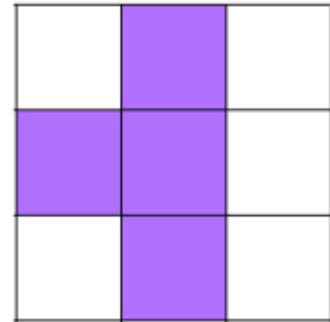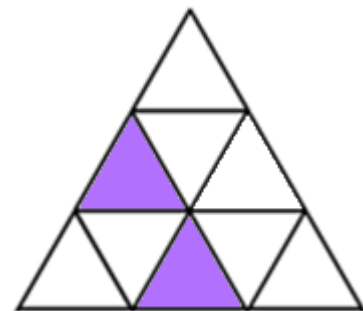Charlie created a symmetrical pattern by shading in four squares on a 3 by 3 square grid

Alison created a symmetrical pattern by shading in two triangles on a 3 by 3 isometric grid:

Choose whether you would like to work on square grids or isometric grids.

How many different symmetrical patterns can you make?

Here are some questions you might like to consider:

- How many different patterns can you make if you are only allowed to shade in one... two... three... four cells?
- How does the number of patterns with 6 cells shaded relate to the number with 3 cells shaded?
- Can you make patterns with exactly one... two... three... four lines of symmetry?
- Can you make patterns with rotational symmetry AND lines of symmetry?
- Can you make patterns with rotational symmetry but NO lines of symmetry?
- Can you make patterns using more than one colour?