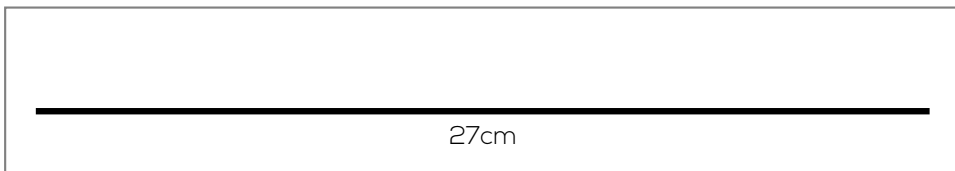# Constructing a Koch Curve

A Koch Curve is a fractal made from a single line. It starts off as a straight line then you repeat the same process to turn it into a fractal. Follow the steps below to construct one yourself!

Step 1. Draw a straight horizontal line 27cm long across the page, about two thirds of the way down your page so there's space above it.

27cm

Step 2. Divide your horizontal line into three 9cm sections, and mark with dots.

9cm 9cm 9cm
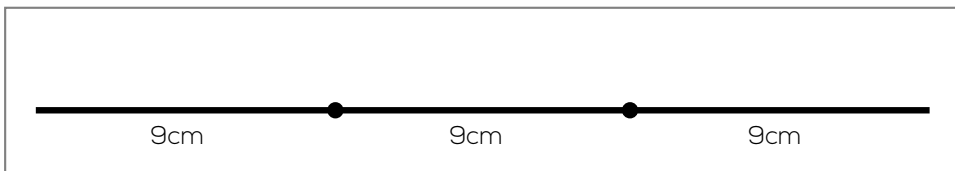
Step 3. Construct an equilateral triangle on your line, with two of its corners at your two dots, whose sides measure 9cm. You can construct it precisely, using a protractor or by calculating the height needed, or you can move your ruler until the lines measure 9cm.

9cm 9cm
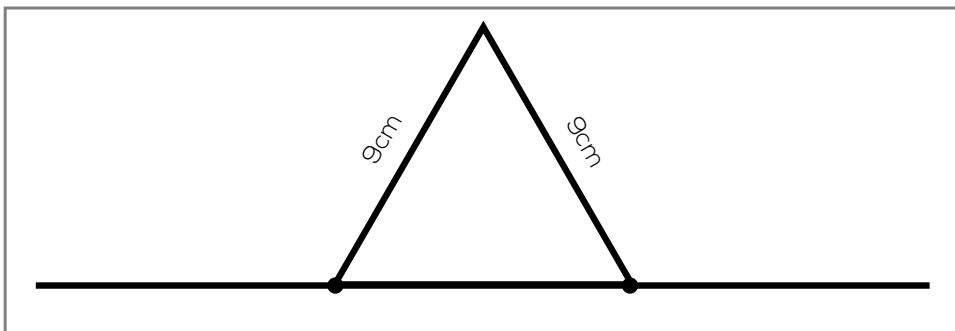
Step 4. You should now have 4 sections of line on the top of your curve which measure 9cm each. You can now repeat - divide each into thirds, so your sections measure 3cm.

3cm 3cm 3cm 3cm 3cm 3cm 3cm 3cm 3cm 3cm 3cm 3cm
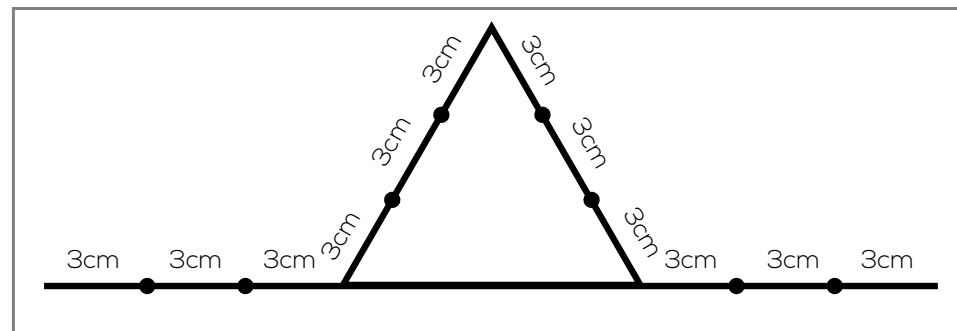
Step 5. Repeat as before - construct a 3cm equilateral triangle in the centre section of each part, making a total of sixteen 3cm sections; these can be divided into 1cm pieces, and so on. Keep drawing more layers of smaller and smaller triangles until your curve is complete (or the triangles get too small to draw!)
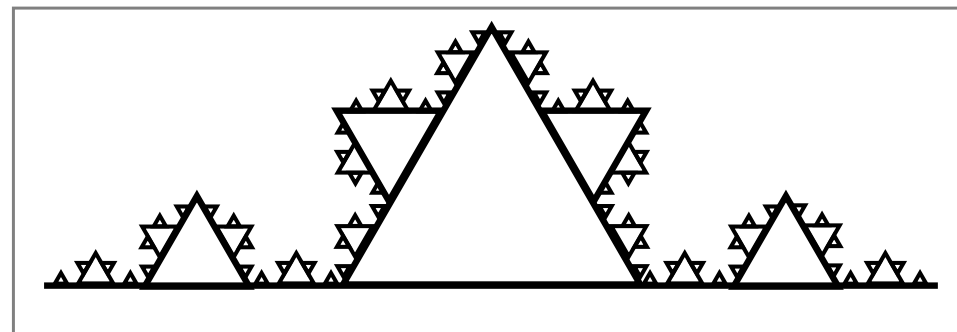
Can you see how each smaller section of the Koch curve has the same structure as the whole curve?