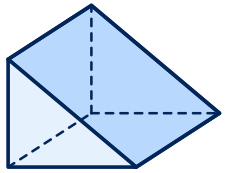
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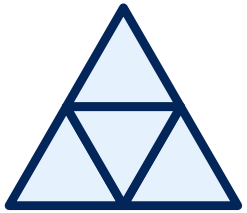
Properties of 3D shapes

1 Here is a triangular prism.



Write down the number of faces, edges and vertices.

2 Here is the net of a 3D shape.

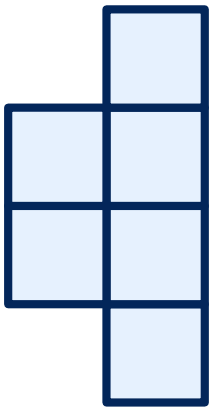


Name the 3D shape.

3 A pentagonal pyramid has 6 faces, 6 vertices and 10 edges.

Show that faces + vertices – edges = 2.

4 Ella says this is the net of a cube.



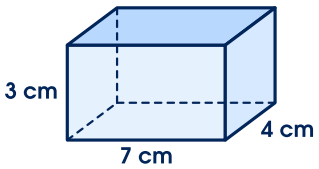
Explain why Ella is wrong.

5 A prism has 24 edges.

(a) Name the prism.

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

6 A cuboid is 7 cm by 3 cm by 4 cm.



Work out the total surface area of the cuboid.

ANSWERS · REVISION MAT 4

Properties of 3D shapes

1 Faces **5**, edges **9**, vertices **6**

2 **Tetrahedron (triangular-based pyramid)**

3 6 + 6 − 10 = **2** ✓

4 Two squares on the same side next to each other would fold onto the same face.

5 A prism has $3n$ edges, where n is the number of sides of its end face: $n = 8$.

(a) **Octagonal prism**

(b) Faces **10**, vertices **16**

6 2 × (7×3 + 7×4 + 3×4)

= 2 × 61 = **122 cm^2**

Mr&Mrs MATHS