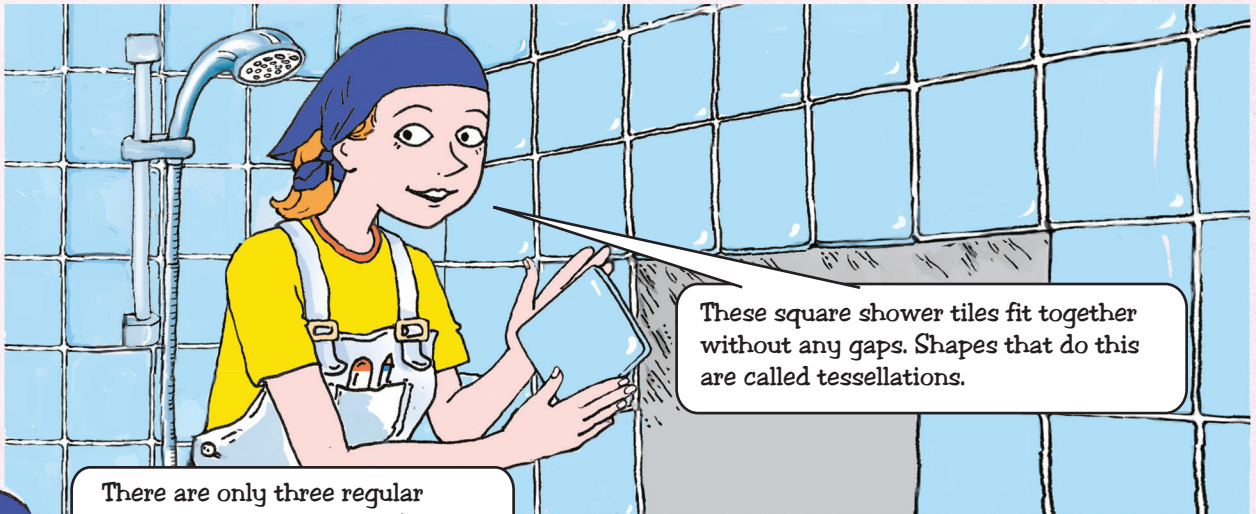


Get tessellating...

Explore the mathematics of tessellations using Mathomat.



These square shower tiles fit together without any gaps. Shapes that do this are called tessellations.

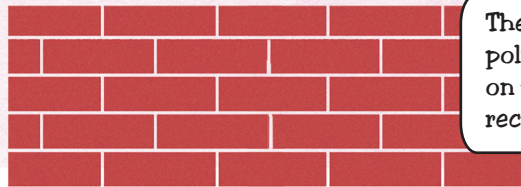
There are only three regular polygons that tessellate. Can you draw them here?

A regular polygon has equal length sides and equal angles (equilateral and equiangular).

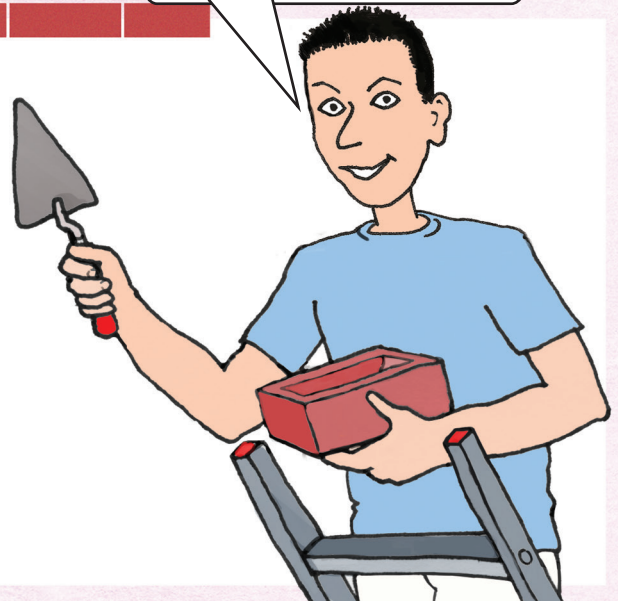
Try out the regular Mathomat shapes on a sheet of paper first to discover which ones will leave gaps when you draw them on a plane.

The three regular polygons that tessellate

Find other irregular polygons on Mathomat that will tessellate on their own and draw them below:

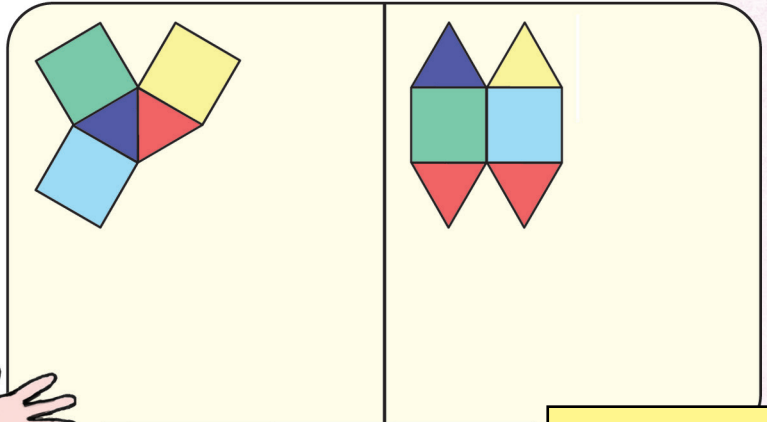
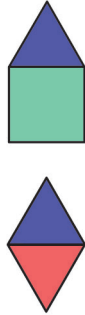
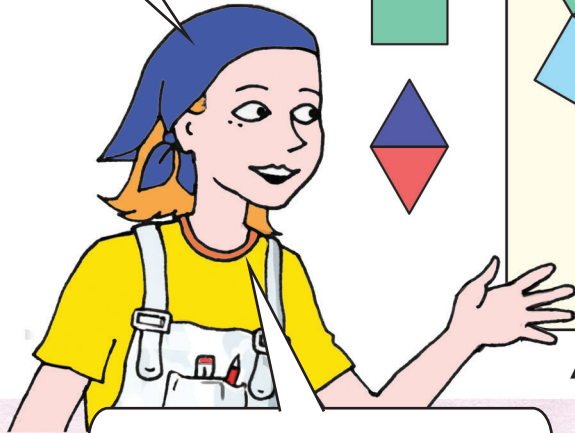


There are some irregular polygons that will tessellate on their own, like these rectangular bricks.



A polygon is a plane (flat) shape with 3 or more straight sides. Apart from the triangle and quadrilateral polygons are usually named by the Greek word for their number of sides plus the ending 'gon', such as hexa-gon.

What if we put two regular polygons together?



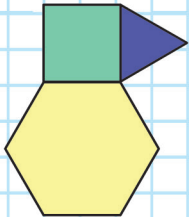
Continue these tessellations.

A vertex is a point where lines meet.

These semi-regular tessellations are also called **HOMOGENEOUS** tessellations. The pattern is the same on each vertex.

Try experimenting with a combination of regular polygons on your Mathomat.

Find these pages, full size, to print out in **MAC**.



The sum of the angles of any point is 360°

Try hexagons with triangles or an octagon and a square. There are only 8 possible semi-regular tessellations.

