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Draw the perfect snowflake

Use the magic of maths to mimic nature.

What you need

- Pencil
- Ruler
- Pen
- Pencil eraser

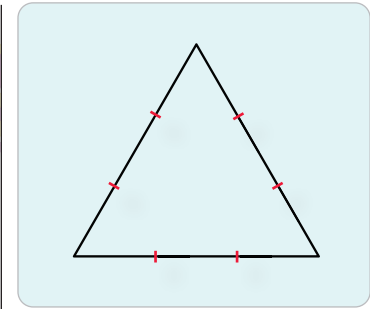
How does it work?

The image you've created is called a Koch snowflake. It is a special kind of mathematical object called a fractal. Fractals are never-ending, infinite patterns created by repeating a simple process over and over again. Nature

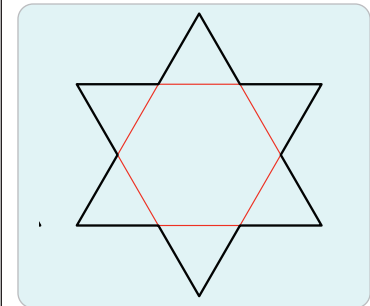
is filled with fractals. Think about a tree, with branches sprouting off the main trunk, and each of those branches has smaller branches. Mountains, clouds and even lightning all have repeating fractal patterns.

TOP TIP!

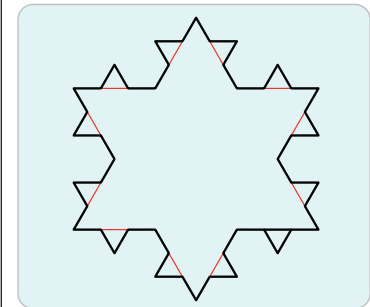
Draw lightly in pencil, so that you can easily rub out your markings when you are finished.



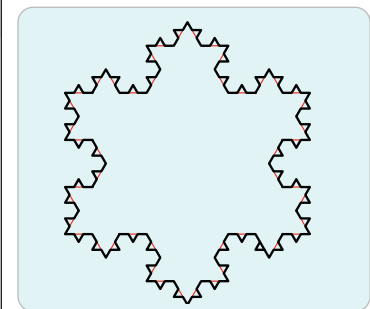
1 Start by drawing a large equilateral triangle (all edges have the same length) in pencil. Then, measure each side and divide it into three equal sections.



2 Draw a new equilateral triangle on each edge using the middle section as the base. Divide each side of the new triangles into three, just like you did with the first triangle.

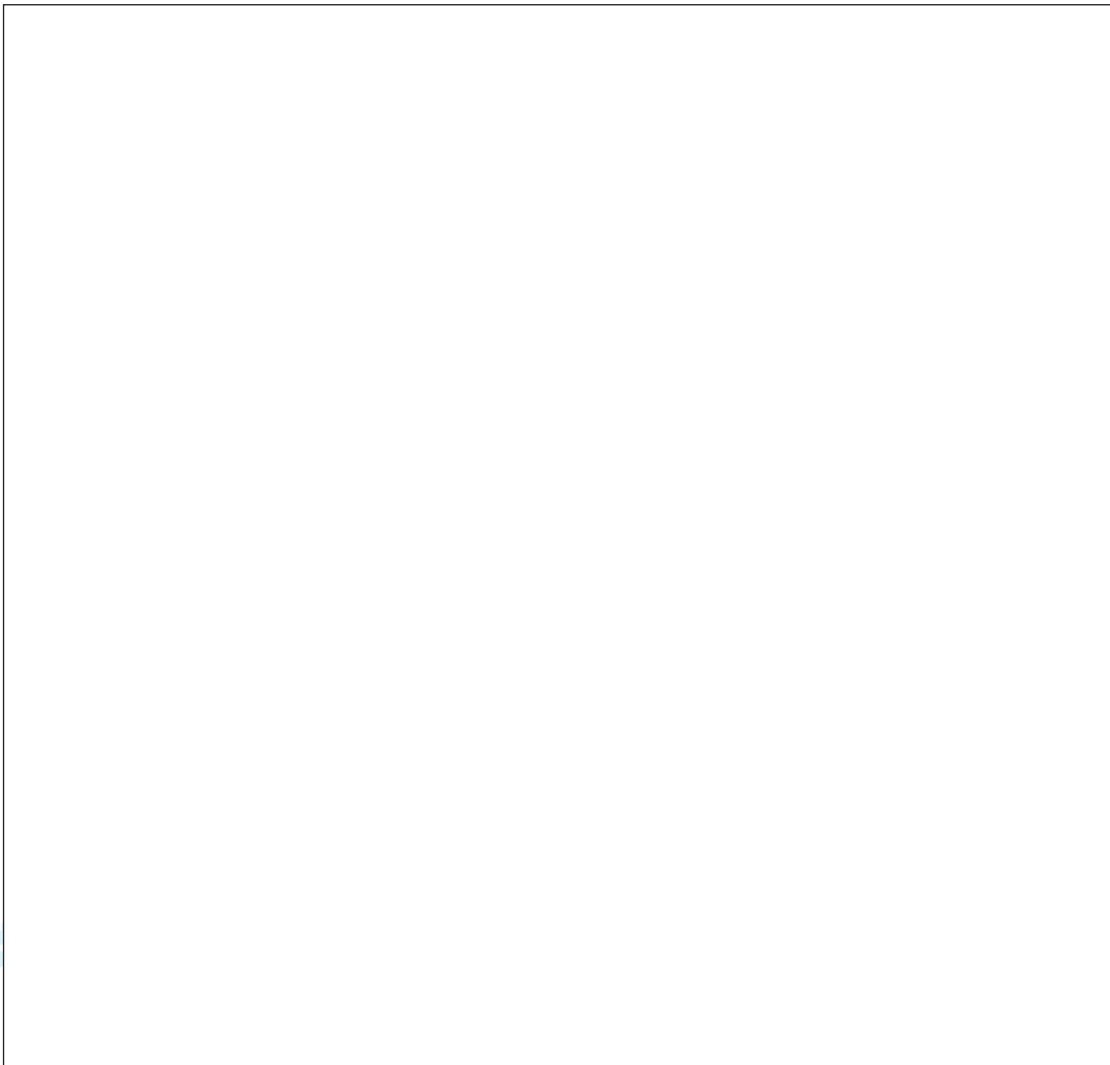


3 Repeat the process in step 2, again and again, adding new triangles to each edge every time. As you continue, your drawing will look more and more like a snowflake.



4 In theory, you can continue this process for ever. When you have gone as far as you can, draw around the shape with a pen and rub out the pencil marks.

Draw your snowflake in here.



Send your finished drawings to hello@science-nature.co.uk