Worksheet on Pythagorean Theorem.

We know, in a right angled triangle the square of the hypotenuse is equal to the sum of the squares of its remaining two sides.

$$\text{Hypotenuse}^2 = \text{Perpendicular}^2 + \text{Base}^2$$

1. The side of the triangle are of length 7.5 m, 4 m, 8.5 m. Is this triangle a right triangle? If so, which side is the hypotenuse?

2. In ΔABC right angled at A. if AB = 10 m and BC = 26 m, then find the length of AC.

3. In ΔXYZ right angled at Y. find the length of the hypotenuse if the length of the other two sides is 1.6 cm and 6.3 cm.

4. If the square of the hypotenuse of an isosceles right triangle is 98cm22, find the length of each side.

5. A tree broke from a point but did not separate. Its top touched the ground at a distance of 24 m from its base. If the point where it broke is at the height of 7 m from the ground, what is the total height of the tree?

6. A ladder 13 m long when set against the wall of house just reaches a window at a height of 12 m from the ground. How far is the lower end of the ladder from the base of the wall?

7. Find the perimeter of the rectangle whose length is 24 cm and diagonal is 26 cm.

8. The diagonal of the rhombus is 24 m and 10 m. find the perimeter.

9. One of the diagonals of the rhombus is 3 cm and each side is 2.5 cm. Find the length of the other diagonal of the rhombus.

10. A ladder 8.5 m long rests against a vertical wall with its foot 4 m away from the wall. How high up the wall the ladder reach?

Answers:

7.5 m , 4 cm , 52 m , 7 cm , 32 m , 5 m

6.5 cm , 24 m , Yes, hypotenuse = 8.5 m , 68 cm