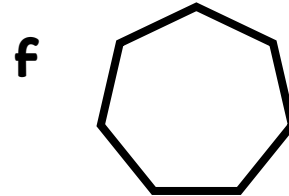
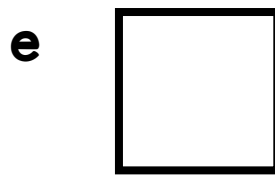
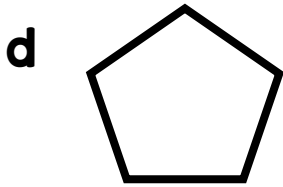
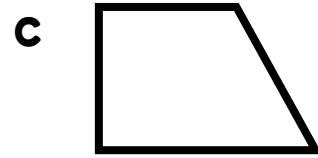
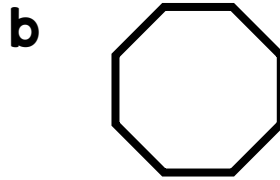
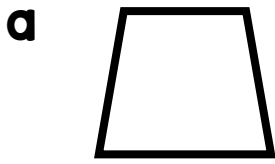
2D shapes

	<b>Pair of shapes</b>	<b>a</b> What is something they have in common?	<b>b</b> What is one difference between them?
<b>1</b>	square rhombus	_____ _____ _____	_____ _____ _____
<b>2</b>	square rectangle	_____ _____ _____	_____ _____ _____
<b>3</b>	square parallelogram	_____ _____ _____	_____ _____ _____
<b>4</b>	parallelogram rectangle	_____ _____ _____	_____ _____ _____
<b>5</b>	parallelogram rhombus	_____ _____ _____	_____ _____ _____
<b>6</b>	rhombus rectangle	_____ _____ _____	_____ _____ _____

# Angles in shapes

2D shapes

1 Color the right angles red. Color the angles smaller than a right angle in blue. Color the angles larger than a right angle in green.



2 Draw two other shapes with NO right angles.

**a**

**b**

3 Draw two other shapes with at least one right angle.

**a**

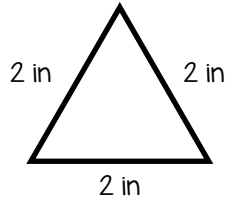
**b**

# Regular and irregular shapes

2D shapes

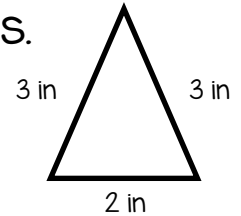
Regular shapes have all the same size angles and all the same length sides.

For example, this triangle:



Irregular shapes have at least one different sized angle and the sides are not equal lengths.

For example, this triangle:



1 Draw one of each.

**a** Regular quadrilateral

**b** Irregular quadrilateral

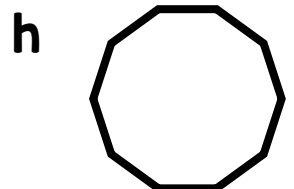
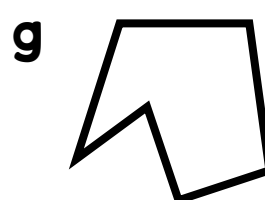
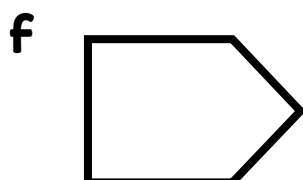
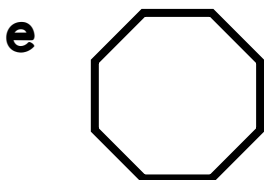
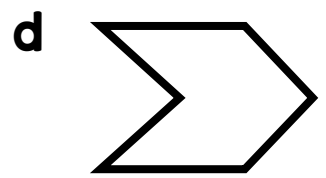
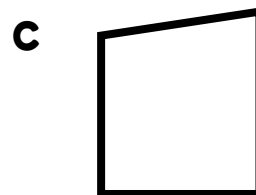
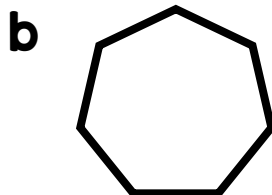
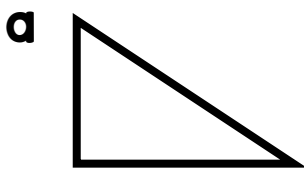
**c** Regular pentagon

**d** Irregular pentagon

**e** Regular hexagon

**f** Irregular hexagon

2 Color the irregular shapes in blue. Color the regular shapes in pink.



# 2D shape sudoku

2D shapes

Each row, column and larger square must have 1 of each shape.

For example:

△	○	□	◇
◇	□	○	△
□	△	◇	○
○	◇	△	□

Can you complete these?

a

⬠	▭		○
△	○		⬠
			▭
▭	⬠	○	

b

○	△	◇	⬠
⬠			○
			◇
		⬠	△

c

△	○	♥	□
♥		□	
○		△	

d

○			☾
	☆	▭	
		○	
			☆

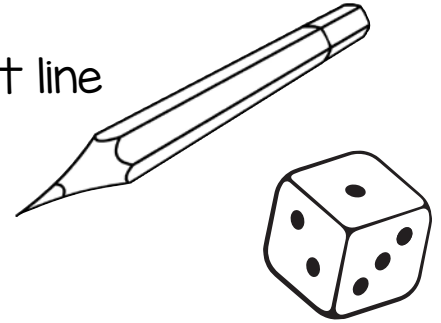
# Guess my shape game

2D shapes

Play in groups of any size from 2 to 30. You need 1 die.  
You all need pencils and paper, or whiteboards, and pens.

**1** One person is the 'drawer'. They roll the die to pick a type of 2D shape:

- 1 = 1 line, e.g. circle, oval, wavy or straight line
- 2 = 2 lines, e.g. semicircle, heart, angle
- 3 = triangle
- 4 = quadrilateral
- 5 = pentagon
- 6 = hexagon



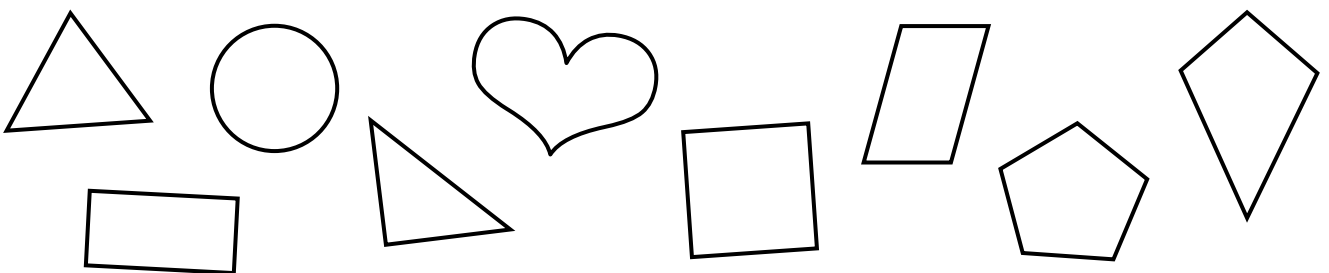
**2** The drawer draws a shape of that type and keeps it a secret. E.g., they roll a 3 and draw a right-angle triangle.

**3** A player asks a question about the shape, e.g. *Does your shape have 3 sides?* The drawer answers 'yes' or 'no'.

**4** All players use the answer to draw their guesses and hold them up.

**5** The drawer answers 'correct' or 'incorrect' to each guess. If no one is correct, repeat steps **3** and **4**.

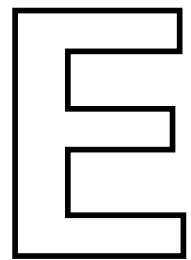
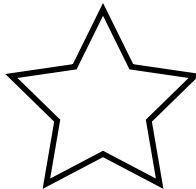
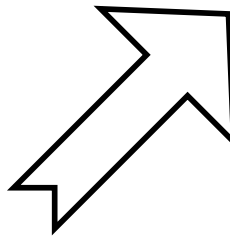
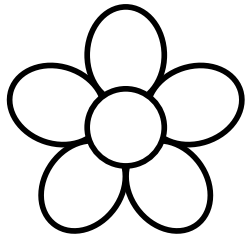
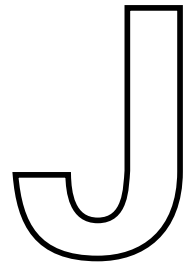
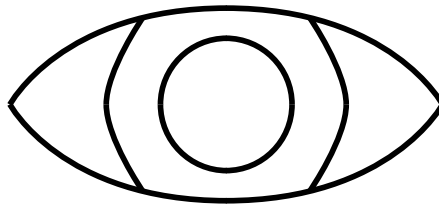
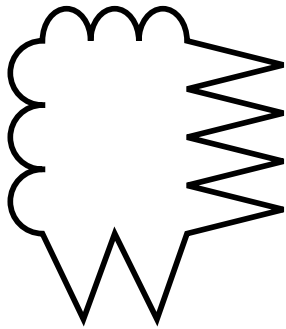
Continue until someone wins by drawing the correct shape. They become the drawer for the next round.



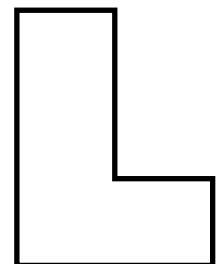
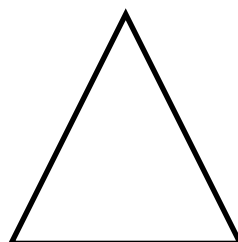
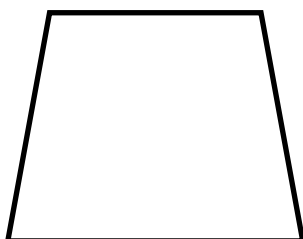
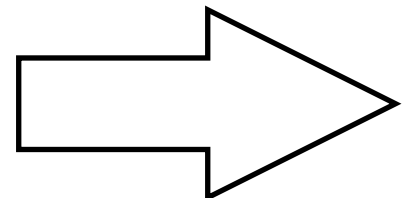
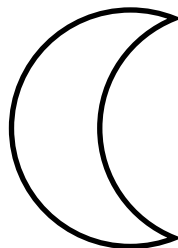
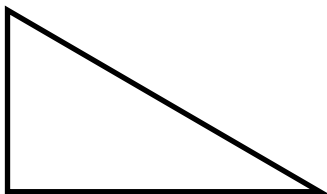
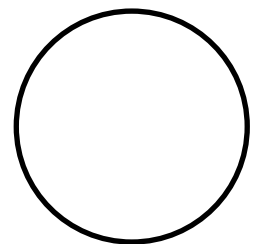
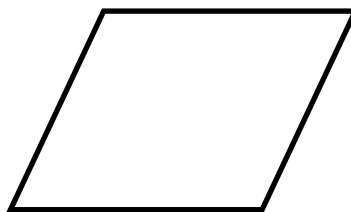
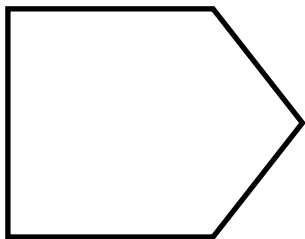


# Symmetrical or not?

1 Color the symmetrical shapes.

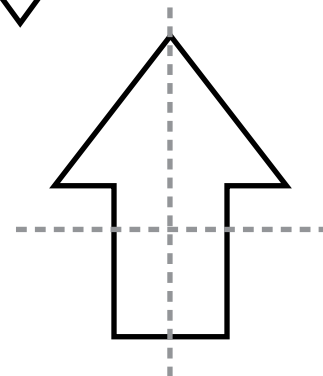
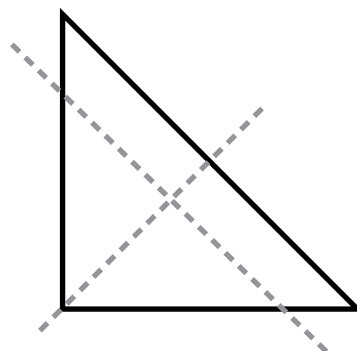
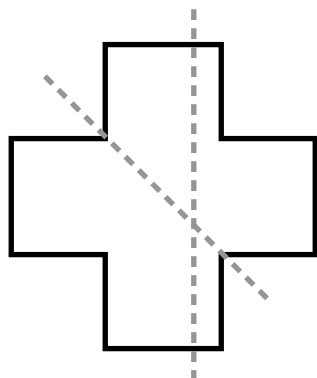
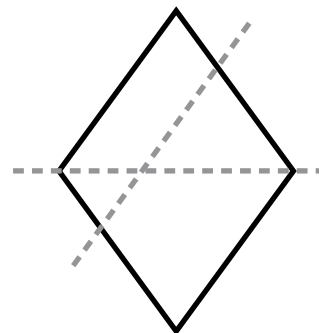
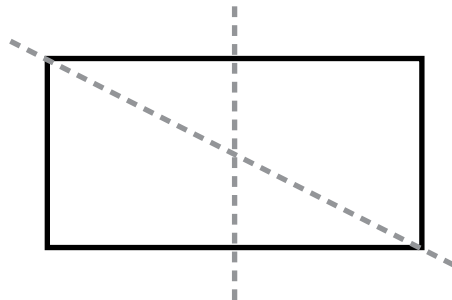
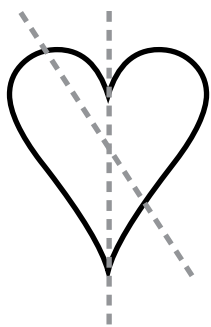


2 Draw a line of symmetry on the symmetrical shapes.



# Lines of symmetry

1 Trace over the lines of symmetry.

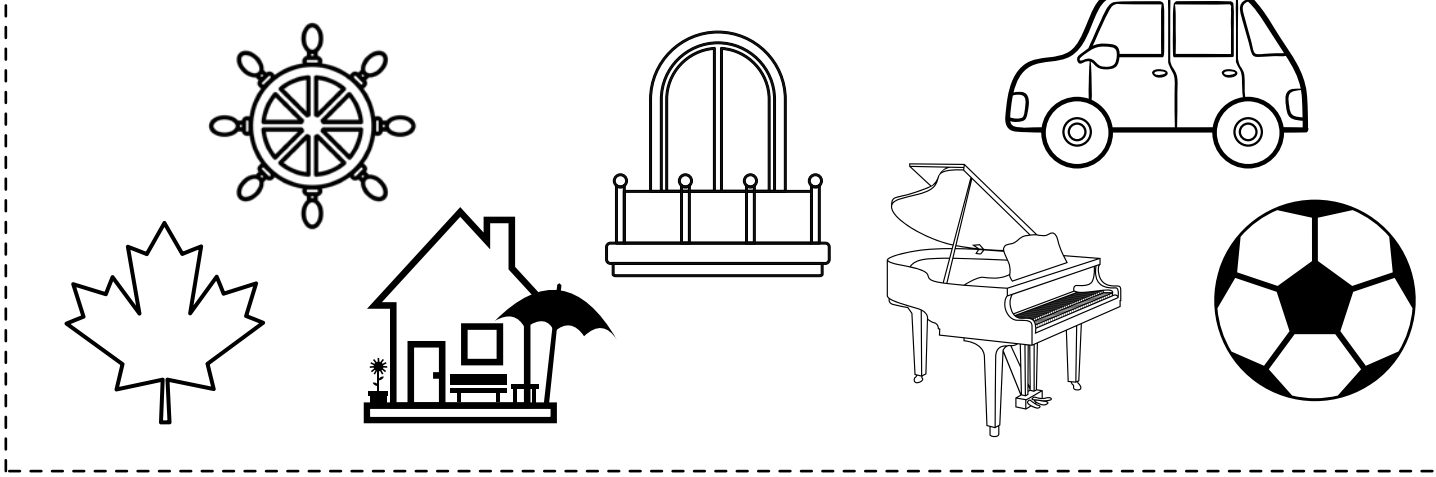


2 Draw a line of symmetry on the patterns that are symmetrical.

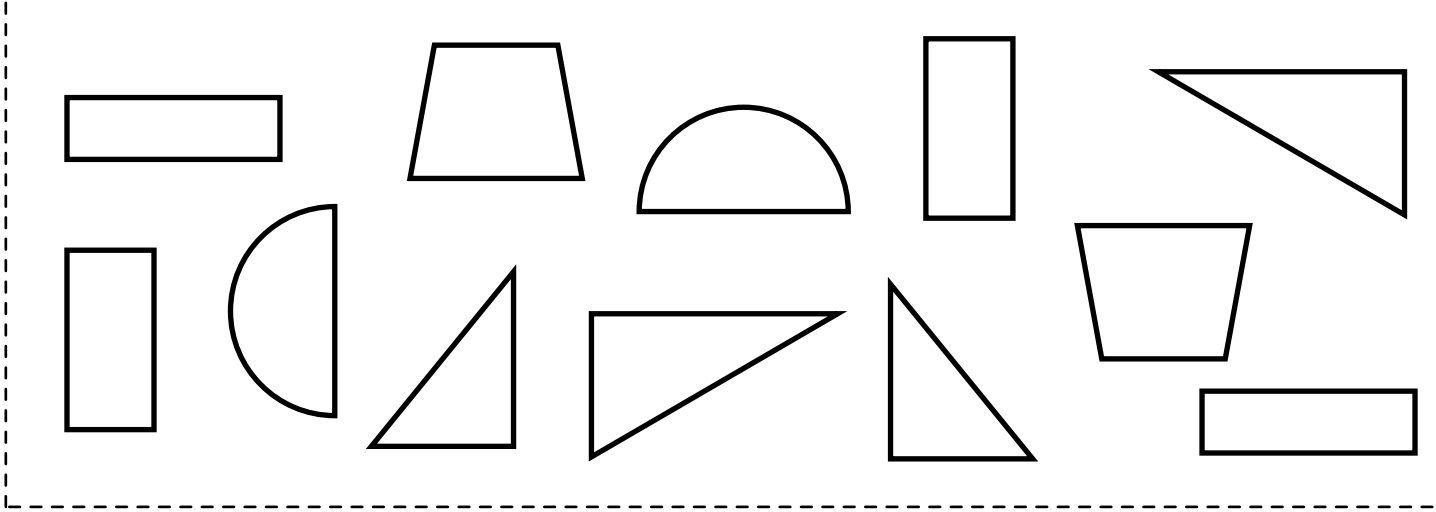


# Identify symmetry

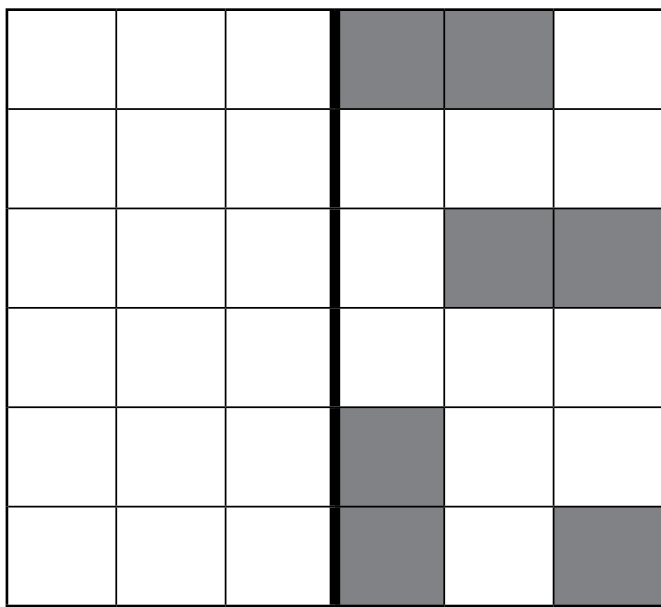
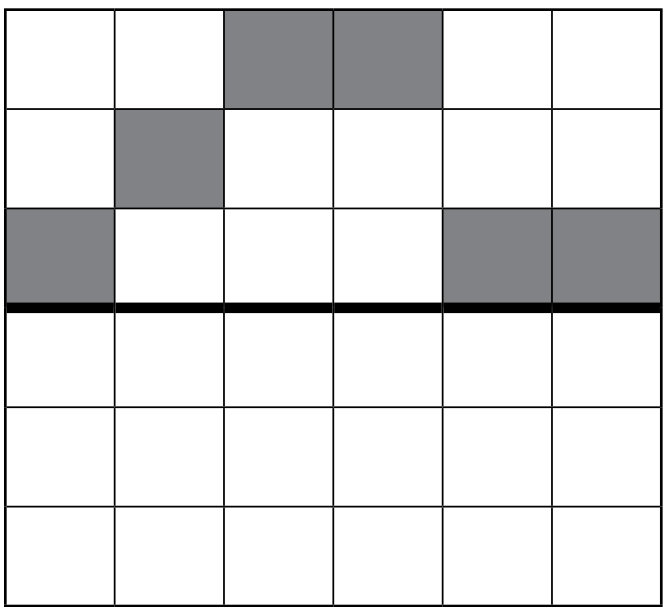
1 Circle the symmetrical things.



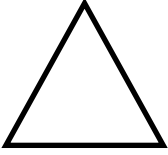
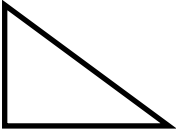
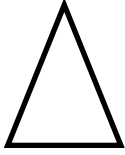
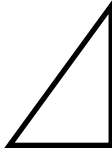
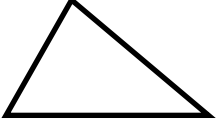
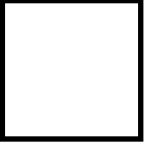


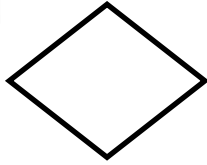
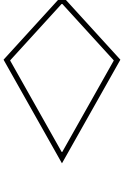
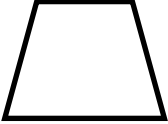
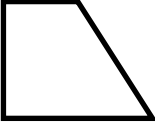
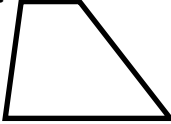
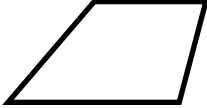
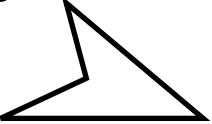
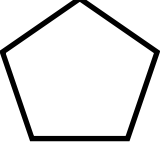
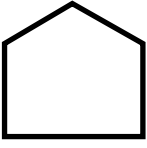
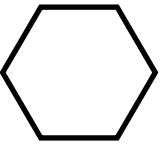
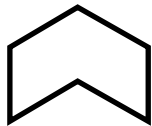
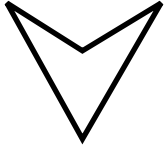
2 Color the symmetrical halves in matching colors.



3 Complete the symmetrical patterns.



# Symmetry in shapes

<b>a</b>  _____	<b>b</b>  _____	<b>c</b>  _____	<b>d</b>  _____	<b>e</b>  _____
<b>f</b>  _____	<b>g</b>  _____	<b>h</b>  _____	<b>i</b>  _____	<b>j</b>  _____
<b>k</b>  _____	<b>l</b>  _____	<b>m</b>  _____	<b>n</b>  _____	<b>o</b>  _____
<b>p</b>  _____	<b>q</b>  _____	<b>r</b>  _____	<b>s</b>  _____	<b>t</b>  _____

1 Color any non-symmetrical 2D shapes.

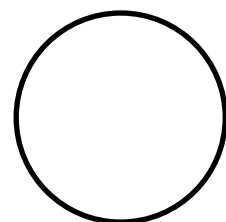
2 **a** Draw one line of symmetry on each symmetrical shape above.

**b** Can you draw more lines of symmetry on any of the symmetrical shapes?

**c** Write the number of lines of symmetry you drew under each shape.

3 **a** Draw a line of symmetry on this circle.

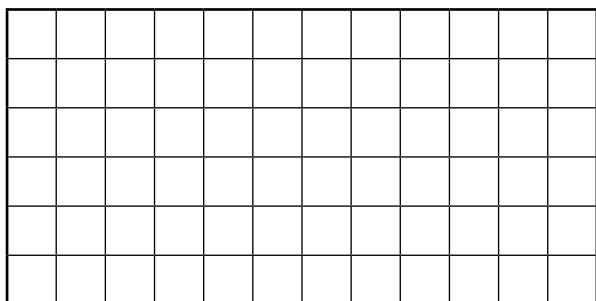
**b** How many lines of symmetry does a circle have? \_\_\_\_\_



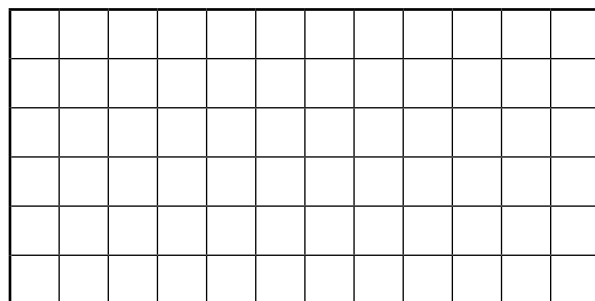
# Symmetry problems

1 Pippa says she can draw a symmetrical 2D shape with 1 right angle for every type of polygon from 3 to 6 sides. Is it possible?

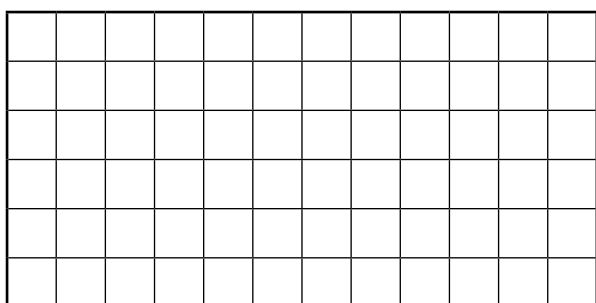
**a** 3 sides



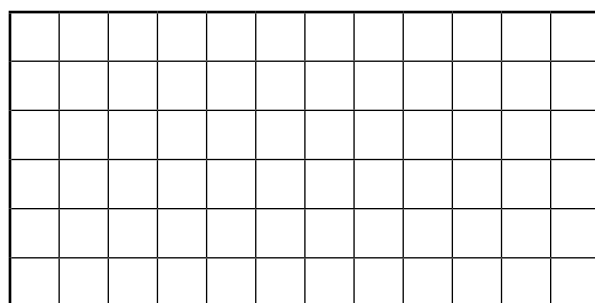
**b** 4 sides



**c** 5 sides

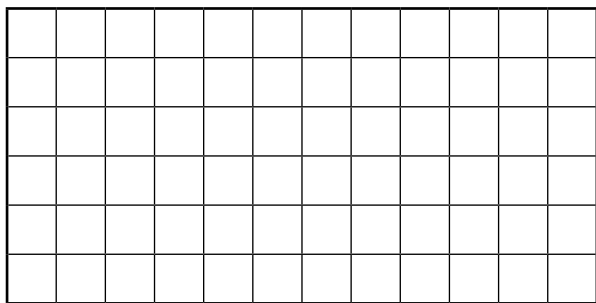


**d** 6 sides

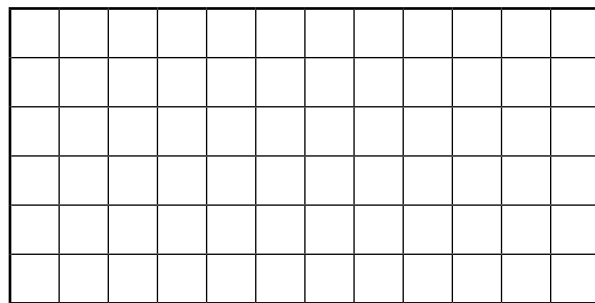


2 Ping says he can draw a symmetrical 2D shape with 2 right angles for every type of polygon from 3 to 6 sides. Is it possible?

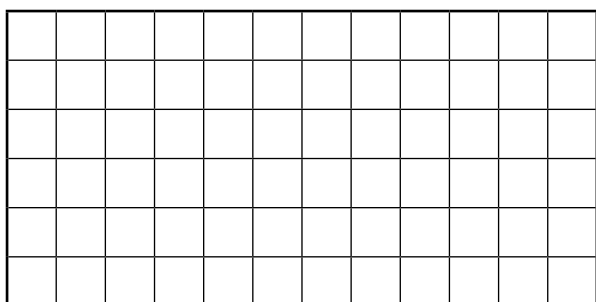
**a** 3 sides



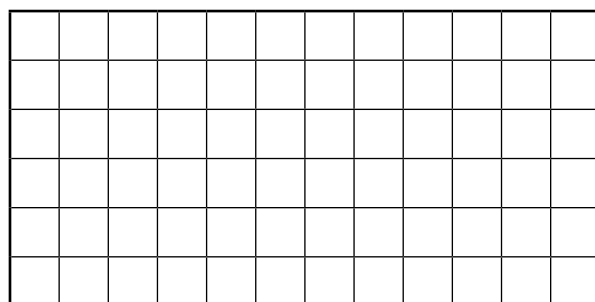
**b** 4 sides



**c** 5 sides

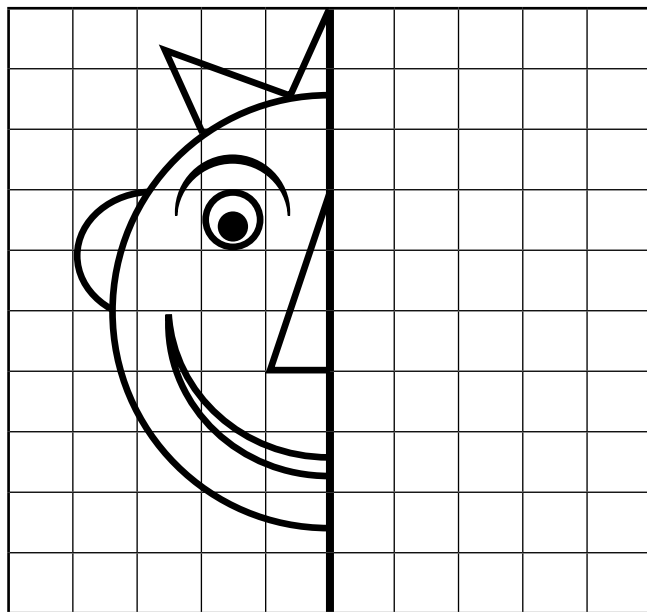
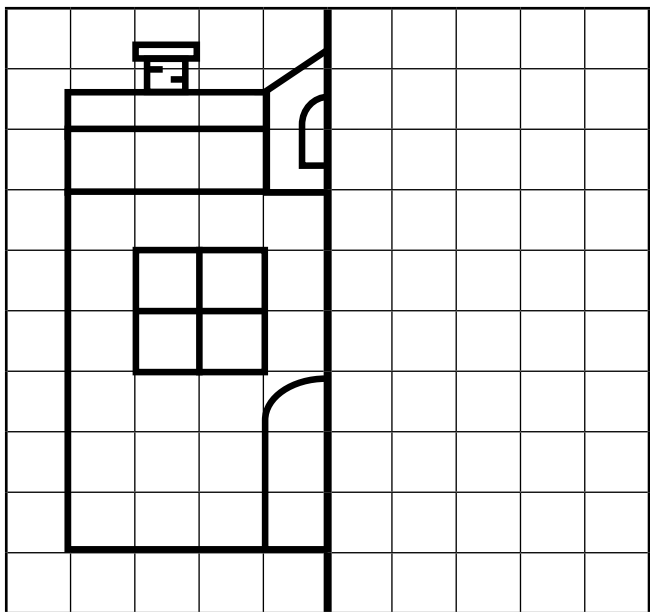


**d** 6 sides

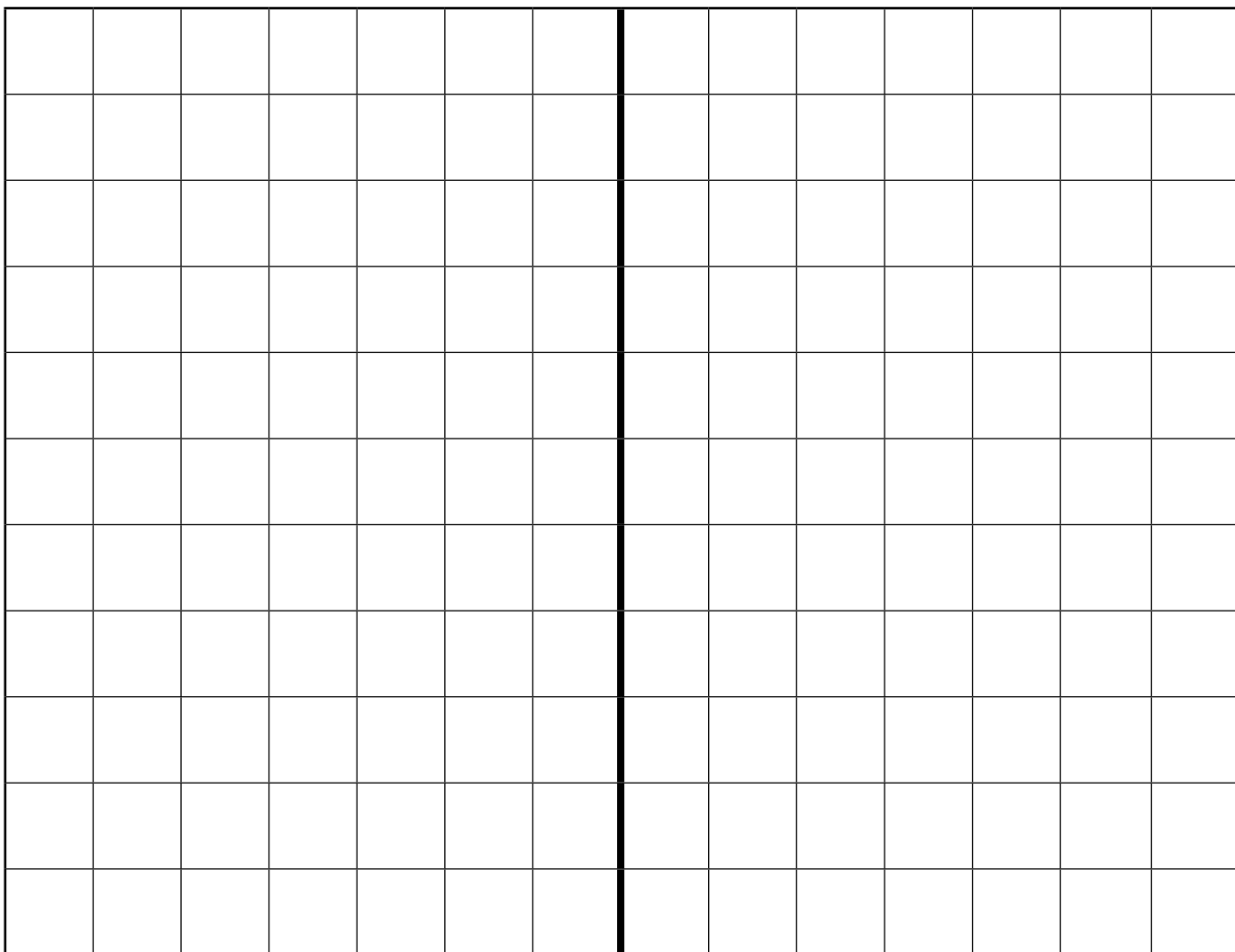


# Symmetrical pictures

1 Complete the symmetrical pictures.

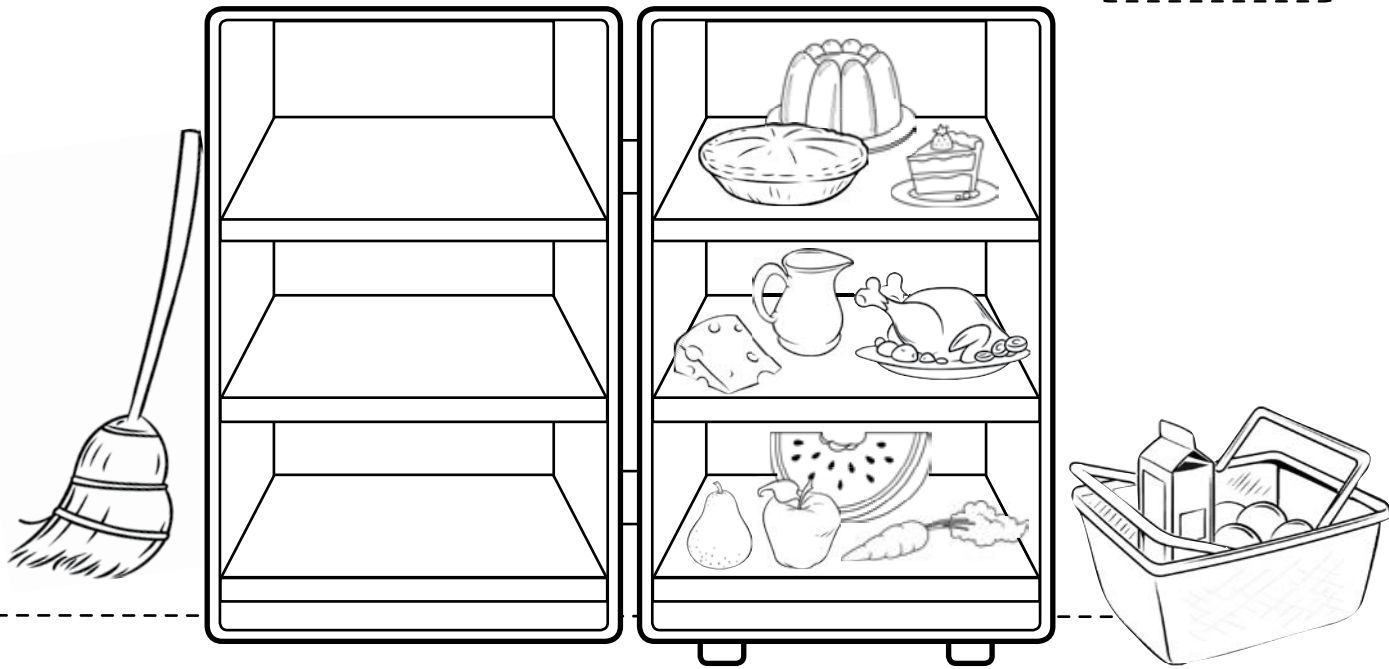


2 Draw your own symmetrical picture.



# Location

Location



1 Complete the sentences.

- a The apple is to the \_\_\_\_\_ of the pear.
- b The pie is in \_\_\_\_\_ of the jello.
- c The watermelon is \_\_\_\_\_ the apple.
- d The cheese is \_\_\_\_\_ the pie.
- e The jug is to the \_\_\_\_\_ of the chicken.
- f The pear is on the \_\_\_\_\_ shelf.
- g The jello is on the \_\_\_\_\_ shelf.
- h The chicken is on the \_\_\_\_\_ shelf.
- i The cake is \_\_\_\_\_ the chicken.

2 Draw these items on the empty shelves.

- a Juice is on the left side of the bottom shelf.
- b A jar of jelly is right in the middle.
- c Milk is on the top shelf to the right of a banana.
- d A chocolate bar is left of the jelly.
- e Eggs are at the bottom, on the right.
- f There is a jar of honey next to the jelly.

# Compass directions

Location

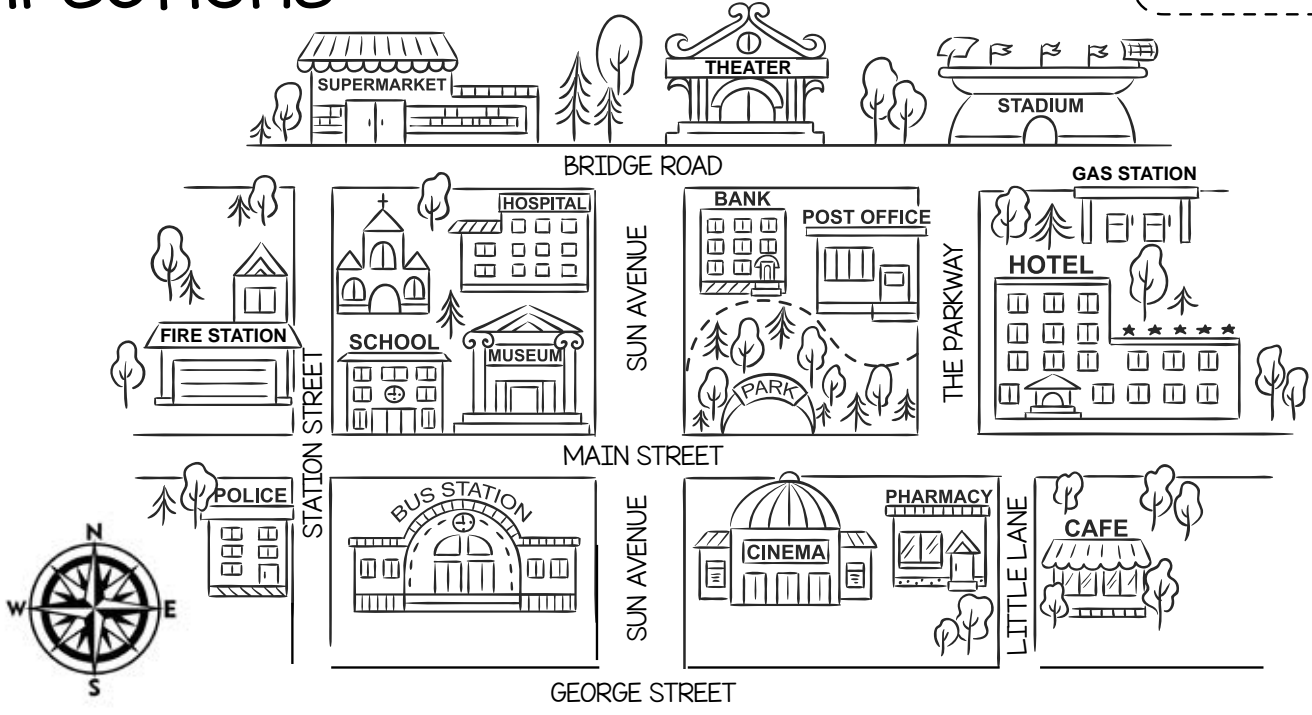


- 1 Label the points on the compass: North, South, East, West. Remember the phrase *Never Eat Soggy Waffles* to help you.
- 2 Use this map of the world and the compass to answer these questions.
  - a Which continent is just south of Europe? \_\_\_\_\_
  - b Which continent is west of Europe? \_\_\_\_\_
  - c Which continent is west of Australia? \_\_\_\_\_
  - d Which continent is east of Australia? \_\_\_\_\_
  - e Which continent is north of South America? \_\_\_\_\_
  - f Which continent is west of North America? \_\_\_\_\_
  - g Which ocean is east of the Americas and west of Africa? \_\_\_\_\_
  - h Which ocean is south of Asia and east of Africa? \_\_\_\_\_
  - i Which ocean is east of Asia and west of the Americas? \_\_\_\_\_



# Directions

Location



1 Tom is staying at the hotel.




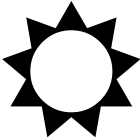


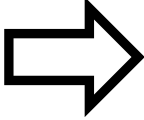

- a If he heads down Little Lane, turns east on George Street, then enters the building on his left, where is he? \_\_\_\_\_
- b If Tom leaves there, goes west along George Street, then turns right and goes to the end of Station Street, where is he? \_\_\_\_\_
- c If he leaves that place, heads east, turns right at Sun Avenue and enters the 2nd building on his right, where is he? \_\_\_\_\_

2 Write directions for these trips:

- a A class from the school is going on an excursion to the theater. How can they get there?  
 \_\_\_\_\_  
 \_\_\_\_\_
- b I just got off the bus and now I'm heading to the stadium. How do I get there?  
 \_\_\_\_\_  
 \_\_\_\_\_

# Coordinates

Location

4				
3				
2				
1				
	A	B	C	D

1 Write the coordinates for

a the star.    \_\_\_ \_\_\_

b the heart.    \_\_\_ \_\_\_

c the cloud.    \_\_\_ \_\_\_

d the lightning.    \_\_\_ \_\_\_

2 What shape is at these coordinates?

a C4 \_\_\_\_\_

b C3 \_\_\_\_\_

c B2 \_\_\_\_\_

d B1 \_\_\_\_\_

3 Draw these shapes at these coordinates.

a a triangle at D4

b a circle at C2

c a rectangle at B3
























d a square at A3

4 Which coordinates have no image now?

\_\_\_ \_\_\_    \_\_\_ \_\_\_    \_\_\_ \_\_\_    \_\_\_ \_\_\_

# Map reading

Location

6						
5						
4						
3						
2						
1						
	A	B	C	D	E	F

1 Write the coordinates for these items.

**a** monkey \_\_\_\_\_

**b** owl \_\_\_\_\_

**c** fox \_\_\_\_\_

**d** bear \_\_\_\_\_

**e** lion \_\_\_\_\_

**f** koala \_\_\_\_\_

2 What is at these coordinates?

**a** A4 \_\_\_\_\_

**b** B6 \_\_\_\_\_

**c** C3 \_\_\_\_\_

**d** D6 \_\_\_\_\_

**e** B1 \_\_\_\_\_

**f** F4-5 \_\_\_\_\_

3 Where are the toilets located?

\_\_\_\_\_ & \_\_\_\_\_

4 Where can you go for first aid?

\_\_\_\_\_ & \_\_\_\_\_

5 Where can you go to eat?

\_\_\_\_\_ & \_\_\_\_\_

6 Where are the hippos?

\_\_\_\_\_ & \_\_\_\_\_

7 What are the empty squares for?

(a) more animals

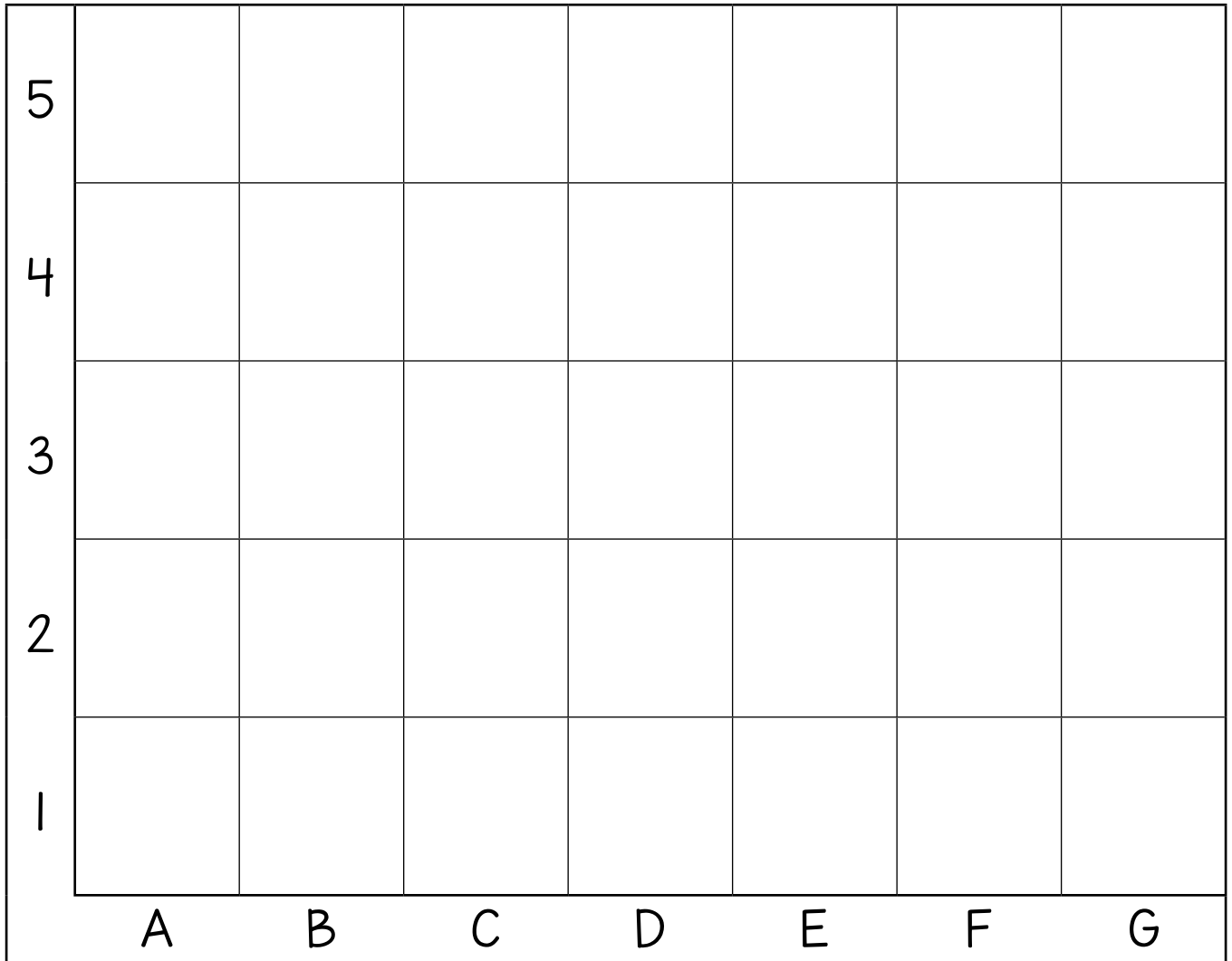
(b) a path

(c) it's a mistake

# Make a map

Location

1 Use the grid below to make a simple map of your school.



2 Write the coordinates for each building.

- a your classroom \_\_\_\_\_
- b the office \_\_\_\_\_
- c the hall \_\_\_\_\_
- d the playground \_\_\_\_\_












3 What is at these coordinates?

- a A5 \_\_\_\_\_
- b G1 \_\_\_\_\_
- c C3 \_\_\_\_\_
- d E2 \_\_\_\_\_
- e B1 \_\_\_\_\_
- f F4 \_\_\_\_\_

# Map problems

Location

- Draw Sara's usual walking route on the map.  
Start at home in A4 and go east to the corner shop.  
Turn right and head south to the stadium.  
Turn left and head east to the lighthouse.  
Turn right and walk to the hotel, then turn right and go to the bridge. Head north to the factory and then walk west to the airport.

4						
3						
2						
1						
	A	B	C	D	E	F




- Write the coordinates for Sara's walking route.

\_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_  
 \_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_

- Use the map to answer these questions.

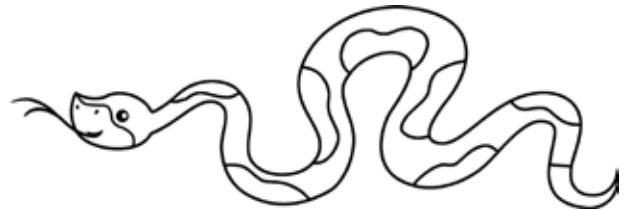
- Which compass direction does Sara walk in to get home from the airport? \_\_\_\_\_
- How many squares on the map does Sara walk through? \_\_\_\_\_
- If each square is 100 m, how far does Sara walk? \_\_\_\_\_
- What are the coordinates for the school? \_\_\_\_\_
- Draw a park in the square at A1.

## COLOR THE SNAKES

Play in pairs 😊😊. You need colored pencils  and two 10 x 10 grids each (see page 42).

1 Hide your grids from each other. On one of your grids draw a set of snakes:

- 1 snake that is 2 squares long
- 2 snakes that are 3 squares long
- 2 snakes that are 4 squares long
- 1 snake that is 5 squares long



2 Take turns guessing where your opponent's snakes are by saying coordinates. E.g.:

'Is there a snake on B9?' 'Yes!' Color in that square on your second grid.

'Is there a snake on H2?' 'No!' Cross out that square on your second grid.

The winner is the player who colors in all their opponent's snakes first.

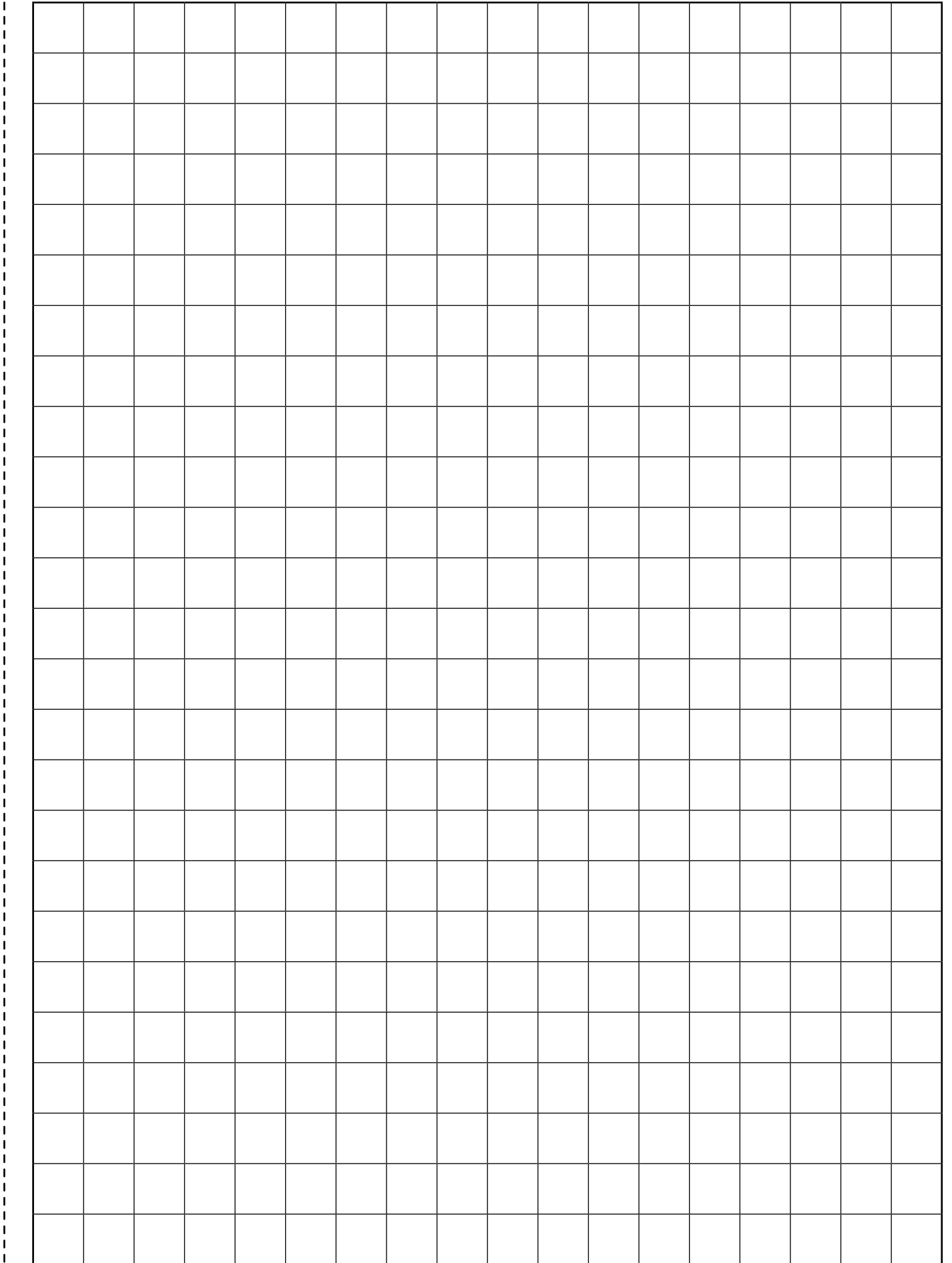
## COLOR COORDINATES

Play in a pair 😊😊 or a trio 😊😊😊. You need a 10 x 10 grid (see page 42), a colored pencil each, a 1-10 spinner, and an A-J spinner (see page 43).

- 1 Player A: Spin both spinners to get a pair of coordinates. Color that square on the grid.
- 2 Player B: Spin both spinners to get a pair of coordinates. Color that square in a different color to Player A.
- 3 Take turns spinning and coloring in squares. If a player spins a pair of coordinates that is already colored, they miss that turn.
- 4 Continue until the grid is full, or 5 successive spins have not given a blank pair of coordinates. The winner is the player with the most squares in their color.

Harder version: Play on a larger grid (see page 41) and/or with more people.

# Grid paper



# 10 x 10 coordinate grids

10										
9										
8										
7										
6										
5										
4										
3										
2										
1										
	A	B	C	D	E	F	G	H	I	J

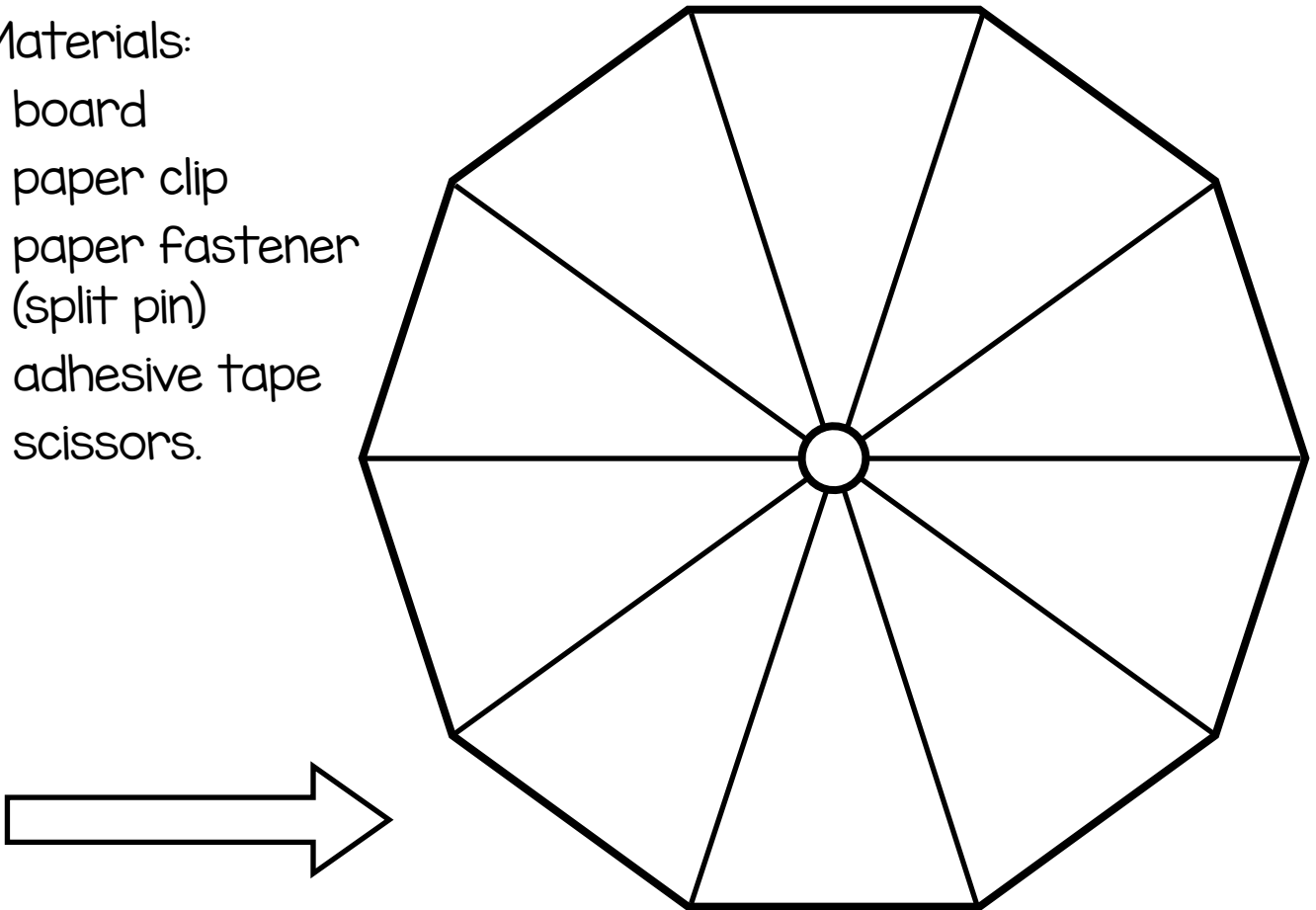
10										
9										
8										
7										
6										
5										
4										
3										
2										
1										
	A	B	C	D	E	F	G	H	I	J



# 10-sided spinner

## Materials:

- board
- paper clip
- paper fastener (split pin)
- adhesive tape
- scissors.



- 1 Print or glue the spinner and the arrow onto board. Write on the numbers 1-10 or the letters A-J. You could laminate them to make them last longer.
- 2 Bend out one end of the paper clip to make the spinning pointer.
- 3 Insert the split pin with the paper clip on it through the center of the spinner.
- 4 Split the back of the pin and tape the ends down. The top of the split pin should sit about half an inch above the card to allow the paper clip pointer to spin freely.
- 5 Tape the arrow onto the paper clip.

