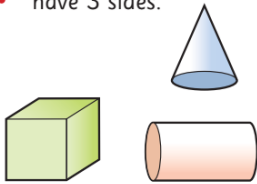


Chapter 32: 3-D shapes - Revision Quiz

How much do you remember about 3-D shapes? Circle each correct answer.

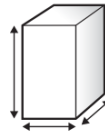
1. 3-D shapes ...

- are flat.
- are solid.
- have 3 sides.



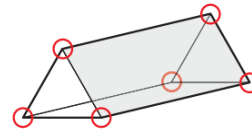
2. The dimensions of a 3-D shape are ...

- length, height.
- length, faces, edges.
- length, width, height.



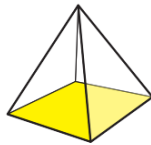
3. A corner of a 3-D shape is called a ...

- tip.
- vertex.
- edge.



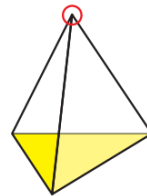
4. The face that a pyramid sits on is called its ...

- base.
- seat.
- apex.



5. The vertex at the top of a pyramid is called its ...

- base.
- apex.
- summit.



6. Pyramids are named after the ...

- shape of their bases.
- person who discovered them.
- shape of their sides.

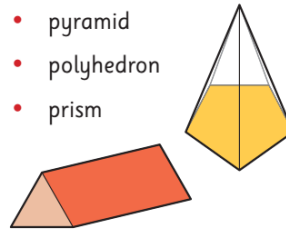
7. A triangular pyramid is also known as a ...

- triangular prism.
- three-sided pyramid.
- tetrahedron.






8. Which type of 3-D shape can always be cut into equal slices?

- pyramid
- polyhedron
- prism



9. Which of the following is **not** a prism?

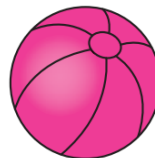
- 
- 
- 

10. All 3-D shapes with flat faces and straight sides are known as ...

- polyhedra.
- polygons.
- solids.

11. A sphere has a curved face, so it is **not** a ...

- polyhedron.
- 3-D shape.
- solid.



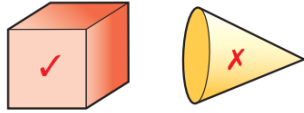
12. This is called a ...



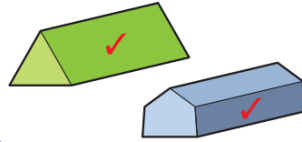
- shape skeleton.
- shape drawing.
- shape net.

3-D Shapes – polyhedra

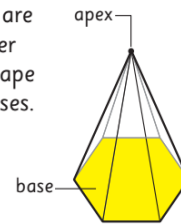
A **polyhedron** is any 3-D shape with flat faces and straight edges.



Prisms can be cut into identical slices. They have straight edges only.



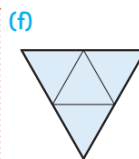
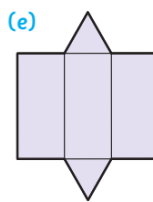
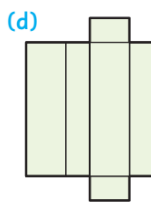
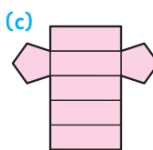
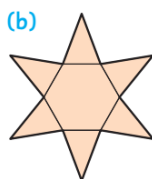
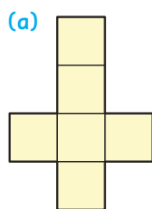
Pyramids are named after the 2-D shape of their bases.



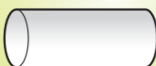
1. Copy and complete this grid.

Shape	Name	Number of ...			How many edges meet at each vertex?
		Faces	Edges	Vertices	
(a)	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3
(c)	pentagonal prism	<input type="checkbox"/>	<input type="checkbox"/>	10	<input type="checkbox"/>
(d)	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e)	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) (i) (ii)	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(i) _____ (ii) _____

2. Which 3-D shapes can be made from the following shape nets?



Challenge 1 A prism can be cut into equal slices. Is this cylinder a prism? Explain!



Challenge 2 Name three 3-D shapes that are not polyhedra.

3-D shapes – Regular polyhedra

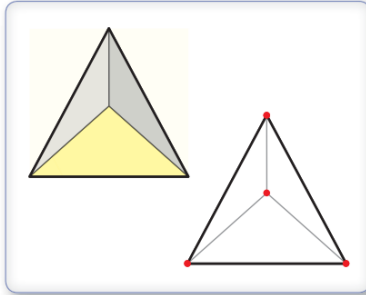


All faces of **regular polyhedra** are equal.

There are only **5 regular polyhedra** in total.

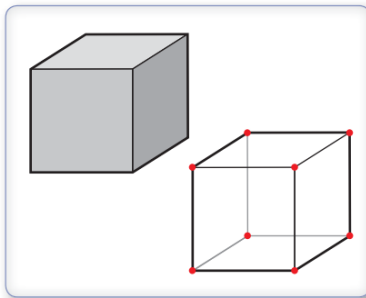


1. Tetrahedron



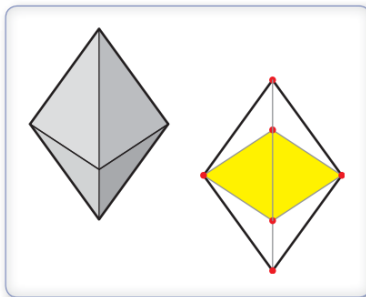
- (a) Also known as a tr _____ py _____.
- (b) Number of edges? _____
- (c) Number of faces? _____
- (d) What 2-D shape is each face? _____
- (e) Number of vertices? _____

2. Cube



- (a) Number of edges? _____
- (b) Number of faces? _____
- (c) What 2-D shape is each face? _____
- (d) Number of vertices? _____
- (e) A cube is also a (pyramid / prism).

3. Octahedron



- (a) Number of edges? _____
- (b) Number of faces? _____
- (c) What 2-D shape is each face? _____
- (d) Number of vertices? _____
- (e) It is made by joining two sq _____ py _____ together, base to base.

Challenge

Here are the two remaining regular polyhedra. Count the number of (i) faces, (ii) edges and (iii) vertices on each.

(a) dodecahedron



(b) icosahedron

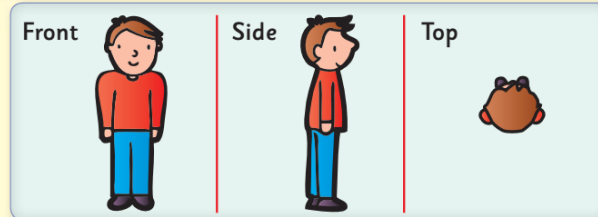


Only half of each shape is shown.



3-D shapes - Perspective

When we view a 3-D solid from different angles, we see a different 2-D shape or outline.



1. Each of these images shows the **side** view. Circle the **2-D shadow** that shows the ...

(a) front view.



- (i)
- (ii)
- (iii)

(b) front view.



- (i)
- (ii)
- (iii)

(c) top view.



- (i)
- (ii)
- (iii)

(d) top view.



- (i)
- (ii)
- (iii)

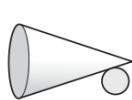
2. Each of these images shows the **front** view. Identify which view each of the following shadows shows: **front**, **side** and **top**.

(a)



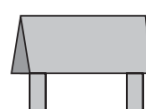
- (i)
- (ii)
- (iii)

(b)



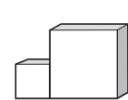
- (i)
- (ii)
- (iii)

(c)



- (i)
- (ii)
- (iii)

(d)



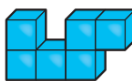
- (i)
- (ii)
- (iii)

3. What view of each 3-D shape does the 2-D shape show: **front**, **side** or **top**?

(a)



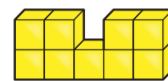
(b)



(c)



(d)



Challenge 1

Draw the (i) front, (ii) side and (iii) top view of each of these shapes: (a)



Challenge 2

Draw (i) front, (ii) side and (iii) top views of your:

- (a) pencil case.
- (b) chair.
- (c) lunchbox.