

## Investigation

### Draw your own

1. Have a go at drawing polygons with:

3 sides

4 sides

5 sides

6 sides

8 sides

with the following properties:

- one pair of parallel sides
- two pairs of parallel sides
- one pair of perpendicular sides
- two pairs of perpendicular sides.

Make a note of which combinations are and which aren't possible...

### Handy Hints!

Try drawing a pair of parallel lines or perpendicular lines, *then* extending this to form a polygon...

Investigate systematically, maybe exploring each shape in order of the number of sides

2. Triangle Challenge!

What happens if you try to draw:

- A triangle with a pair of parallel lines?
- A triangle with two pairs of perpendicular lines?
- A triangle with two right angles?

3. Can you identify any 'impossible' quadrilaterals?