

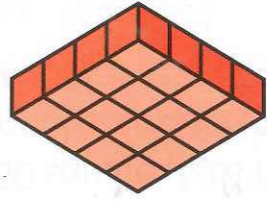
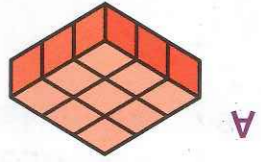
Surface area

Know when to use the formula for the area of shapes



Challenge 1

Find the surface area of each cuboid by counting the squares.



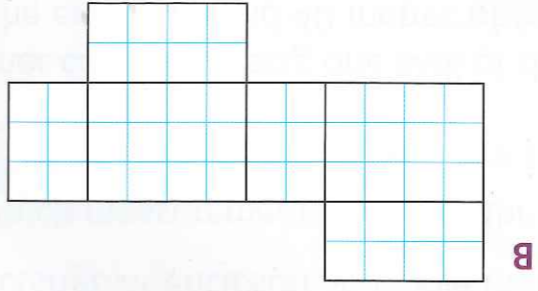
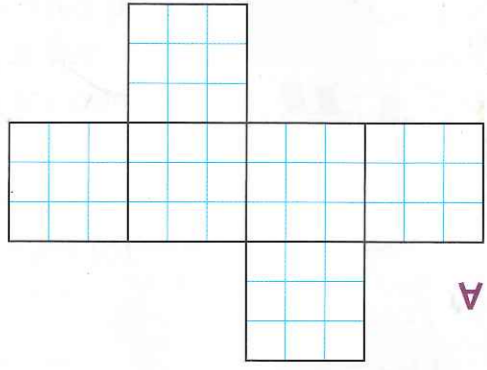
Visible 1 cm squares: 8
Hidden 1 cm squares: 8
Surface area = 16 cm²



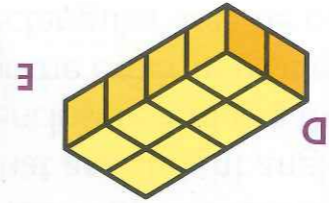
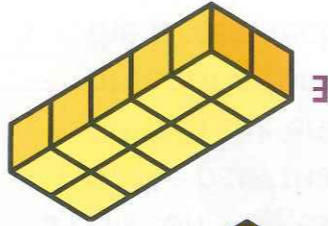
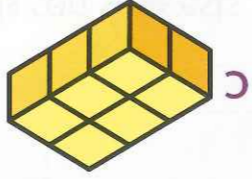
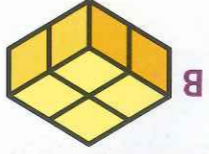
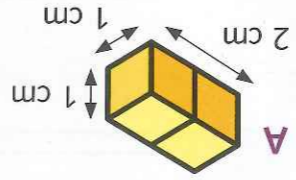
Example

1 Each net of a 3-D shape is drawn on 1 cm squared paper. Calculate the surface area of each net in square centimetres.

Challenge 2

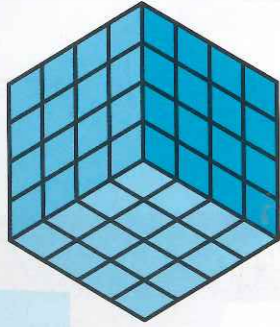
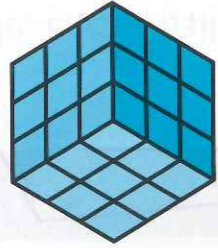
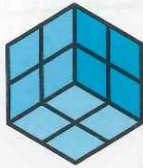


2 Calculate the surface area of each cuboid and record your answers in a table. Look for a pattern in your results and use the pattern to work out the surface area of the next two cuboids, F and G, in the sequence.



3 Each cube is built using 1 cm³ cubes. Copy and complete the table below.

You will need: ruler

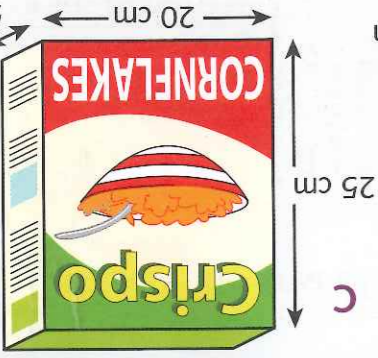
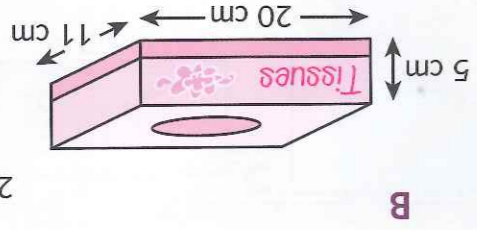
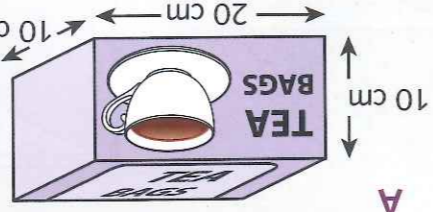


Length of one side (cm)	1	2	3	4
Surface area of one face (cm ²)	1			
Surface area of the cube (cm ²)	6			

4 Using your table from Question 3, find the surface area of cubes with sides of:

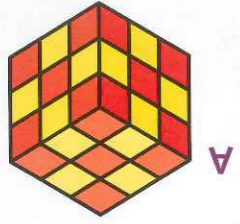
- a 5 cm
- b 8 cm
- c 10 cm

5 Calculate the surface area of each box below. The boxes are not drawn to scale.



Challenge 3

These cubes are made using alternate red and yellow 1 cm³ cubes. For each cube, work out the total surface area that is red and the total surface area that is yellow.



B

