

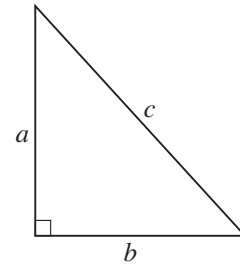
# Pythagoras' Theorem

## Essential information

- *Pythagoras' Theorem* states that:

In any right angled triangle, the area of the square on the hypotenuse (the side opposite the right angle) is equal to the sum of the areas of the squares on the other two sides (the two sides that meet at the right angle).

Note that a right angle is indicated by a small 'box' at an angle which is  $90^\circ$ .



- In a right angled triangle, you can use Pythagoras Theorem,

$$c^2 = a^2 + b^2$$

to find the length of  $c$ , the hypotenuse,

and

$$a^2 = c^2 - b^2$$

$$\text{(or } b^2 = c^2 - a^2)$$

to find the length of  $a$  (or  $b$ ), given the lengths of  $b$  and  $c$  (or  $c$  and  $a$ ).

- In a right angled triangle, the side opposite the marked angle is the *opposite* (opp),  $a$  in the diagram; the *hypotenuse* (hyp) is the longest side,  $c$ , and the other side is the *adjacent* side (adj),  $b$  in the diagram.

