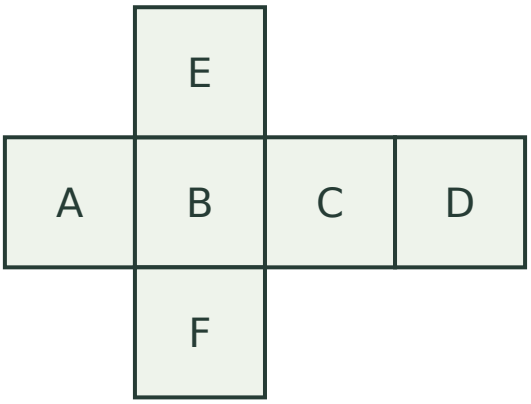
Constructing objects

6 questions | 14 marks

Equivalent correct methods earn the corresponding marks.

1. Draw a valid cube net with square edges 2 cm long. Label each face. [3 marks]



Each square has sides of 2 cm.

Use six equal squares; a row of four with one above and one below the second square is valid.

Check equal shared edges.

Answer: Any valid six-square cube net with 2 cm edges.

2. Find the total face area of a cube whose edges are 3 cm. [2 marks]

Each face has area 3 × 3 = 9.

Six faces have area 6 × 9 = 54.

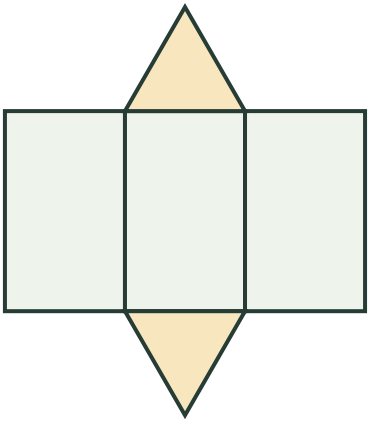
Answer: 54 square centimetres.

3. A box measures 5 cm by 3 cm by 2 cm. List all six face sizes. [3 marks]

Use one pair for each pair of dimensions.

Answer: Two 5×3 cm; two 5×2 cm; two 3×2 cm.

4. A triangular prism has equilateral triangular ends of side 3 cm and length 5 cm. What rectangular side panels are needed? [2 marks]



Each of the triangle's three 3 cm sides extends along the prism's 5 cm length.

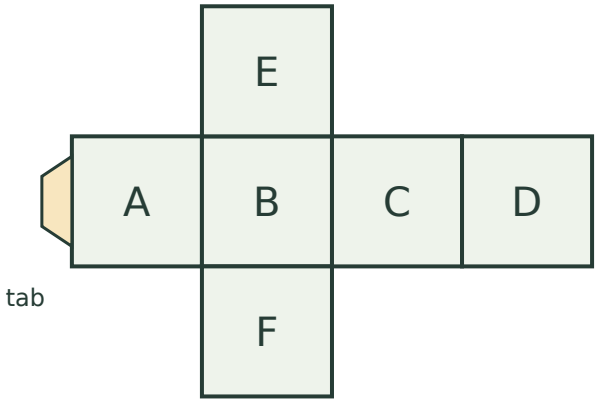
Answer: Three rectangles, each 3 cm by 5 cm.

5. Explain why a 4 cm edge should not be joined to a 3 cm edge without cutting or changing the model. [2 marks]

The 1 cm difference leaves an overhang or a gap.

Answer: Their endpoints will not match.

6. Draw one joining tab on a cube-net sketch and explain whether it counts as a seventh face. [2 marks]



Each square has sides of 2 cm.

The cube still has six outside square faces.

Answer: The tab is outside an edge and folds inside; it is not another face.