

# Year 2 Maths Geometry

## Properties of Shapes

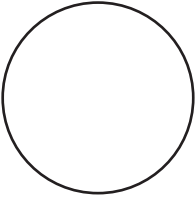
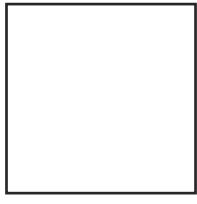

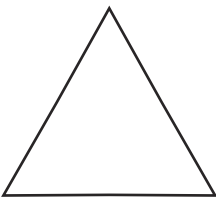
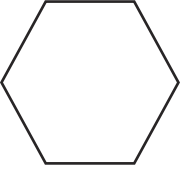
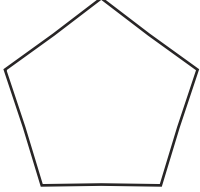
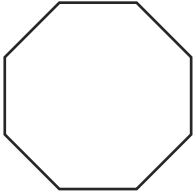

### Learning from Home Activity Booklet

Year 2 Programme of Study – Statistics

Statutory requirements	Activity Sheet	Page Number	Notes
Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line.	Shape Properties (2D)	2	
	Shape Symmetry	3	
	Quadrilateral Quiz	4	
Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces.	Shape Properties (3D)	5	
Identify 2D shapes on the surface of 3D shapes, [for example, a circle on a cylinder and a triangle on a pyramid].	What Shapes Can You See?	6	
Compare and sort common 2D and 3D shapes and everyday objects.	Shape Sorting 1	7-8	
	Shape Sorting 2	9	
	Answers	10-16	

# Shape Properties – 2D

Name these shapes and write their properties.

	Name: _____ Number of sides: _____ Number of corners: _____		Name: _____ Number of sides: _____ Number of corners: _____
	Name: _____ Number of sides: _____ Number of corners: _____		Name: _____ Number of sides: _____ Number of corners: _____
	Name: _____ Number of sides: _____ Number of corners: _____		Name: _____ Number of sides: _____ Number of corners: _____
	Name: _____ Number of sides: _____ Number of corners: _____		Name: _____ Number of sides: _____ Number of corners: _____

Challenge: Lucy says that all 2D shapes have the same number of sides as their number of corners. Is she right? Explain your answer.

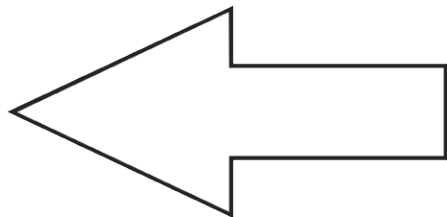
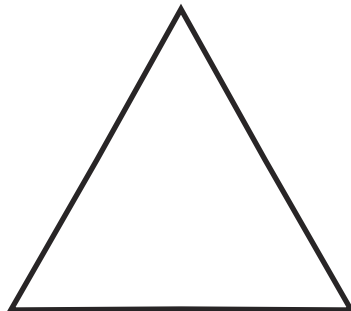
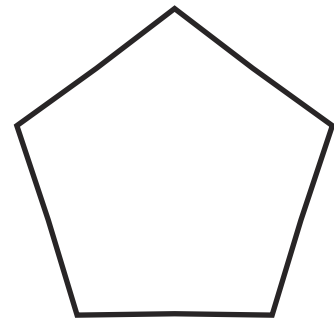
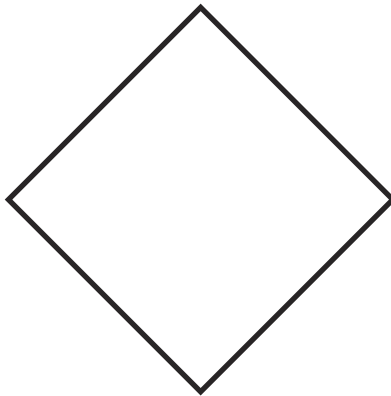
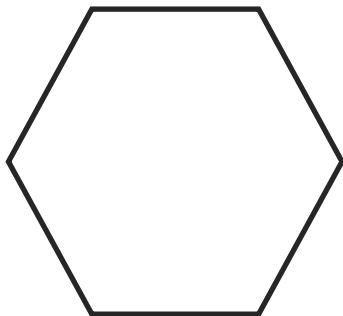
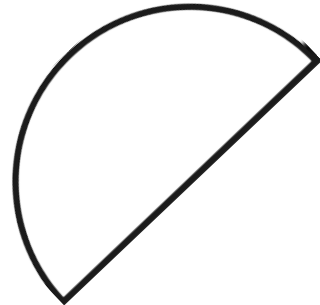
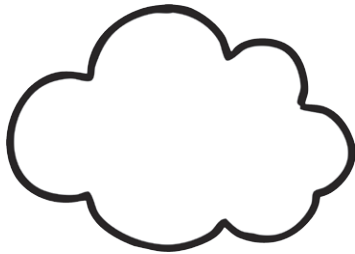
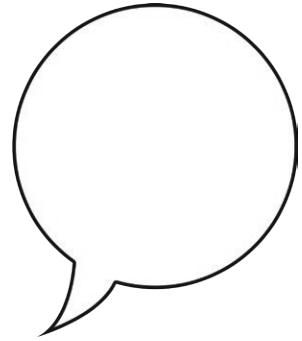
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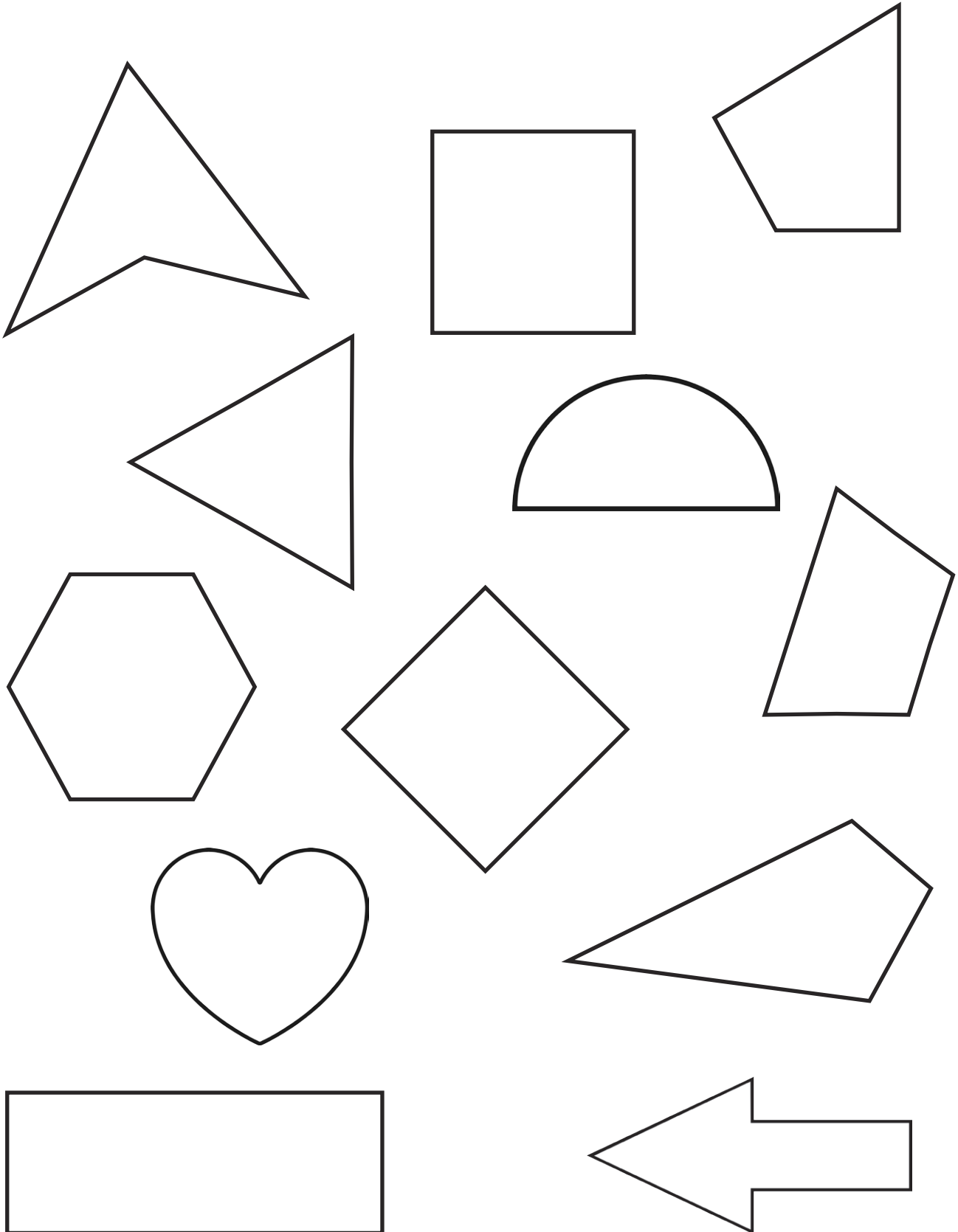
# Shape Symmetry

Some of these shapes have a vertical line of symmetry and some don't. Colour in the shapes that do have a vertical line of symmetry, and draw the line in the correct place.



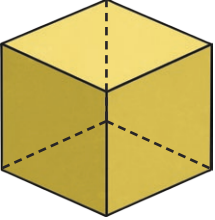
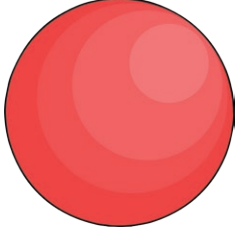
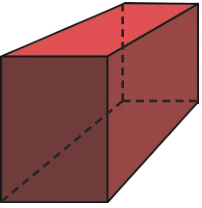
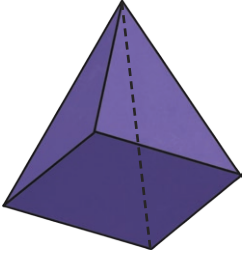
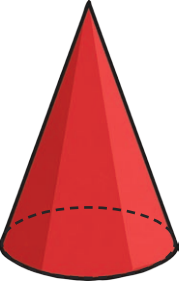
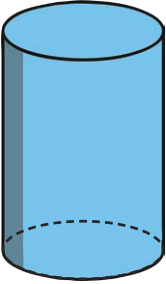
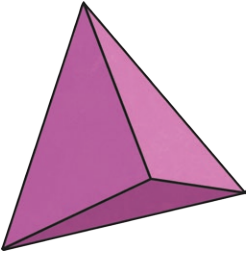
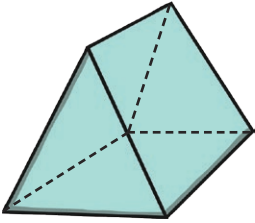
# Quadrilateral Quiz

A quadrilateral is any shape with four sides and four corners. Colour in all the quadrilaterals.



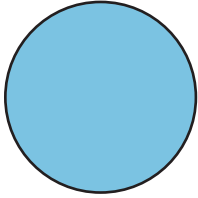
# Shape Properties – 3D

Name these shapes and write their properties.

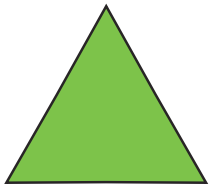
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	Name: _____ Number of faces: _____ Number of edges: _____ Number of vertices: _____		Name: _____ Number of faces: _____ Number of edges: _____ Number of vertices: _____
	Name: _____ Flat faces: _____ Curved faces: _____ Number of edges: _____ Number of vertices: _____		Name: _____ Flat faces: _____ Curved faces: _____ Number of edges: _____ Number of vertices: _____
	Name: _____ Number of faces: _____ Number of edges: _____ Number of vertices: _____		Name: _____ Number of faces: _____ Number of edges: _____ Number of vertices: _____

# What Shapes Can You See?

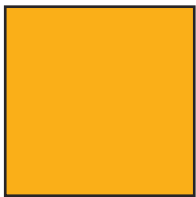
Look closely at some 3D shapes. Their faces are made up of 2D shapes. What shapes can you see? Match the 2D shape faces to the 3D shapes – some 2D shape faces may match with more than one 3D shape.



**circle**



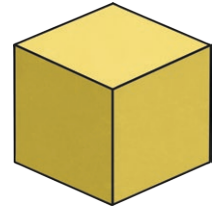
**triangle**



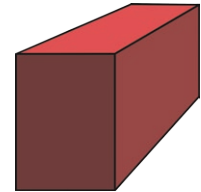
**square**



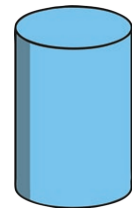
**rectangle**



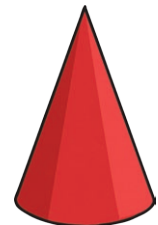
**cube**



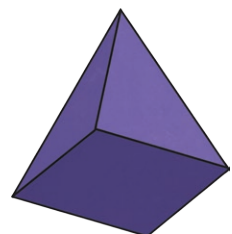
**cuboid**



**cylinder**



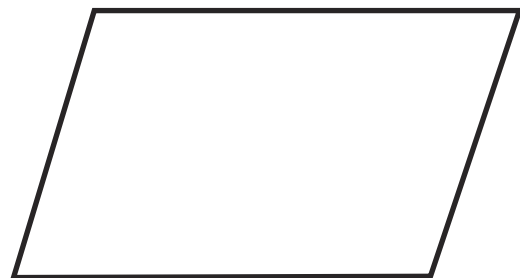
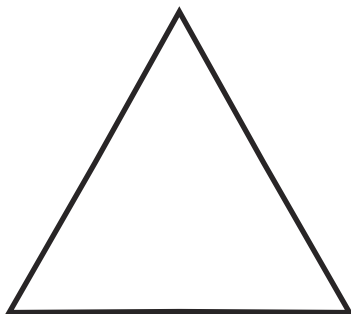
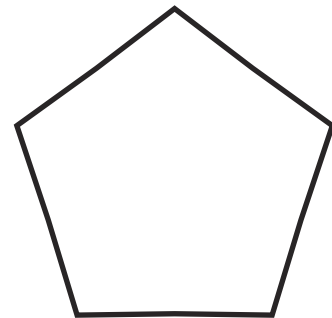
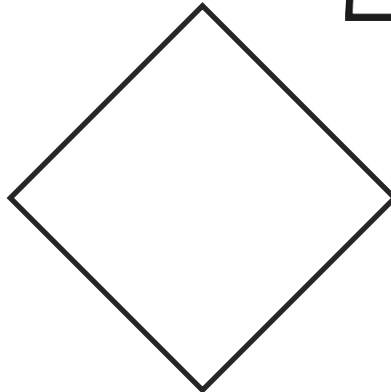
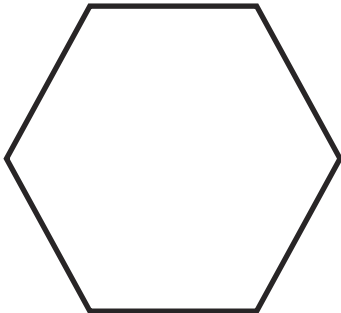
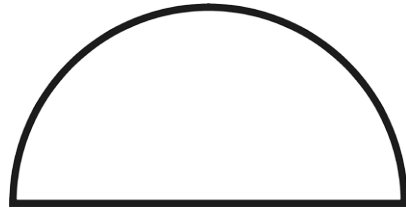
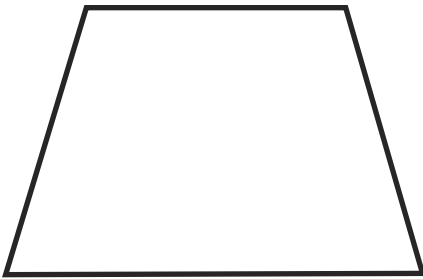
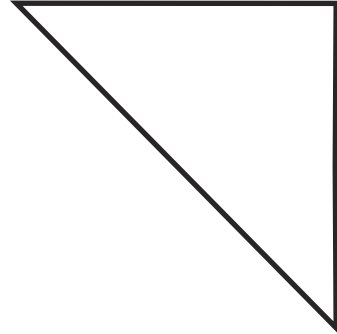
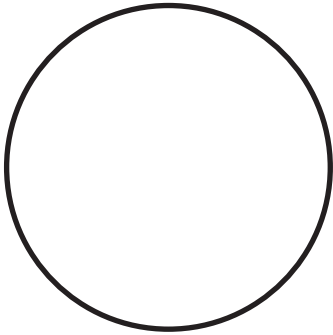
**cone**



**square-based  
pyramid**

# Shape Sorting 1

Cut out these shapes and stick them onto the correct part of the Carroll diagram.



# Carroll Diagram

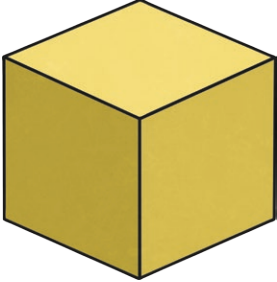
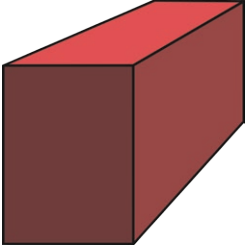
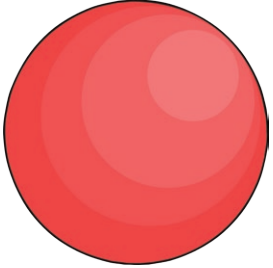
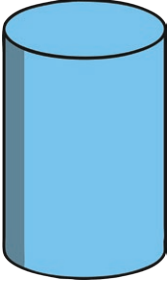
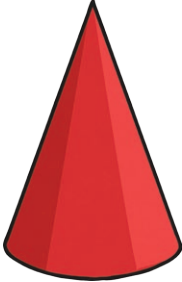
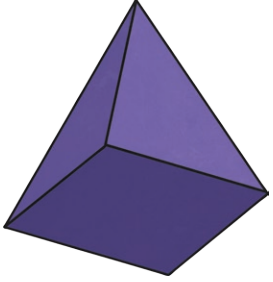
Has three or fewer sides	Has more than three sides

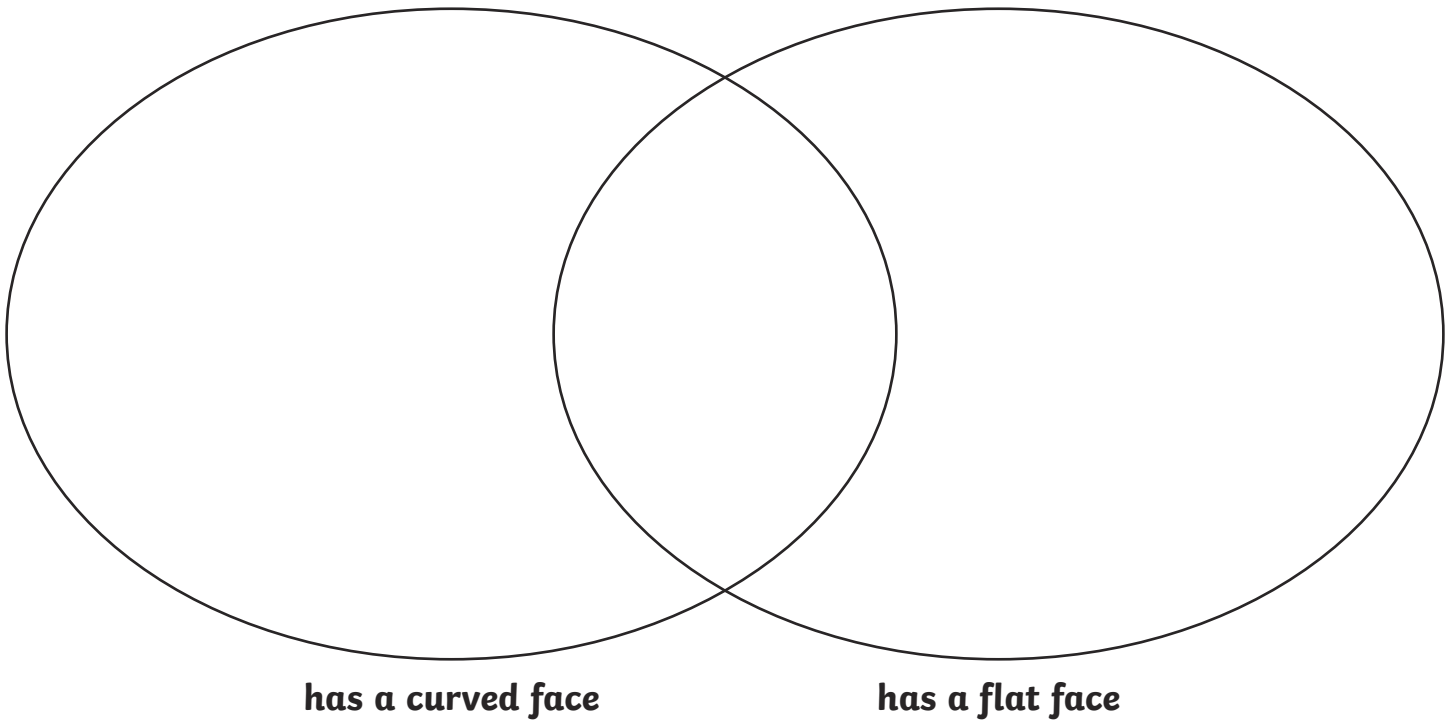
Can you think of a different way to sort 2D shapes? Make your own Carroll diagram.



# Shape Sorting 2

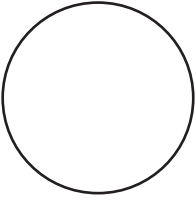
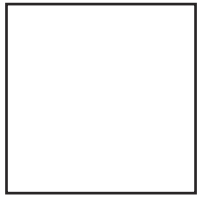

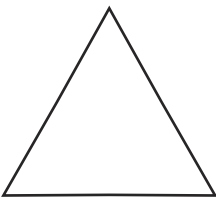
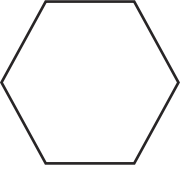
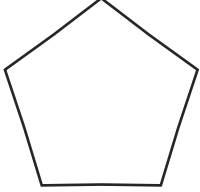
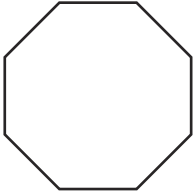

Can you sort these 3D shapes into a Venn diagram? Think about which shape belongs in each circle. Do any belong in the middle? Do any belong outside the circles?

 <p><b>cube</b></p>	 <p><b>cuboid</b></p>	 <p><b>sphere</b></p>
 <p><b>cylinder</b></p>	 <p><b>cone</b></p>	 <p><b>square-based pyramid</b></p>



# Shape Properties – 2D Answers

Name these shapes and write their properties.

	Name: <u>circle</u> Number of sides: <u>1</u> Number of corners: <u>0</u>		Name: <u>square</u> Number of sides: <u>4</u> Number of corners: <u>4</u>
	Name: <u>rectangle</u> Number of sides: <u>4</u> Number of corners: <u>4</u>		Name: <u>triangle</u> Number of sides: <u>3</u> Number of corners: <u>3</u>
	Name: <u>hexagon</u> Number of sides: <u>6</u> Number of corners: <u>6</u>		Name: <u>pentagon</u> Number of sides: <u>5</u> Number of corners: <u>5</u>
	Name: <u>octagon</u> Number of sides: <u>8</u> Number of corners: <u>8</u>		Name: <u>semicircle</u> Number of sides: <u>2</u> Number of corners: <u>2</u>

Challenge: Lucy says that all 2D shapes have the same number of sides as their number of corners. Is she right? Explain your answer.

**She is not right. A circle has 1 side and no corners.**

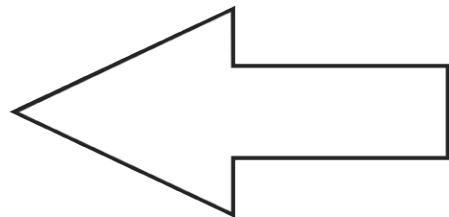
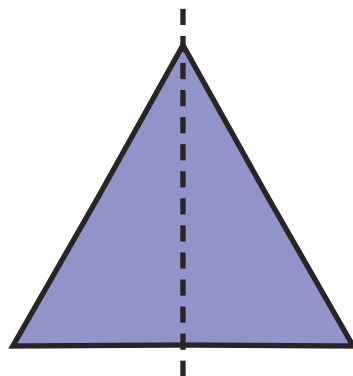
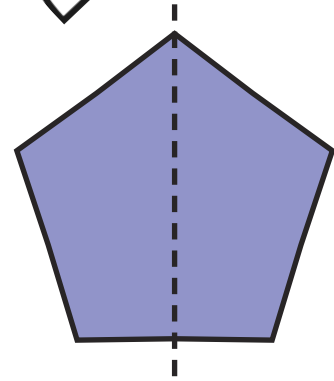
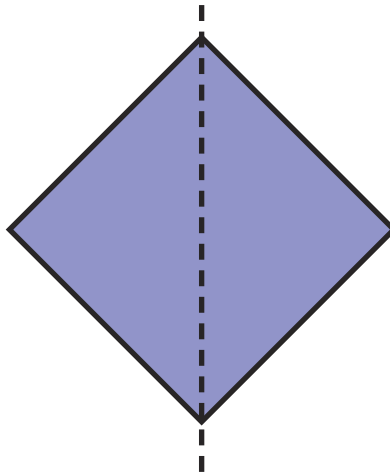
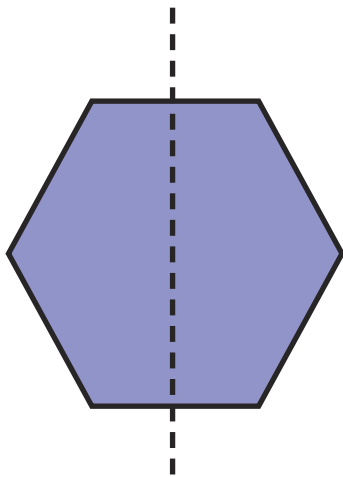
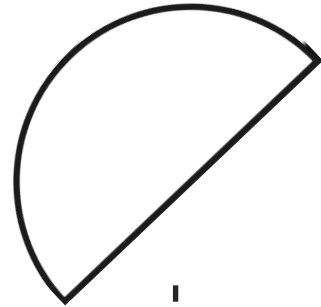
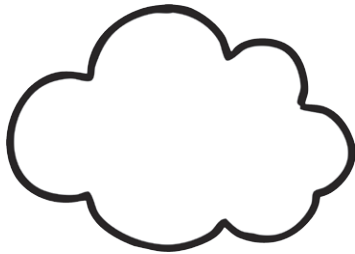
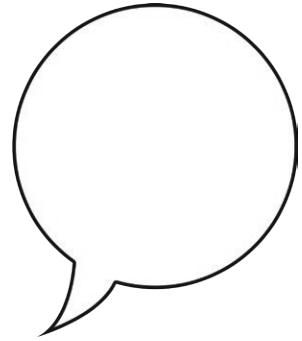
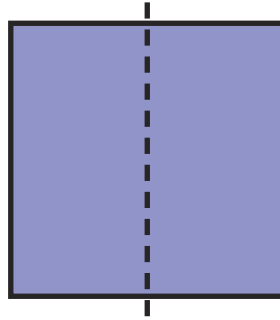
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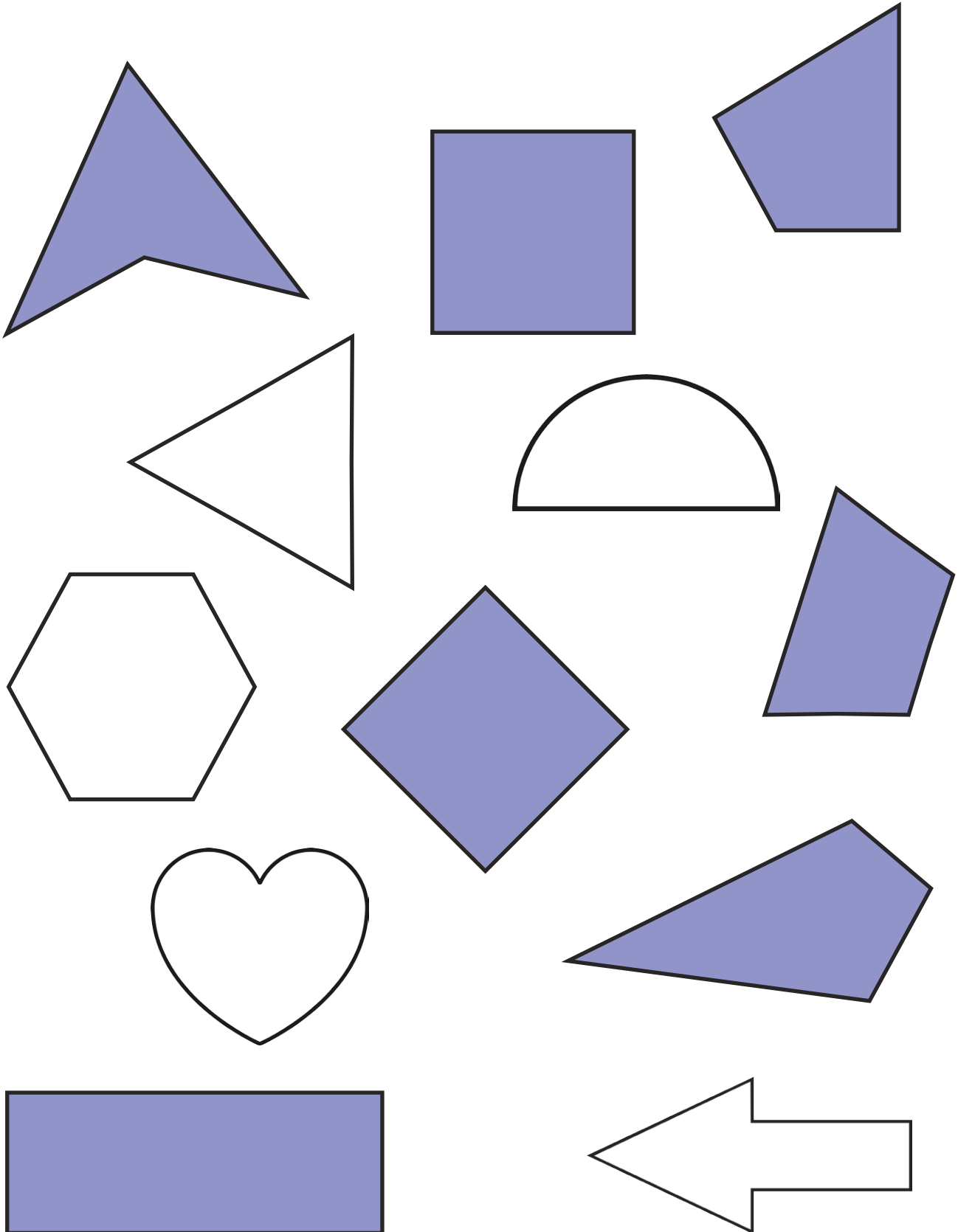
# Shape Symmetry Answers

Some of these shapes have a vertical line of symmetry and some don't. Colour in the shapes that do have a vertical line of symmetry, and draw the line in the correct place.



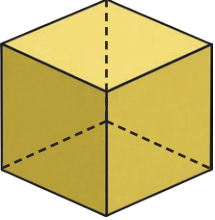
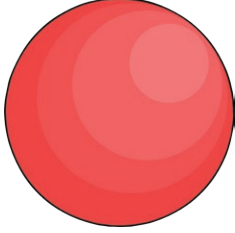
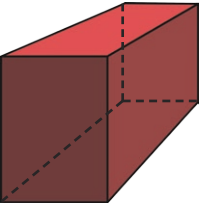
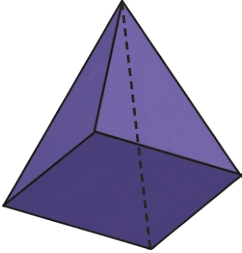
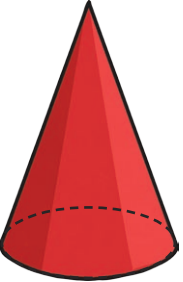
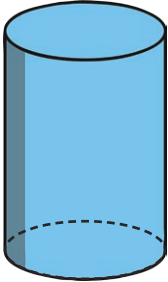
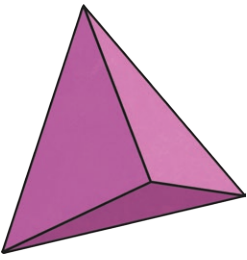
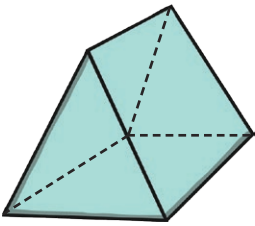
# Quadrilateral Quiz Answers

A quadrilateral is any shape with four sides and four corners. Colour in all the quadrilaterals.



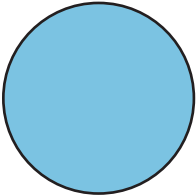
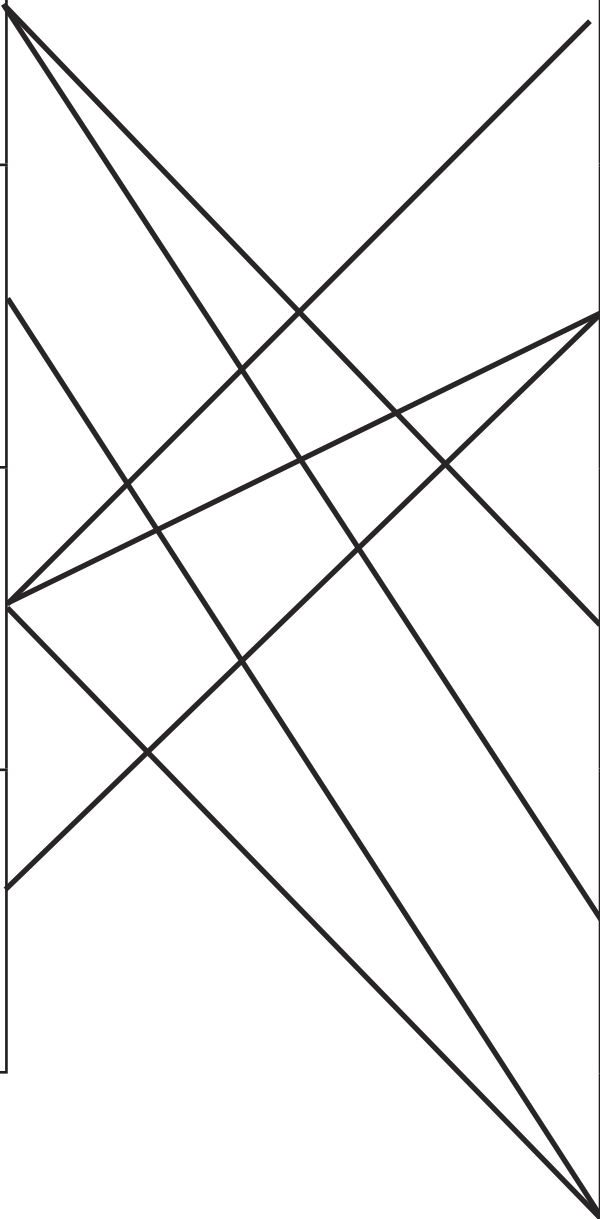
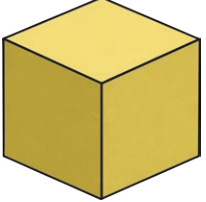
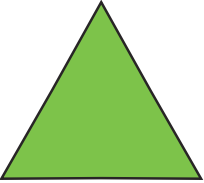
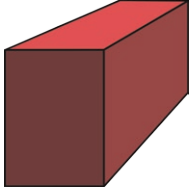
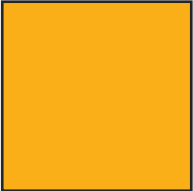
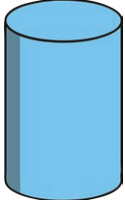

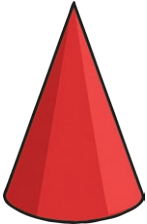
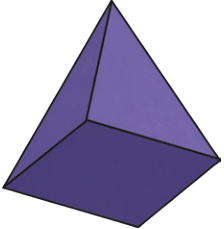
# Shape Properties – 3D Answers

Name these shapes and write their properties.

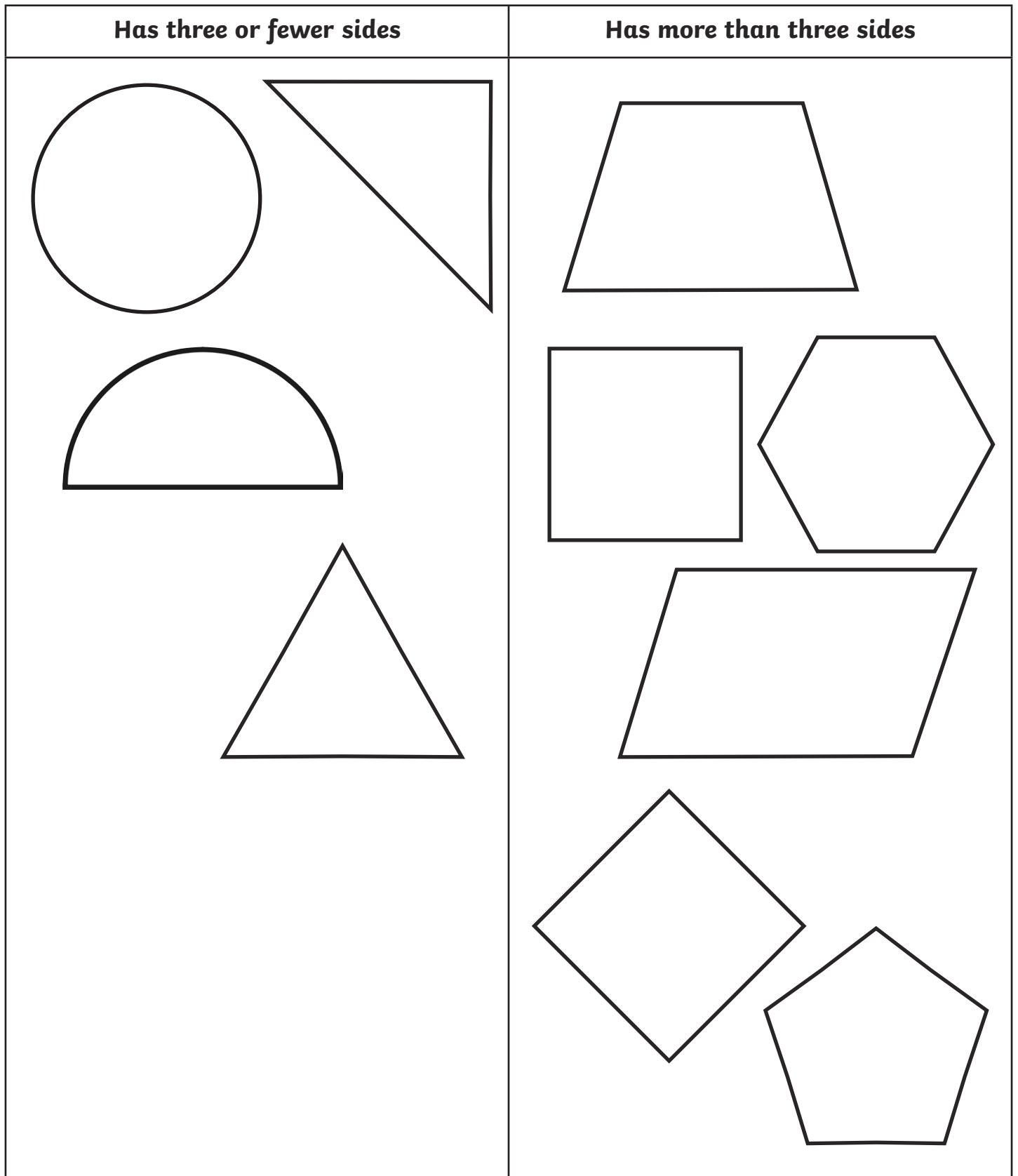
	Name: <u>cube</u> Number of faces: <u>6</u> Number of edges: <u>12</u> Number of vertices: <u>8</u>		Name: <u>sphere</u> Number of faces: <u>1</u> Number of edges: <u>0</u> Number of vertices: <u>0</u>
	Name: <u>cuboid</u> Number of faces: <u>6</u> Number of edges: <u>12</u> Number of vertices: <u>8</u>		Name: <u>square-based pyramid</u> Number of faces: <u>5</u> Number of edges: <u>8</u> Number of vertices: <u>5</u>
	Name: <u>cone</u> Flat faces: <u>1</u> Curved faces: <u>1</u> Number of edges: <u>1</u> Number of vertices: <u>0</u>		Name: <u>cylinder</u> Flat faces: <u>2</u> Curved faces: <u>1</u> Number of edges: <u>2</u> Number of vertices: <u>0</u>
	Name: <u>triangular-based pyramid</u> Number of faces: <u>4</u> Number of edges: <u>6</u> Number of vertices: <u>4</u>		Name: <u>triangular prism</u> Number of faces: <u>5</u> Number of edges: <u>9</u> Number of vertices: <u>6</u>

# What Shapes Can You See? Answers

Look closely at some 3D shapes. Their faces are made up of 2D shapes. What shapes can you see? Match the 2D shape faces to the 3D shapes – some 2D shape faces may match with more than one 3D shape.

 <b>circle</b>		 <b>cube</b>
 <b>triangle</b>		 <b>cuboid</b>
 <b>square</b>		 <b>cylinder</b>
 <b>rectangle</b>		 <b>cone</b>
		 <b>square-based pyramid</b>

# Carroll Diagram Answers



Can you think of a different way to sort 2D shapes? Make your own Carroll diagram.

# Shape Sorting 2

Can you sort these 3D shapes into a Venn diagram? Think about which shape belongs in each circle. Do any belong in the middle? Do any belong outside the circles?

