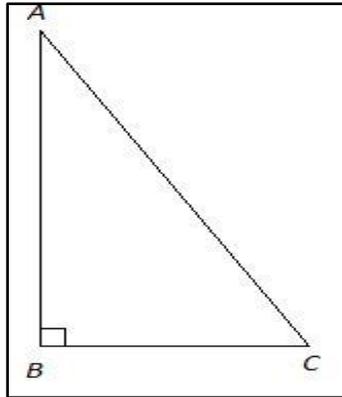


Pythagoras Theorem

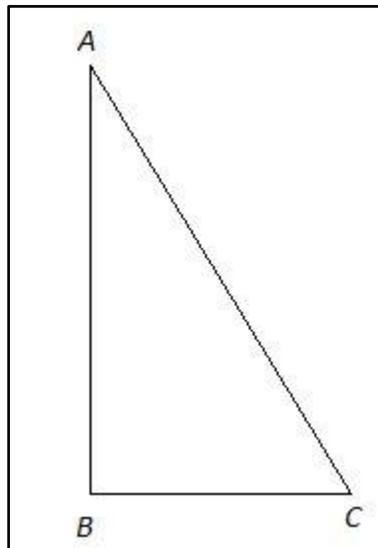
1. Pythagoras theorem: In a right angled triangle, the square of the hypotenuse is equal to the sum of the squares of the remaining two sides.



In right angled $\triangle ABC$ right angled at B, side AC is the hypotenuse, then by Pythagoras theorem,

$$AC^2 = AB^2 + BC^2$$

2. Converse of Pythagoras theorem: If, in any triangle, the square of the longest side is equal to the sum of the squares of the remaining two sides, then the triangle is right triangle and the angle opposite the longest side is a right angle.



For the $\triangle ABC$, $AC^2 = AB^2 + BC^2$, then by converse of Pythagoras Theorem, $\triangle ABC$ is right angled at B.

3. If a, b, c are such number that $a^2 + b^2 = c^2$, then a, b, c form a Pythagorean triplet. For example, 3, 4, 5 and 7, 24, 25 are Pythagorean triplets.