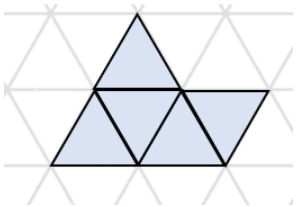
Investigation

How many different polygons can you make?

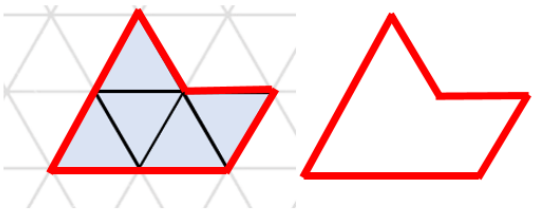
- Using the 'isometric' paper, draw five equilateral triangles, where at least one side of every triangle is directly adjacent to another, e.g.



- How many different arrangements of five triangles can you make?
- Eliminate any repeats, reflections and rotations. If you are in doubt about whether one shape is a reflection or rotation of another use this tip!

TOP TIP!
Cut out the shape, then try to lay it on top of the other shape by rotating it or flipping it over!

- Draw around the outline of each shape in a different colour, then name each shape and decide whether it is regular or not.
- If it is not regular, is it symmetrical or not?
  e.g.
  This is an irregular pentagon with no lines of symmetry.



- Can you find and describe at least 6 different shapes?

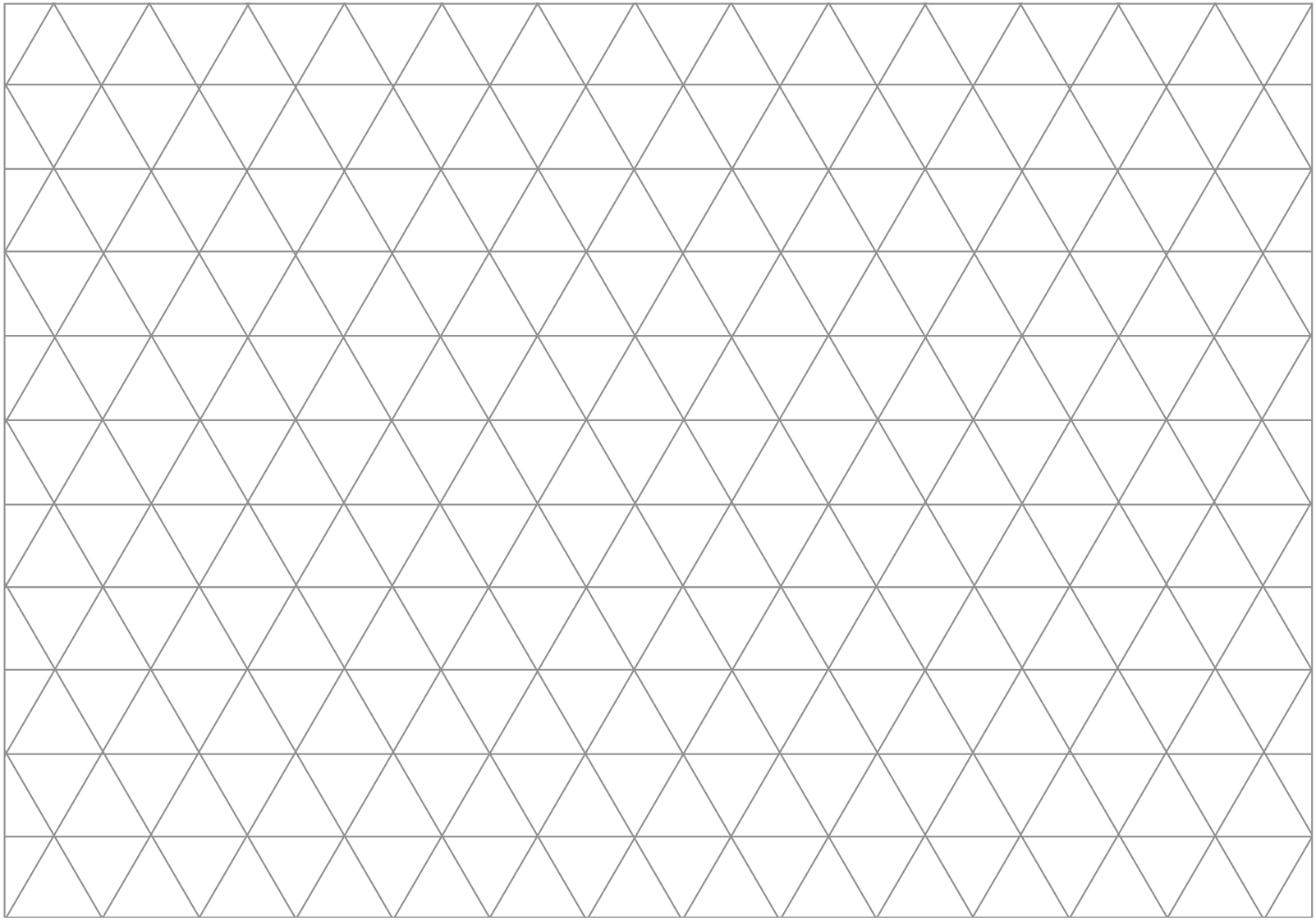
Challenge

Complete the same activity with three, then four equilateral triangles.
Do you see any patterns or links between the number of triangles used, the number of possible shapes and the number of sides on the polygons created?

© Hamilton Trust

Investigation

How many different polygons can you make?



© Hamilton Trust

Explore more Hamilton Trust Learning Materials at https://wrht.org.uk/hamilton