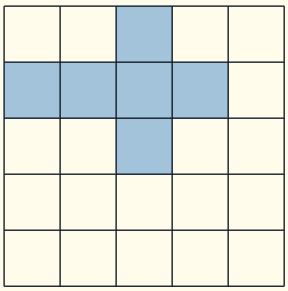
Lesson 77

3D shapes – nets and building models

CHECKING A CUBE NET

1. The net shows four squares in a row, plus one square above and one below.
2. Count the squares: there are **6**, and a cube needs exactly **6** faces.
3. The row folds up to make the four side walls; the extra squares become the lid and the base with no overlap or gap.
4. It closes neatly, so this flat shape is a net of a cube.



WARM-UP

Draw each net on the grid, then decide whether it folds into a cube.

1. Draw a net of 4 squares in a row, with 1 square above the row and 1 below it. Mark the base and the lid.
2. Does the net you drew in 1 fold into a cube? Write Yes or No.
3. Draw 6 squares in one straight line. Does that net fold into a cube? Write Yes or No.

PRACTICE

1. Sadhbh is cutting squares to build a cube net for the class model. She needs one flat square for each face. How many squares should she cut?
2. Liam lays **6** squares on the grid as **2** rows of **3**. Will it close into a cube with no gap and no overlap?

ALWAYS, SOMETIMES, NEVER

Always true, sometimes true, or never true? Write A, S or N.

a. A cube has 6 faces, 12 edges and 8 vertices. ☐

b. A cube and a cuboid have the same number of edges. ☐

c. A square-based pyramid has 5 faces. ☐

d. A square-based pyramid has 8 edges and 5 vertices. ☐

REFLECT What makes one net fold cleanly into a solid while another overlaps?

SHAPE & SPACE