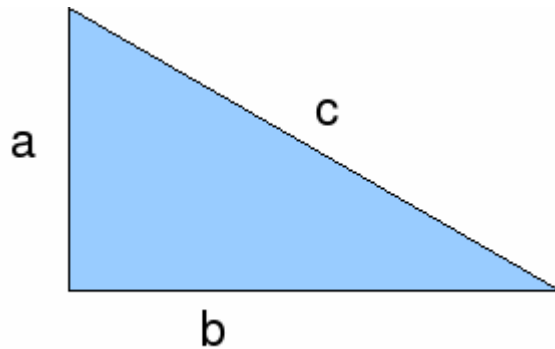


Pythagoras Theorem

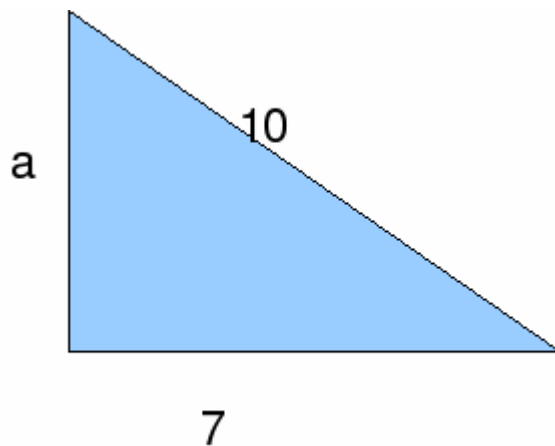
With Pythagoras theorem we can find the lengths of a side in a right angled triangle given the other two sides.



With the sides of the triangle as labelled above, we use the formula

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

For example



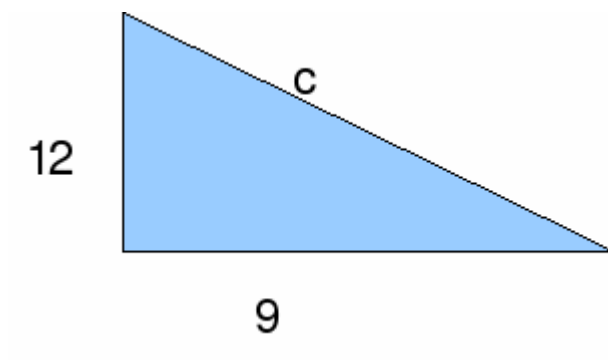
$$a^2 + b^2 = c^2$$

$$a^2 + 7^2 = 10^2$$

$$a^2 = 10^2 - 49 = 51$$

$$a = \sqrt{51} = 7.14$$

It is important to label the sides of the triangle a, b and c in the way shown above. If you remember that c is the longest side then labelling becomes easier. Then you must use these values in their correct position in the equation $a^2 + b^2 = c^2$.



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

$$12^2 + 9^2 = c^2$$

$$144 + 81 = 225 = c^2$$

$$c = \sqrt{(225)} = 15$$