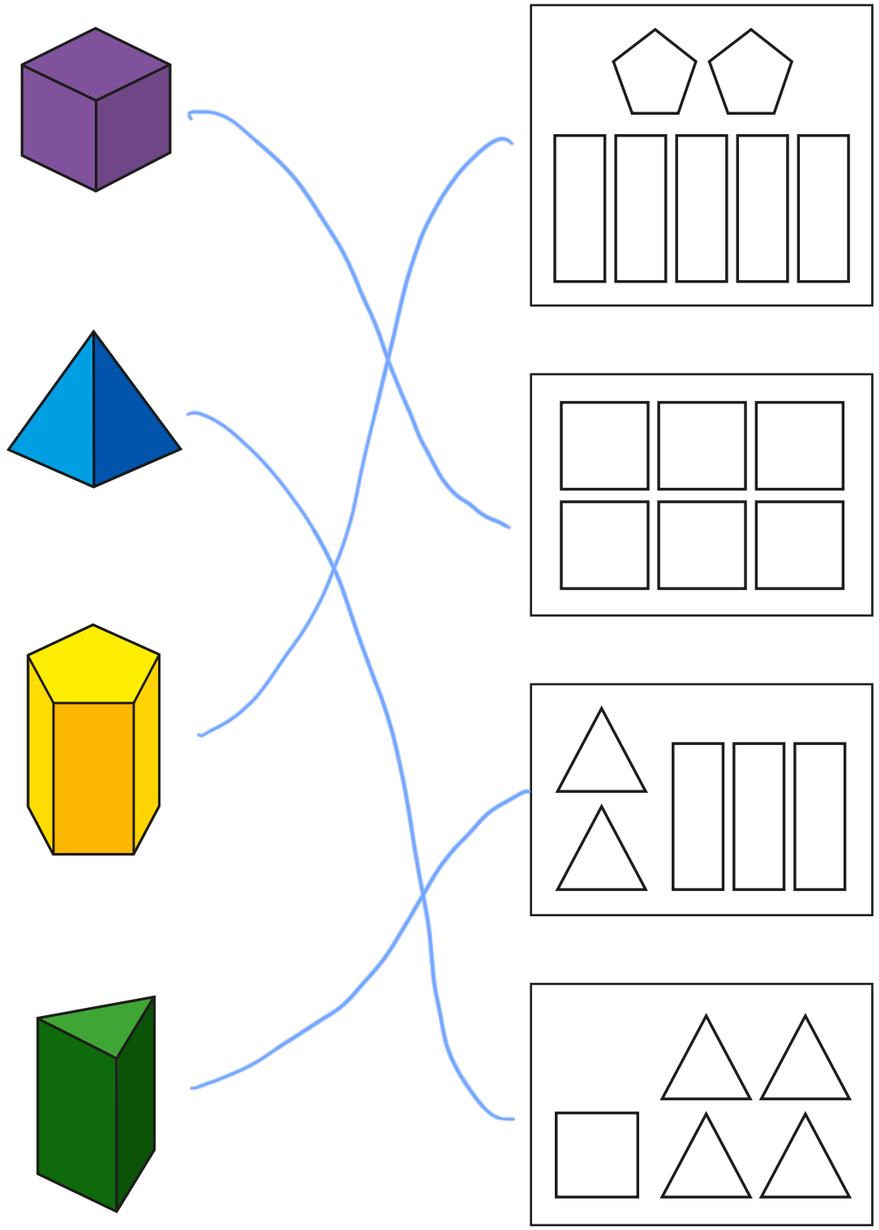
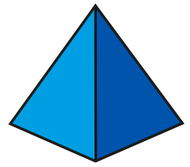
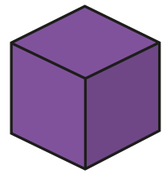
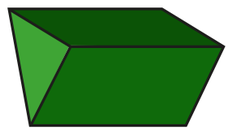
Count faces on 3D shapes

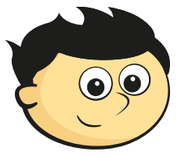
1 Match the shapes to the faces.



2 Complete the table.

Shape	Name	Number of faces
	cuboid	6
	pyramid	5
	cube	6
	triangular prism	5

3

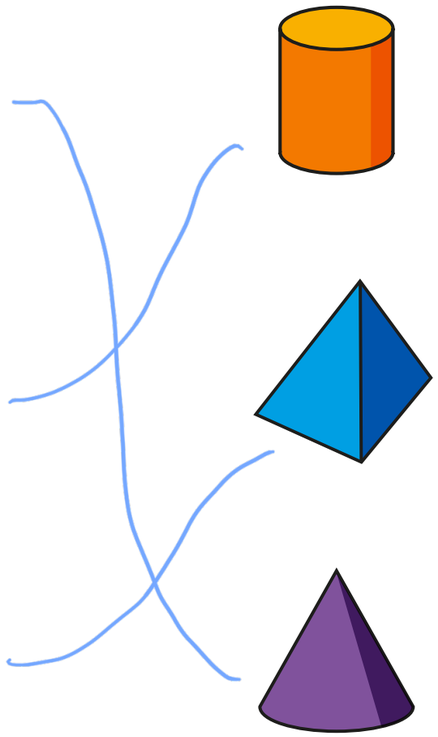


My shape has one curved surface.

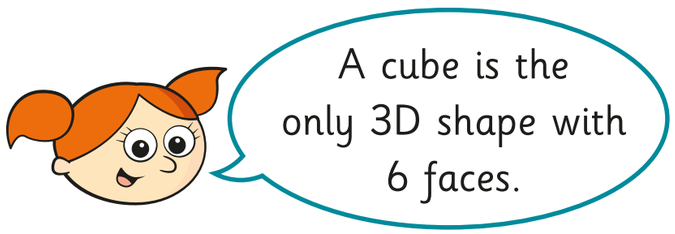
What shape is Jack describing? e.g. cylinder

4 Match the description to the shape.

1 circular face and 1 curved surface
2 circular faces and 1 curved surface
4 triangular faces



5

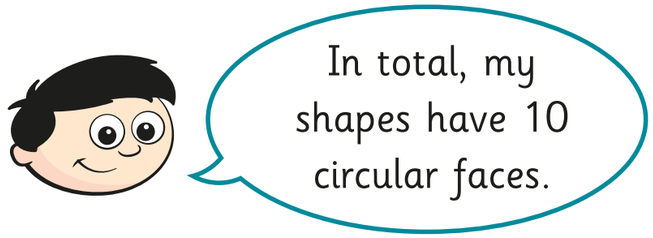


Alex has made a mistake.

Name another 3D shape that has 6 faces.

cuboid

6 Dexter has 5 of the same 3D shapes.



What shapes has Dexter got?

Dexter has got 5 cylinders

7 Dora wants to put a sticker on each face of some cubes.

She has 60 stickers.

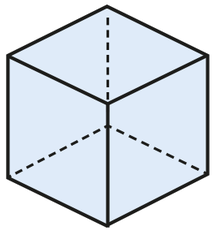
How many cubes can she cover in stickers?

Dora can cover 10 cubes in stickers.

Count edges on 3D shapes

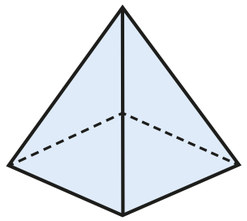
1 How many edges does each shape have?

a)



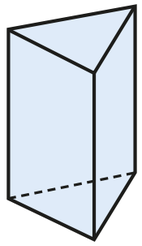
12 edges

b)



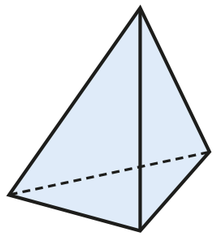
8 edges

c)



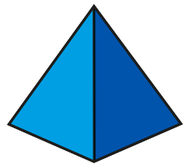
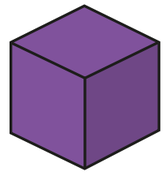
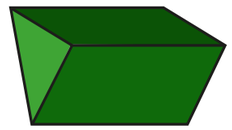
9 edges

d)

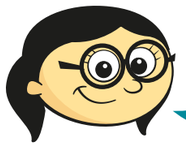


6 edges

2 Complete the table.

Shape	Name	Number of edges	Number of faces
	cuboid	12	6
	pyramid	8	5
	cube	12	6
	triangular prism	9	5

3

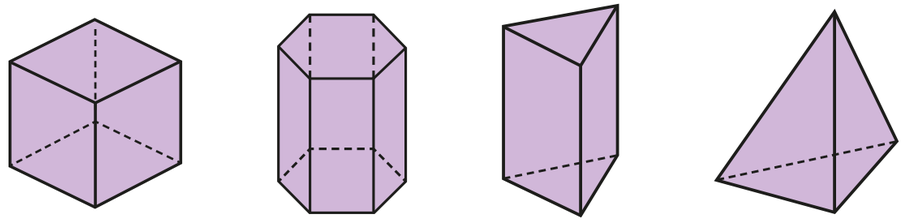


3D shapes always have more edges than faces.

Do you agree? NO

Why?

4 Use the clues to label the shape with the correct letter.



D _____ B _____ A _____ C _____

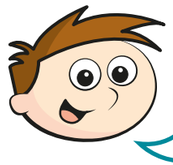
- Shape A has an odd number of edges.
- Shape B has the most edges.
- Shape C has the same number of edges as a cube has faces.
- The edges of shape D are all the same length.

5 Write the name of two 3D shapes that have the same number of edges.

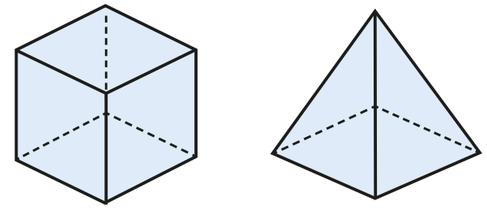
e.g

cube and cuboid

6



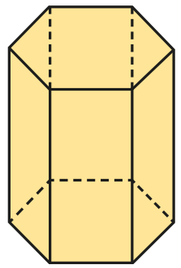
A cube has 6 faces and 12 edges, so a square-based pyramid must have 5 faces and 10 edges. The number of edges is always double the number of faces.



Do you agree with Teddy? No

Why?

7 This hexagonal prism has 18 edges.



How many edges do you think a pentagonal prism has?

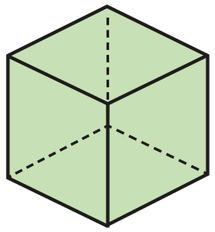
15

Why do you think this?

Count vertices on 3D shapes

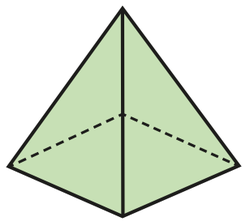
1 How many vertices does each shape have?

a)



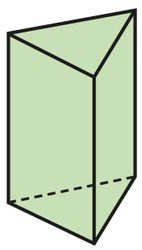
8 vertices

b)



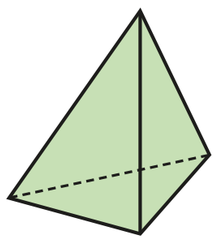
5 vertices

c)



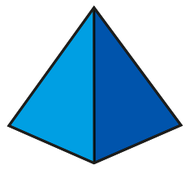
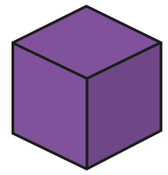
6 vertices

d)



4 vertices

2 Complete the table.

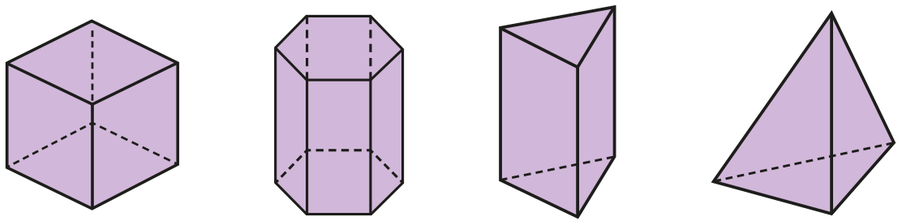
Shape	Name	Number of vertices
	cuboid	8
	pyramid	5
	cube	8
	cylinder	0

Write the name of a different 3D shape with no vertices.

sphere

3 Write the shapes in order of the number of vertices.

Start with the shape that has the fewest vertices.



A B C D

fewest most

D C A B

4 Complete the sentences.

more fewer

a) A cube has more vertices than a sphere.

b) A sphere has fewer vertices than a cone.

c) A triangular prism has fewer vertices than a cuboid.

5 Match each shape to the correct label.

< 5 vertices

= 5 vertices

> 5 vertices