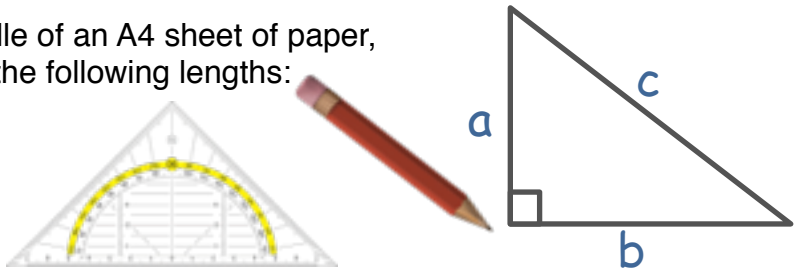
DEMONSTRATING PYTHAGORAS' THEOREM

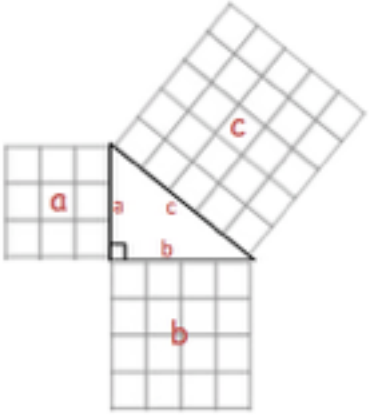
Step 1: Using a set square, in the middle of an A4 sheet of paper, draw a right-angled triangle with sides the following lengths:

OPTION 1: a=3cm, b=4cm, c=5cm
OPTION 2: a=6cm, b=8cm, c=10cm
OPTION 3: a=9cm, b=12cm, c=15cm



Step 2: Next, take some 1cm squared paper. You're going to draw and cut out three squares:

- For **square a**, draw the sides the same length as side a on your triangle. Label the square with an 'a'. Cut out the square.
- For **square b**, draw the sides the same length as side b on your triangle. Label the square with an 'b'. Cut out the square.
- For **square c**, draw the sides the same length as side c on your triangle (the hypotenuse). Label the square with a 'c'. Cut out the square.



Step 3: Put square a against side a of your triangle. Put square b against side b, and square c against side c. You should have something that looks like this picture.

Step 4: Work out the number of centimetre squares in square a, square b and square c. You can do this either by counting the individual squares, or by multiplying the sides.

square a = …….. cm^2

square b = …….. cm^2

square c = …….. cm^2

Step 5: Add the number of squares in square a and square b together

(square a) …….. cm^2 **+** (square b) …….. cm^2 = …….. cm^2

Have you noticed the same thing I did? I worked out that the squares on the two small sides of a right-angled triangle always add up to the number of squares on the long side (the hypotenuse).