

Name: \_\_\_\_\_

Exam Style Questions

## 3D Shapes



Corbettmaths

Equipment needed: Calculator, pen

### Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

[www.corbettmaths.com/contents](http://www.corbettmaths.com/contents)

Videos 3, 5



Answers and Video Solutions

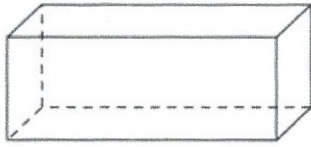


1. The names of five solid shapes are given.

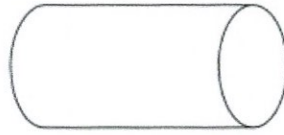


triangular prism    sphere    cube    cuboid    cylinder

Three of them are drawn below.



A



B



C

Complete these statements.

Shape A is called a ..... *Cuboid* .....

Shape B is called a ..... *cylinder* .....

Shape C is called a ..... *sphere* .....

(3)

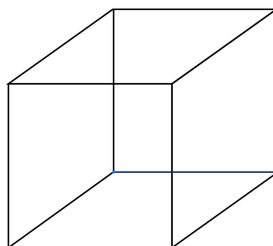
2. (a) How many faces does a cube have?



*6*

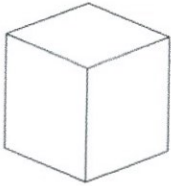
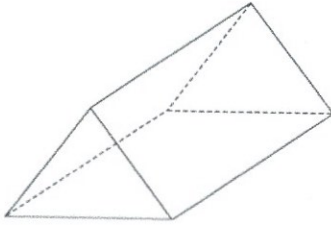
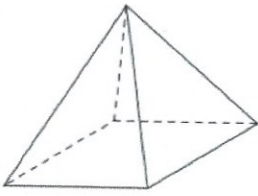
.....  
(1)

(b) Sketch a cube.



(1)

3. Below is a list of solid shapes and their names.



Sphere

Triangular Prism

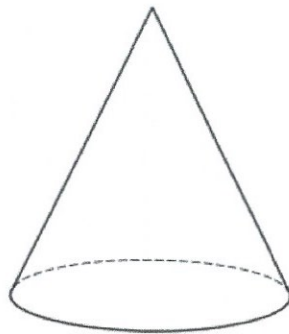
Square-based Pyramid

Cube

Match each shape to the correct name.

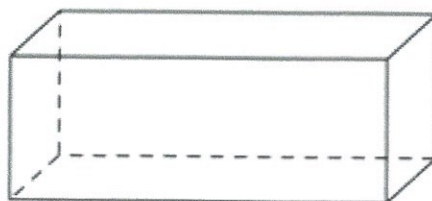
(4)

4. Shown is a solid shape.



(a) What is the mathematical name for the shape?

Cone  
(1)



The shape above is a cuboid.

(b) How many faces does a cuboid have?

6  
(1)

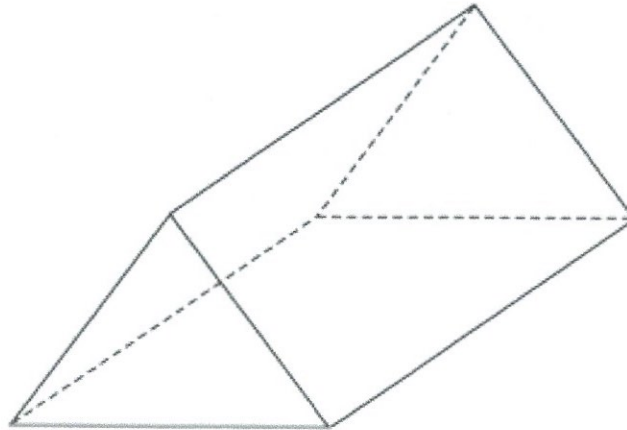
(c) How many edges does a cuboid have?

12  
(1)

(d) How many vertices does a cuboid have?

8  
(1)

5. Below is a solid shape.



(a) What is the mathematical name for the shape?

Triangular Prism  
(1)

(b) Write down the number of vertices

6  
(1)

(c) Write down the number of faces

5  
(1)

(d) Write down the number of edges

9  
(1)

6. Circle the solid that has 5 vertices.



Cube

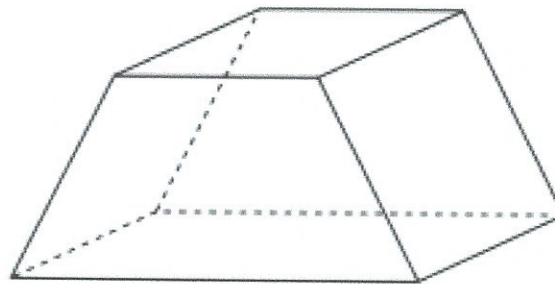
Triangular Prism

Square-based Pyramid

Cylinder

(1)

7. Below is a solid.



(a) Write down the number of faces

6

.....  
(1)

(b) Write down the number of vertices

8

.....  
(1)

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8. How many vertices does a pentagonal prism have?



5

10

15

20

.....  
(1)

9. Circle the solid that has 6 faces.



pentagonal prism

pentagon-based pyramid

hexagonal prism

hexagon-based pyramid

.....  
(1)

10. Circle the solid that has 18 edges.



pentagonal prism

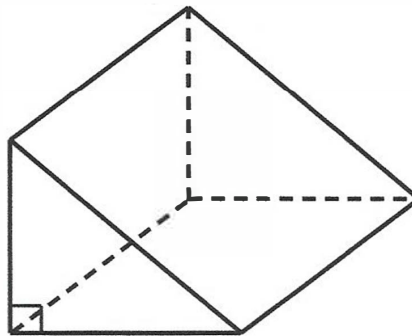
pentagon-based pyramid

hexagonal prism

hexagon-based pyramid

(1)

11.



Shown above is a triangular prism.

Archie says

“the number faces add the number of vertices is 2 more than the number of edges.”

Show Archie is correct.

$$\text{Edges} = 9$$

$$\left. \begin{array}{l} \text{faces} = 5 \\ \text{vertices} = 6 \end{array} \right\} 11$$

Archie is correct,  $F + V = 11$  Edges = 9

$F + V$  is 2 more than Edges

(2)

12. Complete the table below.



	Faces	Edges	Vertices
Cube	6	12	8
Square-based Pyramid	5	8	5
Triangular Prism	5	9	6

(6)

13. The cross section of a prism is an  $n$  sided polygon.



Circle the number of edges that the prism has.

$2n$

$n + 2$

$n + 3$

$3n$

(1)

14. The cross section of a prism is an  $n$  sided polygon.



Circle the number of faces that the prism has.

$2n$

$n + 2$

$n + 3$

$3n$

(1)

15. The cross section of a prism is an  $n$  sided polygon.



Circle the number of vertices that the prism has.

$2n$

$n + 2$

$n + 3$

$3n$

(1)

16. The base of a pyramid is an  $n$  sided polygon.



Circle the number of edges that the pyramid has.

$n$

$n + 1$

$n + 2$

$2n$

(1)

17. The base of a pyramid is an  $n$  sided polygon.



Circle the number of faces that the pyramid has.

$n$

$n + 1$

$n + 2$

$2n$

(1)

18. The base of a pyramid is an  $n$  sided polygon.



Circle the number of vertices that the pyramid has.

$n$

$n + 1$

$n + 2$

$2n$

(1)