

Technical drawing practice grid

Draw solid shapes on isometric dots, then turn a block into flat views.



LEARNING GOAL

Draw 3D objects in isometric, then show them as third-angle views.

SUCCESS CRITERIA

- ☐ I can draw edges only up, 30° left and 30° right.
- ☐ I can copy and design shapes on isometric dots.
- ☐ I can lay out a plan, front view and right view in third angle.

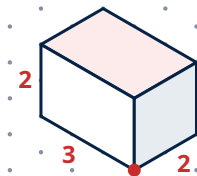
2 Copy the three models

PART A

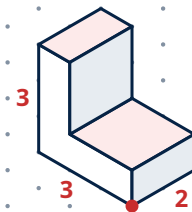
3 marks

Start each copy at its lettered dot. The numbers count spaces between dots.

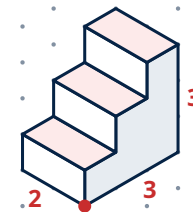
A · CUBOID



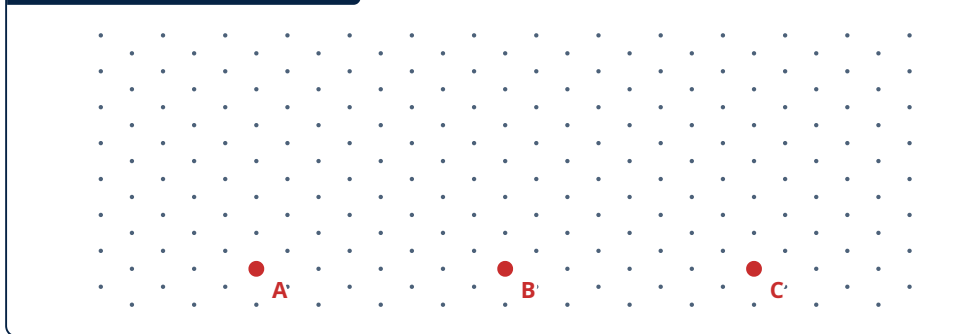
B · L-SHAPE



C · THREE STEPS



COPY GRID: ISOMETRIC DOTS

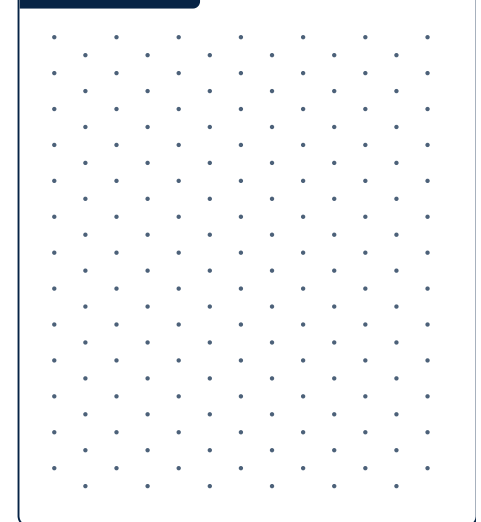


3 Draw your own

2 marks

Imagine a shape made of 4 to 8 cubes. Draw it, then shade the top faces lightly.

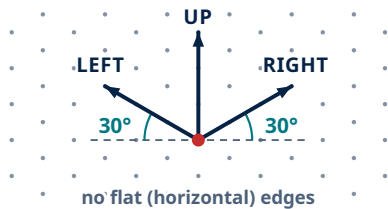
DESIGN GRID



GO FURTHER

Draw Model C turned round, so the steps rise to the left.

1 Three directions only

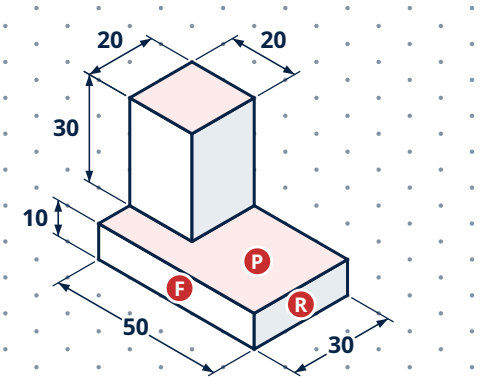


- 1 Start at the lowest corner, on a dot.
- 2 Draw the nearest vertical edge, then the two 30° bottom edges.
- 3 Add the other verticals and top edges.

Draw the corner block in third angle



4 Meet the corner block



F Front view **R** View from the right
P Plan, from above

Sizes in mm. One dot space is 10 mm.

5 Sizes in each view

3 marks

VIEW	CIRCLE TWO	SIZES IN MM
Front view	width depth height	×
Plan	width depth height	×
From the right	width depth height	×

6 Draw the three views

THIRD ANGLE

9 marks

THIRD-ANGLE LAYOUT

The **plan** is drawn **above** the front view. The **view from the right** is drawn **to the right** of the front view.

- 1 Front view:** start at its dot. Draw what you see from F, full size.
- 2 Plan:** project thin lines up from every corner. Draw the depth upwards from the dot.
- 3 From the right:** project heights across. Take depths across to the 45° line, then down.
- 4** Go over the edges with a dark, thick line. Keep projection lines thin.

— Edge: thick, dark
- - - Projection line: thin, light

