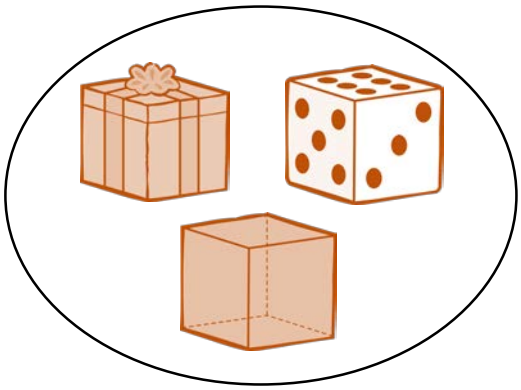
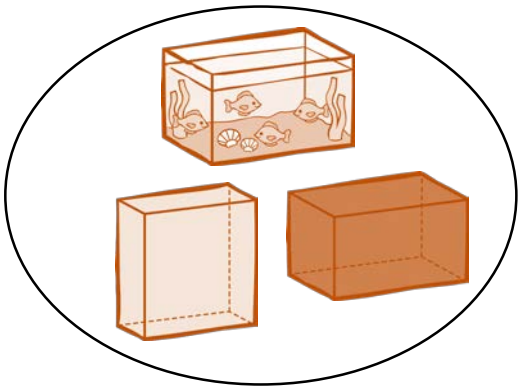
Sort 3D shapes

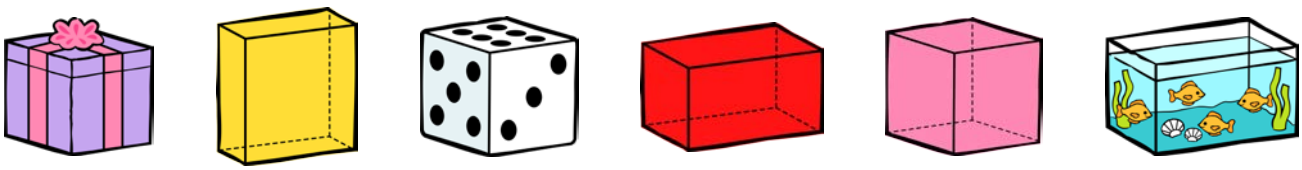
1 Sort the 2D shapes under the correct headings.

Cubes

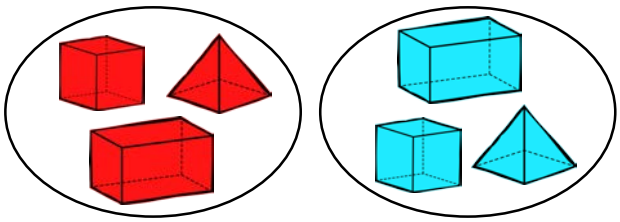
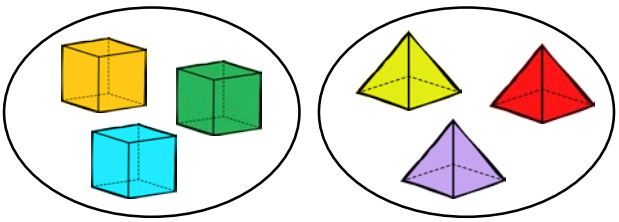
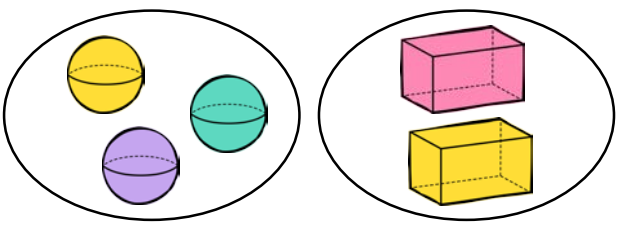
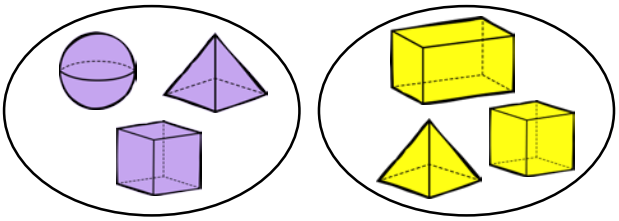


Cuboids





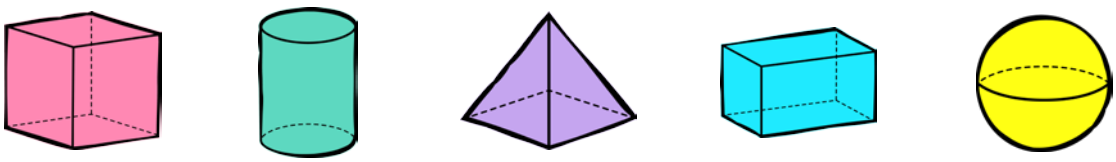
2 Complete the table to show how the shapes have been sorted.

Sorted shapes	How have they been sorted?
	Red shapes and blue shapes.
	Cubes and square-based pyramids.
	Spheres and cuboids.
	Purple shapes and yellow shapes.

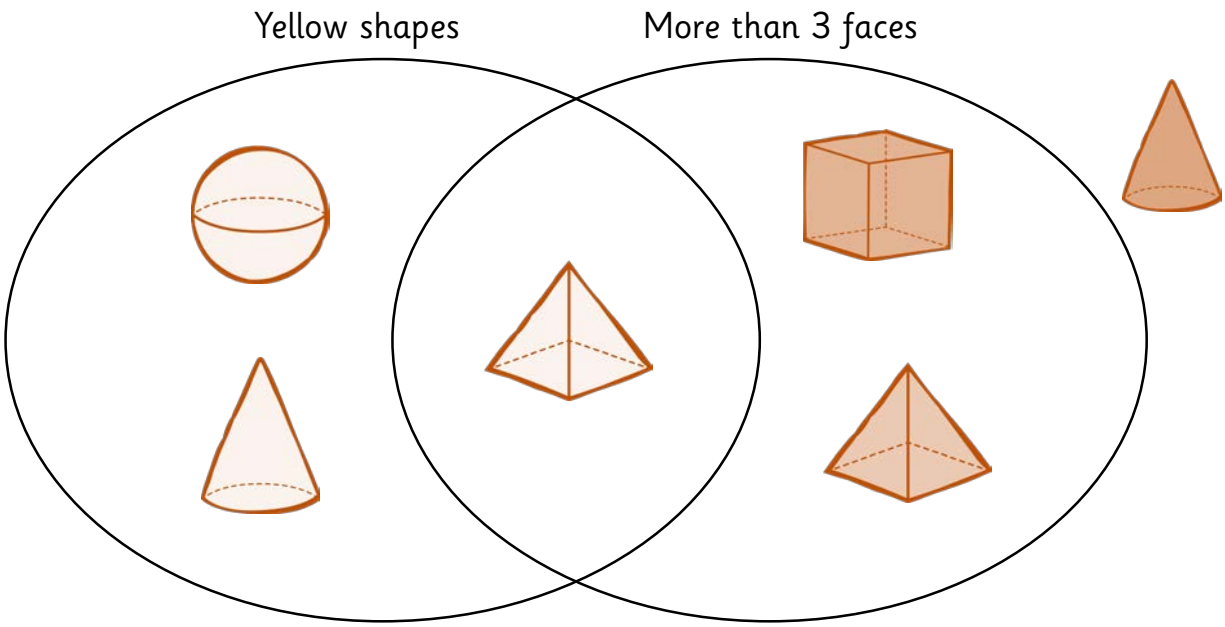
Sort 3D shapes

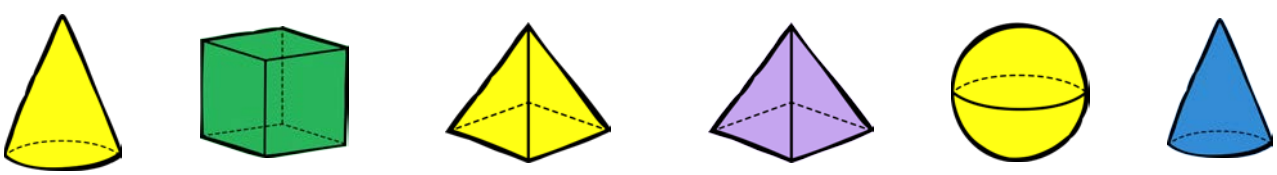
1 Sort the shapes into the table below.

6 faces	Less than 6 faces & surfaces
Cube (6 faces) Cuboid (6 faces)	Sphere (1 curved surface) Cylinder (2 faces & 1 curved surface) Pyramid (5 faces)



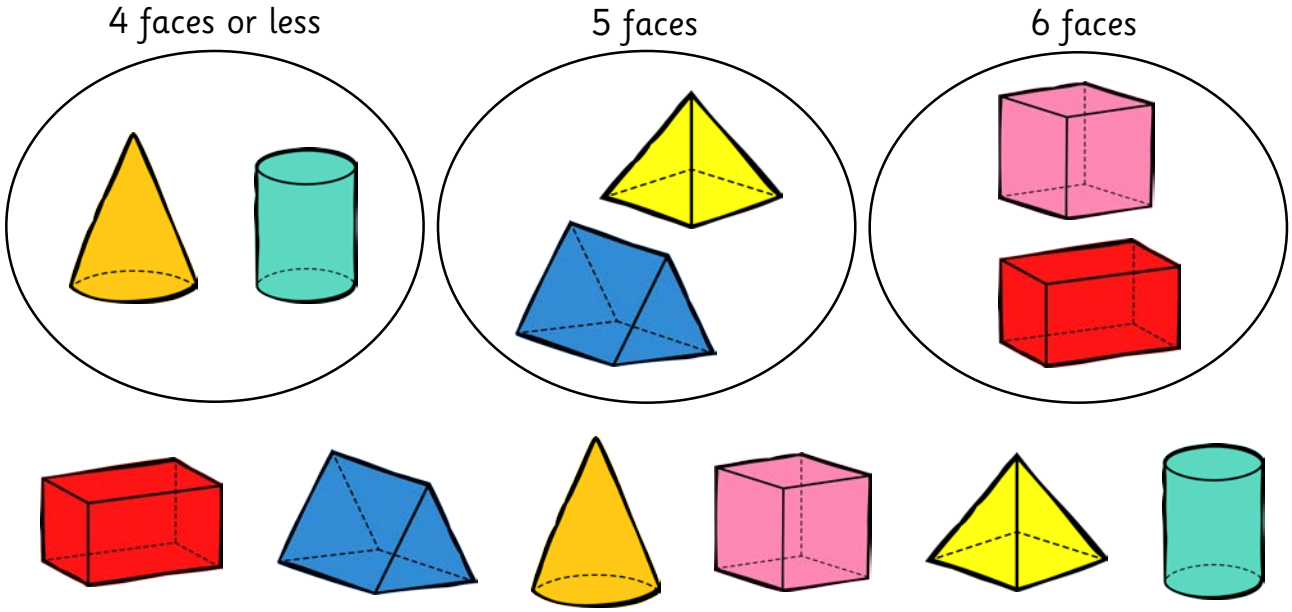
2 Sort the shapes into the Venn diagram below.



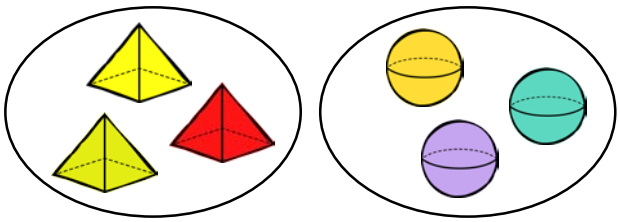
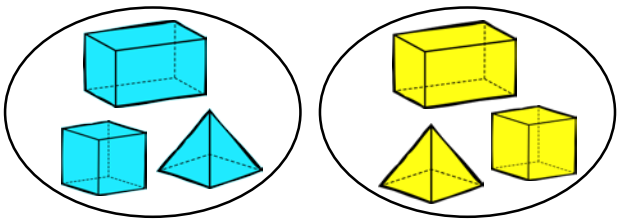
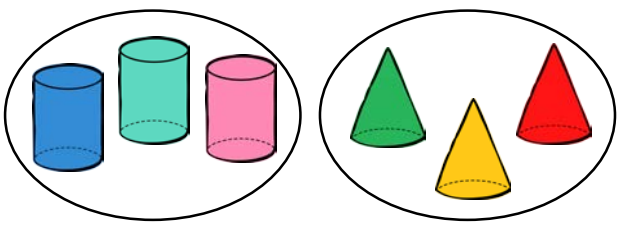
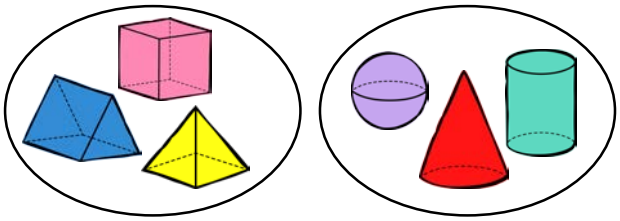


Sort 3D shapes

1 Sort the 2D shapes under the correct headings.



2 Complete the table to show how the shapes have been sorted.

Sorted shapes	How have they been sorted?
	Square-based pyramids and spheres.
	Blue shapes and yellow shapes.
	Cylinders and cones.
	Shapes with 4 or more faces and shapes with less than 4 faces.

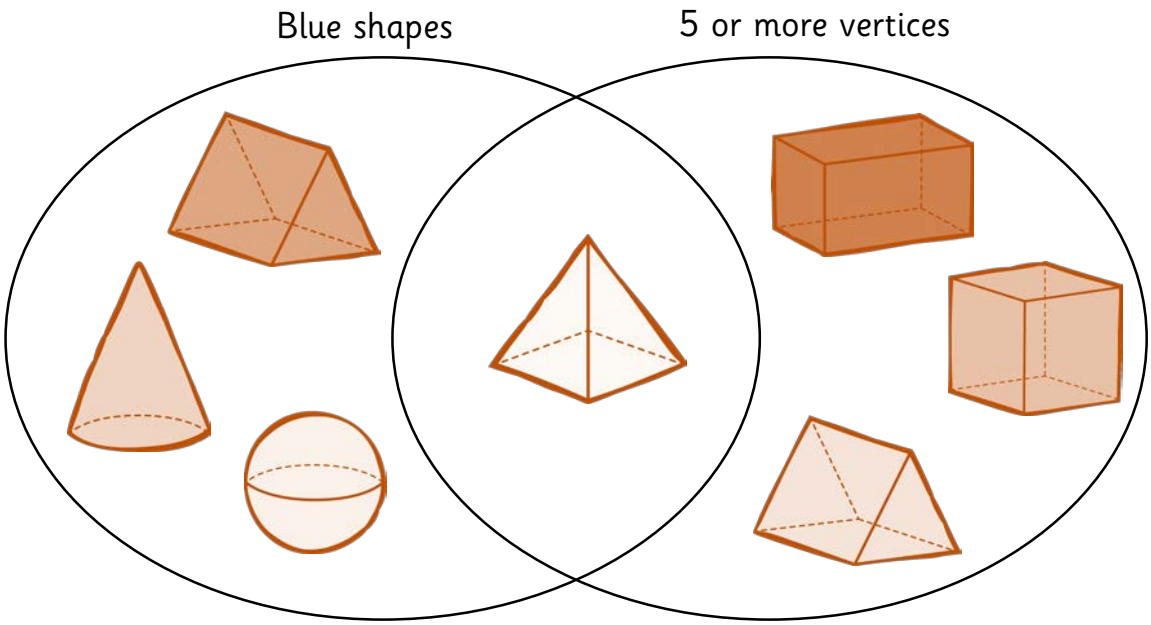
Sort 3D shapes

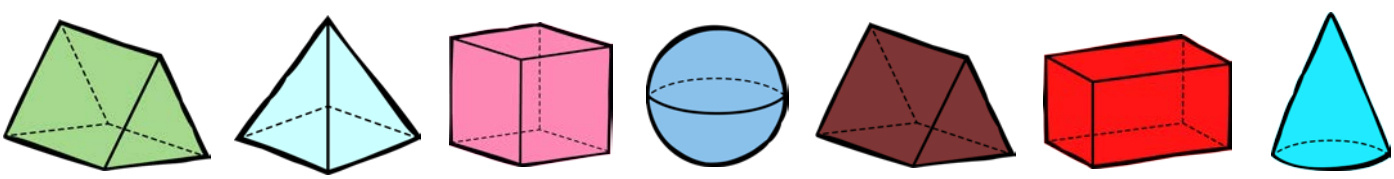
1 Sort the shapes into the table below.

6 edges or less	More than 6 edges
Sphere (0 edges) Cylinder (2 edges) Cone (1 edges) Tetrahedron (6 edges)	Cube (12 edges) Cuboid (12 edges) Square-based pyramid (8 edges) Triangular prism (9 edges)

sphere	square-based pyramid	cuboid	tetrahedron
cylinder	cone	triangular prism	cube

2 Sort the shapes into the Venn diagram below.





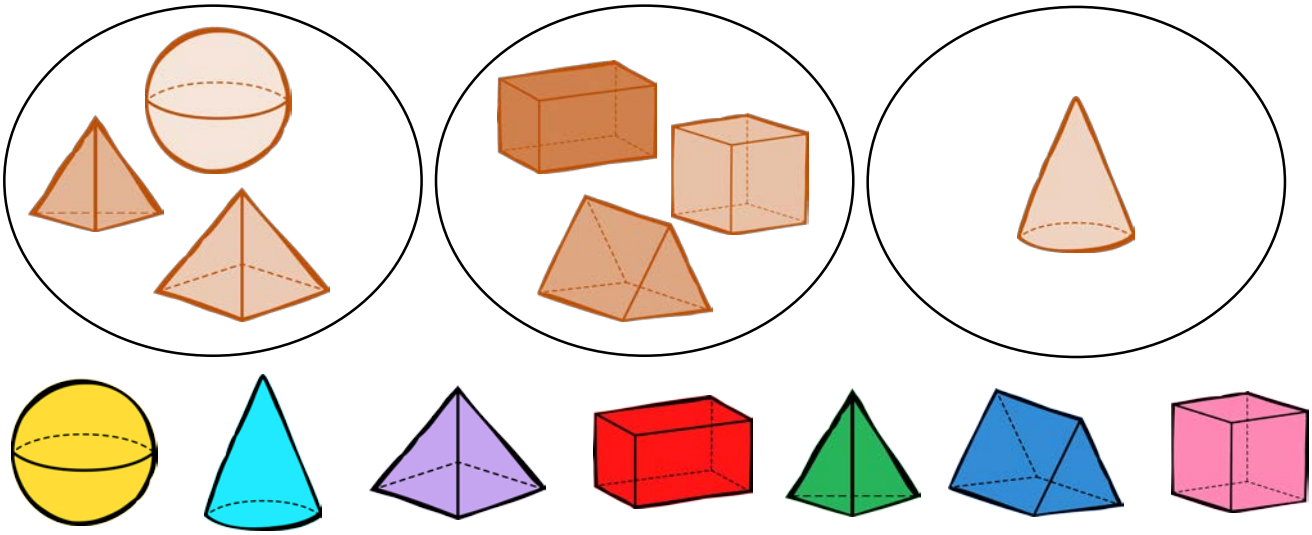
Sort 3D shapes

1 Sort the 2D shapes under the correct headings.

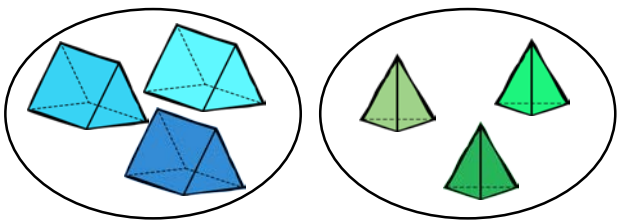
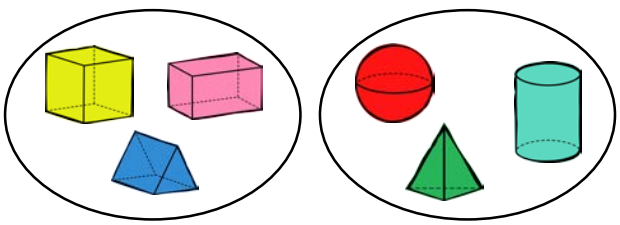
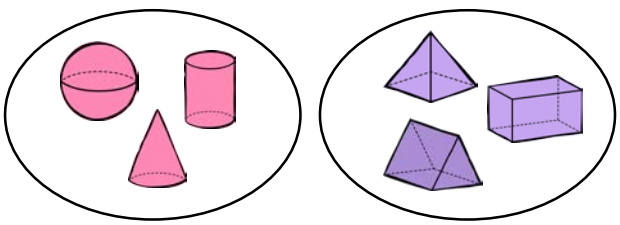
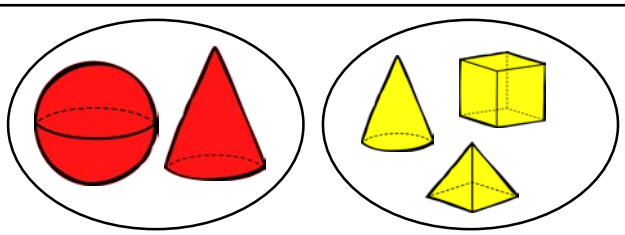
5 vertices or fewer

More than 5 vertices

1 apex



2 Complete the table.

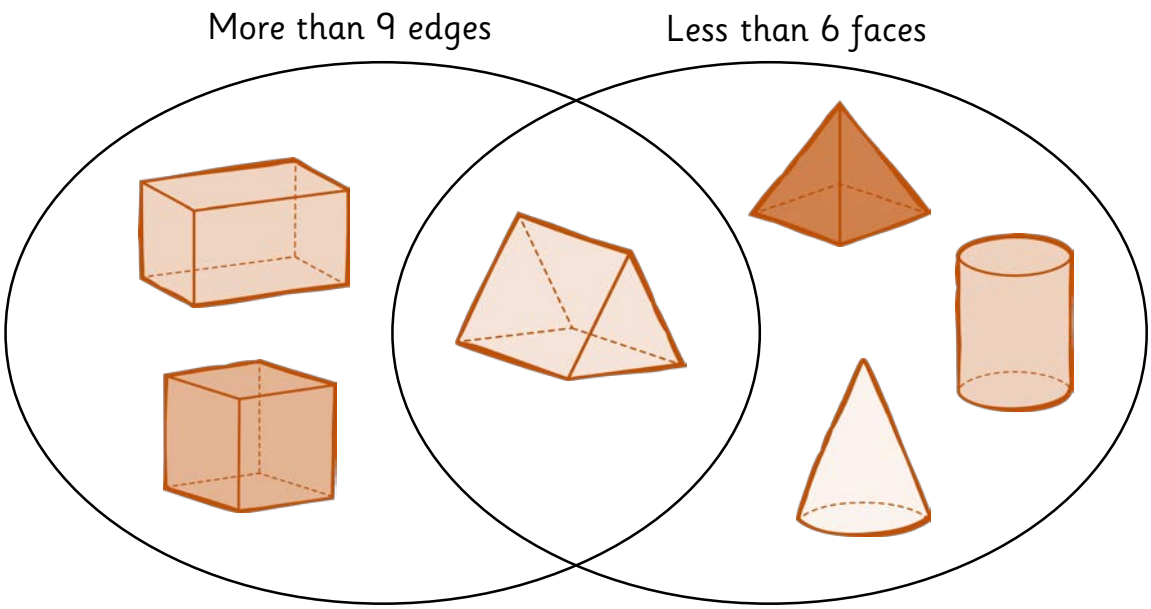
Sorted shapes	How have they been sorted?	How else could they be sorted?
	Triangular prisms and tetrahedrons	Blue shapes and green shapes
	5 faces or more and 4 faces or less	9 vertices or more and 4 vertices or less
	Pink shapes and purple shapes	Curved edges and non-curved edges
	Large shapes and small shapes	Red shapes and yellow shapes

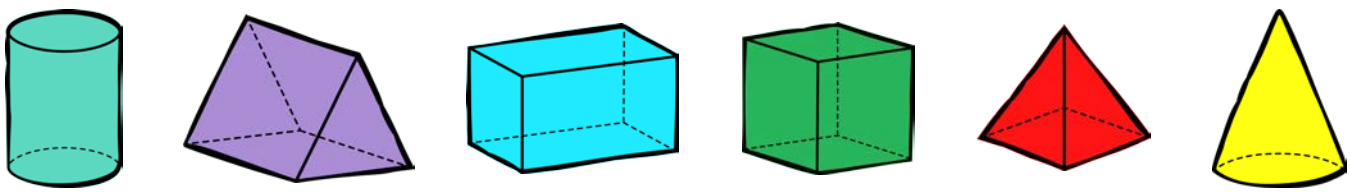
Sort 3D shapes

1 What shapes could belong to each group? Complete the table to show this.

Odd number of faces & surfaces	Even number of faces & surfaces
Examples are: Sphere (1 curved surface) Cylinder (3 faces) Square-based pyramid (5 faces) Triangular prism (5 faces)	Examples are: Cube (6 faces) Cuboid (6 faces) Cone (1 face & 1 curved surface) Tetrahedron (4 faces)

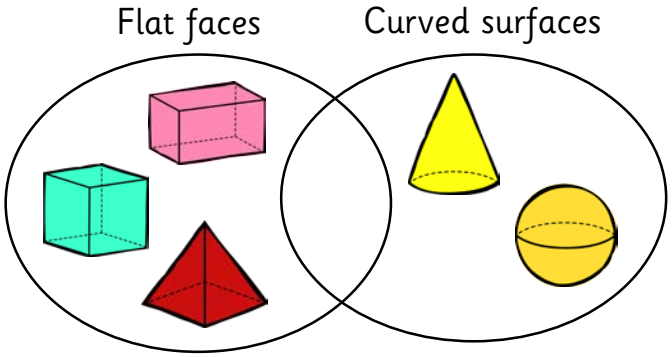
2 Sort the shapes into the Venn diagram below.





Challenge cards

Problem solving and reasoning cards:

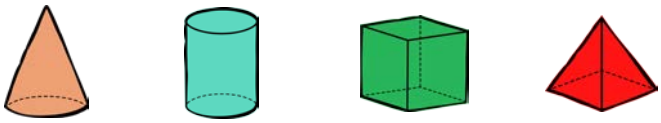


Have the following shapes been sorted correctly? Explain your answer.

No, the cone needs to be placed in the middle as it has both flat faces and a curved surface.

Jess says,

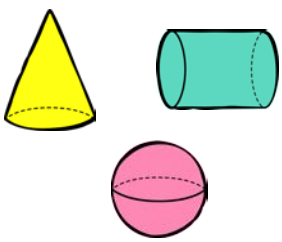
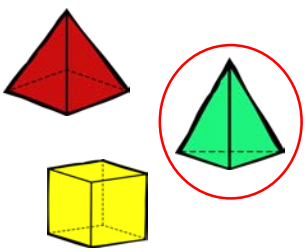
I have sorted these shapes by number of edges from least to most.



Has Jess sorted them correctly?
Explain how you know.

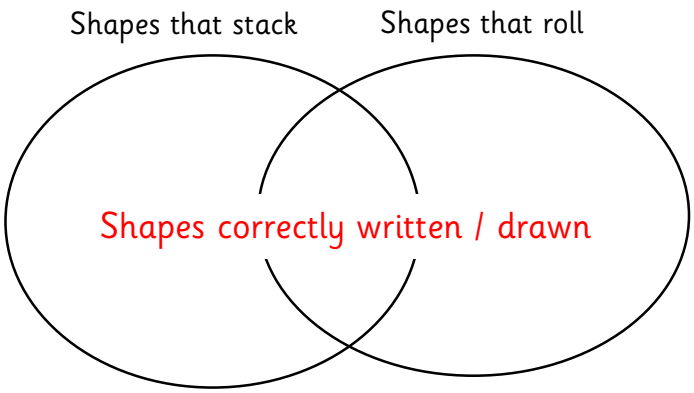
False. The cube has 12 edges and the pyramid has 8 edges, so they need swapping round.

Spot and explain the mistake.

Less than 5 vertices	5 or more vertices
	

A tetrahedron only has 4 vertices. It should be in the 'less than 5 vertices' column.

Write shape names to complete the Venn diagram.



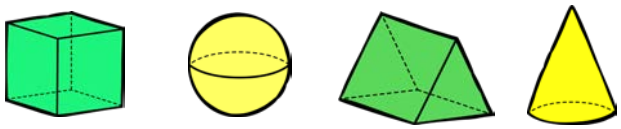
Che is sorting shapes. He says:

A cube is a type of cuboid.

True or false?
Explain your answer.

True. A cube is a special type of cuboid where all the faces are square.

How could the following shapes be sorted?



List your answers below.

Possible answers:
Green shapes / yellow shapes
Curved surfaces / flat faces