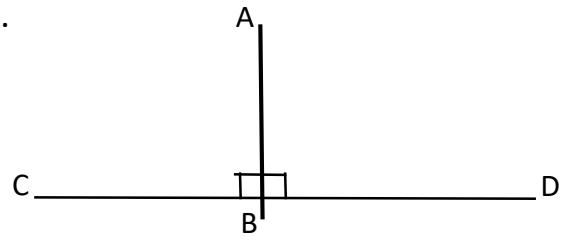
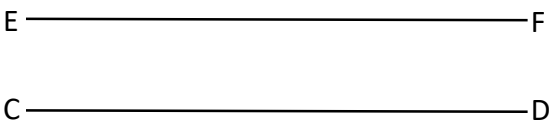
Angles and lengths in shapes Monday 15th June 2020

Before we move on to angles in shapes, we need to revise **perpendicular** and **parallel** lines.

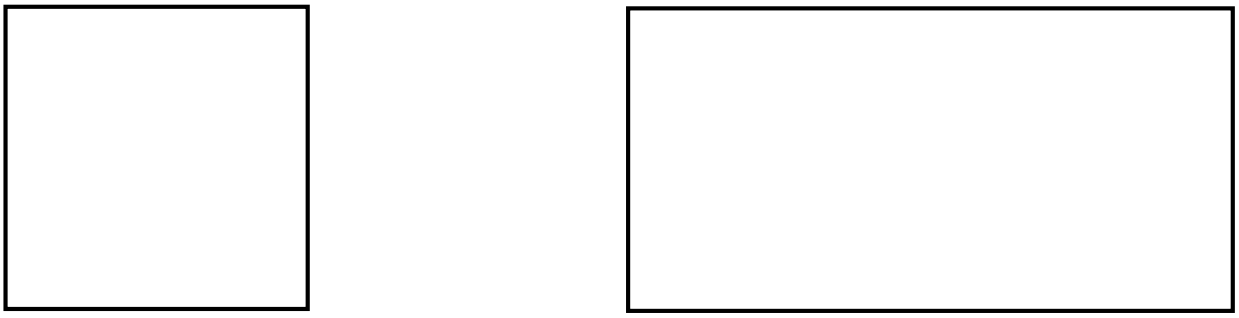
Here are two lines, AB and CD. These lines are perpendicular to one another; they make an angle of 90° where they cross.



Here are two further lines, EF and GH. These lines are parallel; they will always stay the same distance apart, no matter how far they are extended (like the rails on a train track).



Here are a rectangle and a square (I'm hoping you can tell which is which…)



The square 4cm x 4cm and the rectangle is 4cm x 8cm.

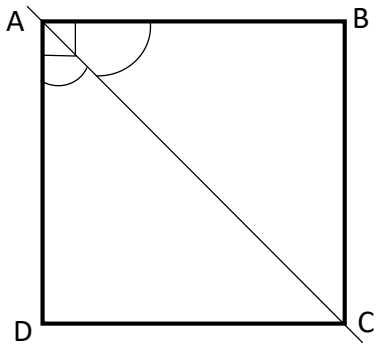
What can you remember about the angles in a square and in a rectangle (of any size)? Can you spot parallel and perpendicular lines?

Write down what you think you know here;

Here's what you should be able to remember…

- both squares and rectangles are quadrilaterals (four-sided shapes),
- all four angles in both shapes are right angles (90°) each,
- both shapes have two pairs of parallel lines and two pairs of perpendicular lines,
- a square has four sides of the same length,
- a rectangle has two pairs of sides the same length.

If we bisect (divide into two equal parts) the opposite angles (A and C) in a square like this;



What size would the resulting smaller angles be? (they are both the same size, by the way)

Clue; 90° ÷ 2 = ☐°

Your tasks will be based on this teaching. You might also find it useful to watch the YouTube video that goes with this, as I explain the concepts and complete calculations.