Reasoning and problem solving

This page does not need to be printed. Write the date you do the work and the above question in your book, underlining them neatly with a ruler.

1) How many symmetrical shapes can you make by colouring in a maximum of 6 squares?
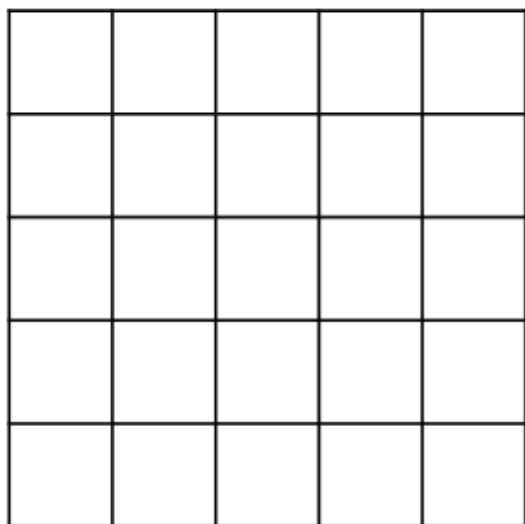
2)

Jack

A triangle has 1 line of symmetry unless you change the orientation.
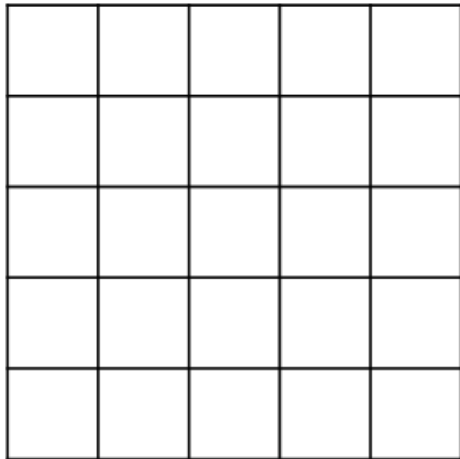
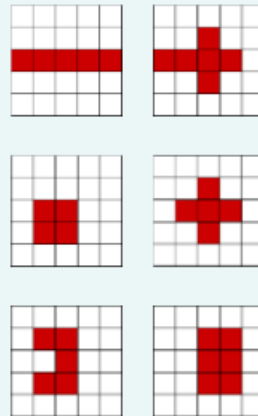Is Jack correct? Prove it.

3) Always, Sometimes, Never.

A four-sided shape has four lines of symmetry.

How many symmetrical shapes can you make by colouring in a maximum of 6 squares?

There are a variety of options. Some examples include:

A triangle has 1 line of symmetry unless you change the orientation.

Jack

Is Jack correct? Prove it.

Jack is incorrect. Changing the orientation does not change the lines of symmetry. Children should prove this by drawing shapes in different orientations and identifying the same number of lines of symmetry.

Always, Sometimes, Never.

A four-sided shape has four lines of symmetry.

Sometimes, provided the shape is a square.