

3D Shapes - Faces, Edges, Vertices and Nets

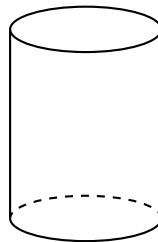
For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name _____

Total marks: **23**

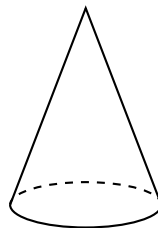
Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

- 1** (a) Write down the mathematical name of this solid shape.



.....
(1)

- (b) Write down the mathematical name of this solid shape.



.....
(1)

(Total for Question 1 is 2 marks)

- 2 The diagram shows a pyramid.
The base of the pyramid is a pentagon.

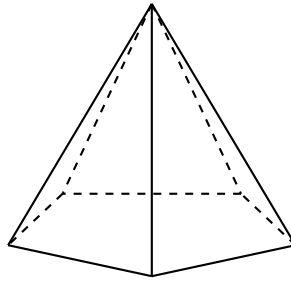


Diagram **NOT** accurately drawn

- (a) Write down the number of vertices of the pyramid.

.....
(1)

- (b) Write down the number of edges of the pyramid.

.....
(1)

(Total for Question 2 is 2 marks)

- 3** (a) A solid shape has one curved surface.
It has no flat faces and no edges.
Write down the mathematical name of this solid shape.

.....
(1)

- (b) In the space below, draw a sketch of a square-based pyramid.

(1)
(Total for Question 3 is 2 marks)

- 4 Here is a triangular prism.
The two ends of the prism are equilateral triangles.

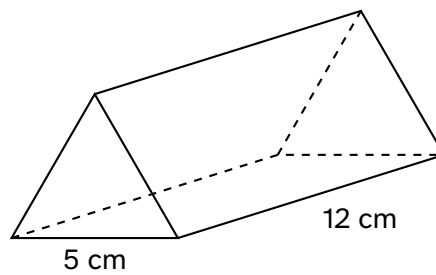


Diagram **NOT** accurately drawn

- (a) Write down the number of vertices of the prism.

.....
(1)

- (b) How many of the faces of the prism are rectangles?

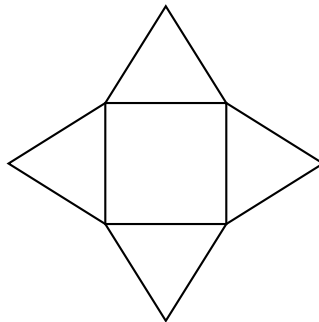
.....
(1)

- (c) Work out the total length of all the edges of the prism.

..... cm
(2)

(Total for Question 4 is 4 marks)

- 5 Here is a net.

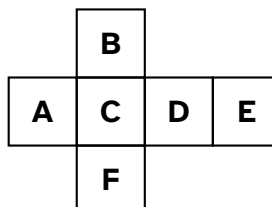


Write down the name of the 3-D shape this net makes.

.....
(1)

(Total for Question 5 is 1 mark)

- 6 Here is the net of a cube.
The faces are labelled A to F.

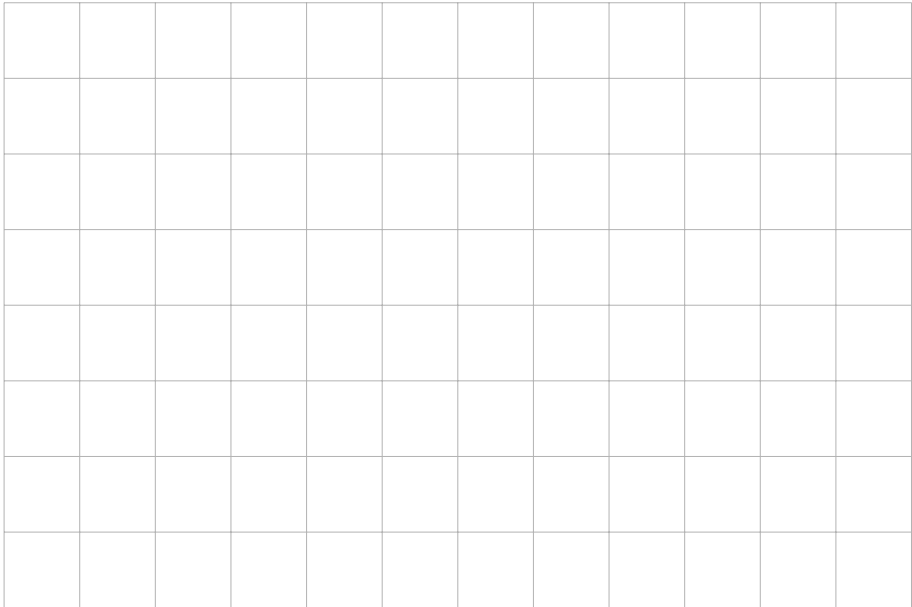


The net is folded to make a cube.
Which face will be opposite face **A**?

.....
(1)

(Total for Question 6 is 1 mark)

7 On the centimetre grid, draw a net of a cube with edges of length 2 cm.



(2)

(Total for Question 7 is 2 marks)

8 A cuboid measures 5 cm by 3 cm by 2 cm.
Work out the total length of all the edges of the cuboid.

..... cm
(2)

(Total for Question 8 is 2 marks)

- 9** A hexagonal prism has two ends that are hexagons.
Write down the number of faces, edges and vertices of a hexagonal prism.

faces edges vertices
(2)

(Total for Question 9 is 2 marks)

- 10** A prism has 21 edges.
Work out the number of faces of the prism.

.....
(2)

(Total for Question 10 is 2 marks)

- 11** Rosie has 1 m of wire.
She uses the wire to make the edges of a model of a cube.
Each edge of the cube is 7 cm long.
How much wire does Rosie have left?

..... cm
(3)

(Total for Question 11 is 3 marks)
