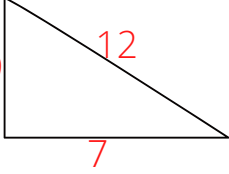


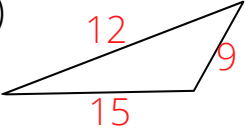
PYTHAGOREAN THEOREM

The PYTHAGOREAN THEOREM shows the relationship between the legs (shorter lengths) and the hypotenuse (longest side) of a right triangle.

USE THE PYTHAGOREAN THEOREM TO SHOW IF THE TRIANGLE IS A RIGHT ANGLE TRIANGLE

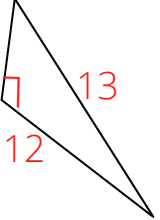
1)  $a^2 + b^2 = c^2$
 $9^2 + 7^2 = 12^2$
 $(9 \times 9) + (7 \times 7) = 144$
 $81 + 49 = 144$
 $130 \neq 144$

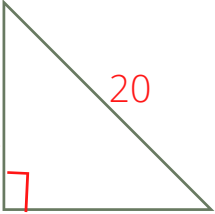
This is not a right angle triangle

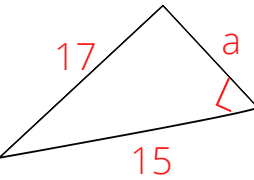
2)  $a^2 + b^2 = c^2$
 $9^2 + 12^2 = 15^2$
 $(9 \times 9) + (12 \times 12) = 225$
 $81 + 144 = 225$
 $225 = 225$

This is a right angle triangle

FIND THE MISSING SIDE FOR EACH TRIANGLE

3)  $a^2 + b^2 = c^2$
 $a^2 + 12^2 = 13^2$
 $a^2 + 144 = 169$
 $a^2 = 169 - 144$
 $a^2 = 25$
a = 5

4)  $a^2 + b^2 = c^2$
 $12^2 + b^2 = 20^2$
 $144 + b^2 = 400$
 $b^2 = 400 - 144$
 $b^2 = 256$
b = 16

5)  $a^2 + b^2 = c^2$
 $a^2 + 15^2 = 17^2$
 $a^2 + 225 = 289$
 $a^2 = 64$
a = 8

