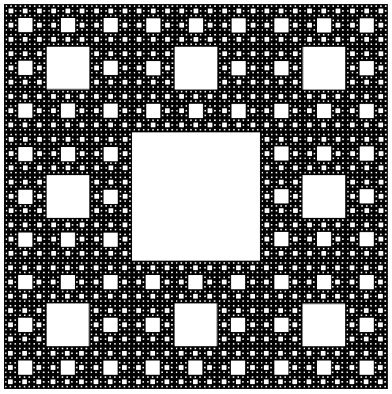
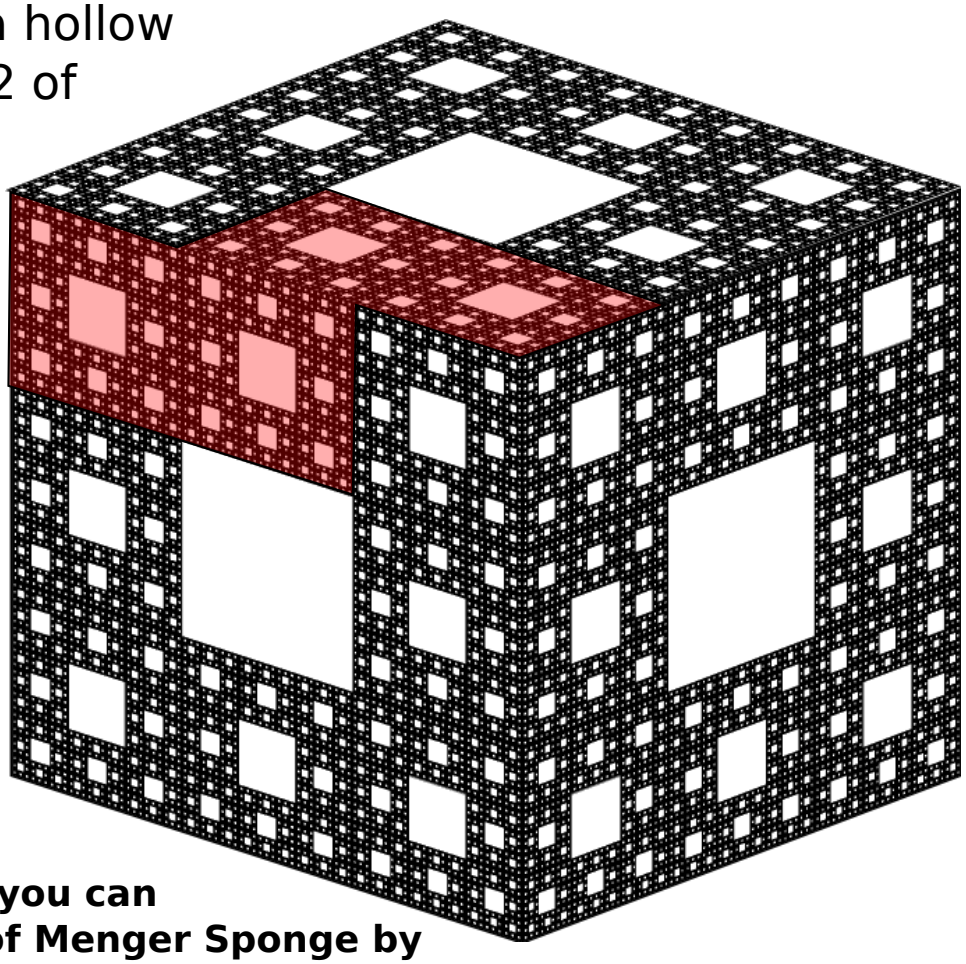
Menger Sponge



A Sierpinski Carpet is a fractal based on a square, made by dividing the square into nine smaller squares, deleting the middle one, and then doing the same for each of the eight remaining squares. If you repeat this process forever, you get a fractal.

You can make a 3D version of the Sierpinski Carpet - it's called the Menger Sponge, and it's made from a cube split into 27 smaller cubes. The central 7 cubes are deleted to leave only the corners and edges, again repeated for each of the smaller cubes.

The attached sheet can be copied onto A3 or A4 card, and will allow you to make an edge unit for a Menger Sponge. Cut out the shape, and fold it in half, attaching the top tab to the bottom edge, to form a hollow square tube. Making 12 of these units, you can fit them together by interlocking and gluing the corners and tabs (make sure the overlaps are so that the pattern always shows on the outside). One edge unit is shown in red.



Instead of cutting smaller and smaller sections out, you can also make the next level of Menger Sponge by putting together 20 Menger Sponges!

THINK MATHS

Menger Sponge Egde Unit

12 units makes one sponge!