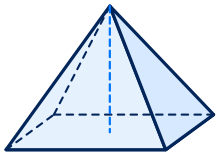
GCSE FOUNDATION · REVISION MAT 5

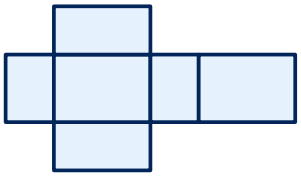
Properties of 3D shapes

1 Here is a square-based pyramid.



Write down the number of faces, edges and vertices.

2 Here is the net of a 3D shape.

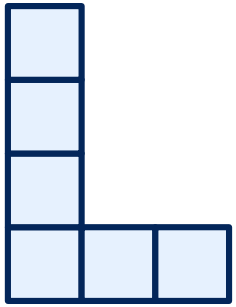


Name the 3D shape.

3 A hexagonal prism has 8 faces, 12 vertices and 18 edges.

Show that faces + vertices – edges = 2.

4 Ella says this is the net of a cube.



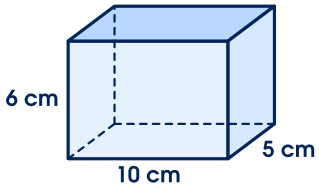
Explain why Ella is wrong.

5 A prism has 9 edges.

(a) Name the prism.

(b) How many faces and vertices does it have?

6 A cuboid is 10 cm by 6 cm by 5 cm.



Work out the total surface area of the cuboid.

ANSWERS · REVISION MAT 5

Properties of 3D shapes

1 Faces **5**, edges **8**, vertices **5**

2 **Cuboid**

3 8 + 12 − 18 = **2** ✓

4 Both extra squares are on the same side of the strip of four, so they would overlap when folded and one face would be missing.

5 A prism has $3n$ edges, where n is the number of sides of its end face: $n = 3$.

(a) **Triangular prism**

(b) Faces **5**, vertices **6**

6 2 × (10×6 + 10×5 + 6×5)

= 2 × 140 = **280 cm^2**

Mr&Mrs MATHS