

Make the net

Use Mathomat to develop 2-D plan drawing and 3-D object visualisation skills.

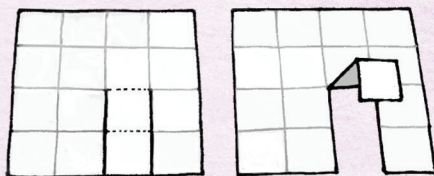


The proper name for a pyramid with the top sliced off parallel to the base is a pyramidal frustum. Draw the net in the box on the right using your Mathomat.

Net for a pyramidal frustum

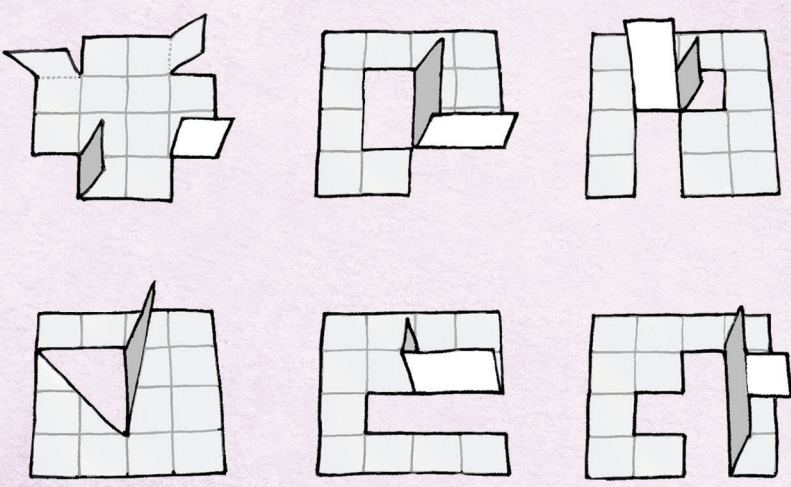


Cuts and folds



Try your visualisation skills. Draw the 2D plans for these 3D sketches. Mark their fold and cut lines in the diagrams at right.

The markings on the 25 mm square on Mathomat will help.
 - - - - - fold
 ———— cut



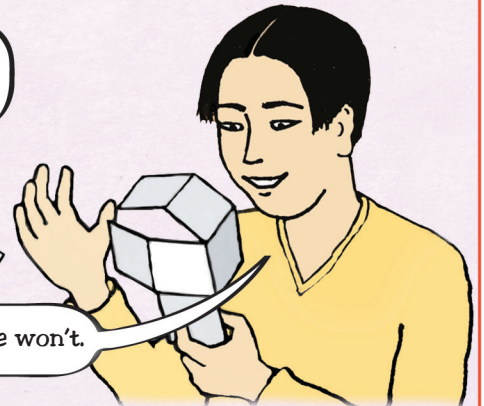
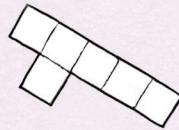
Can you make up some more? Test your friends to match 2D plans to 3D models.

Investigate the cube

You can print this activity out from **MAC**, and discover another exercise in 3-D drawing cubes using the isometric feature on Mathomat (activity 7.2).



There are many ways to arrange a net of 6 squares that will fold to make a cube.



Your's will work, but my one won't.

One net for a cube is shown below. Using the small square on Mathomat, experiment with more nets on a sheet of paper. Try visualising the folds, then cut some out and test them if you're not sure. Draw the successful ones here. How many can you find?

A large empty rectangular box with a black border, intended for drawing various nets of a cube. In the top-left corner of this box, there is a small diagram of a net of a cube. It consists of six squares arranged in a staircase pattern: a bottom row of two squares, a middle row of two squares shifted one unit to the right, and a top row of two squares shifted two units to the right. Dashed lines indicate fold lines.