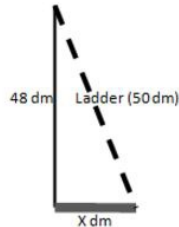




Properties of Triangles Ex 15.5 Q10

Answer :



Let the distance of the lower end of the ladder from the wall be X m.

On using the Pythagoras theorem, we get :

$$X^2 + 48^2 = 50^2$$

$$\Rightarrow X^2 = 50^2 - 48^2 = 2500 - 2304 = 196$$

$$\Rightarrow X = 14 \text{ dm}$$

Hence, the distance of the lower end of the ladder from the wall is 14 dm.

Properties of Triangles Ex 15.5 Q11

Answer :

Let the length of each leg of the given triangle be x units.

Using the Pythagoras theorem, we get :

$$x^2 + x^2 = (\text{Hypotenuse})^2$$

$$x^2 + x^2 = 50$$

$$2x^2 = 50$$

$$\Rightarrow x^2 = 25$$

$$\Rightarrow x = 5$$

Hence, we can say that the length of each leg is 5 units.

Properties of Triangles Ex 15.5 Q12

Answer :

We will check for a Pythagorean triplet by checking if the square of the largest side is equal to the sum of the squares of the other two sides.

$$(i) \quad 37^2 = 1369$$

$$12^2 + 35^2 = 144 + 1225 = 1369$$

$$12^2 + 35^2 = 37^2$$

Yes, they represent a Pythagorean triplet.

$$(ii) \quad 25^2 = 625$$

$$7^2 + 24^2 = 49 + 576 = 625$$

$$7^2 + 24^2 = 25^2$$

Yes, they represent a Pythagorean triplet.

$$(iii) \quad 45^2 = 2025$$

$$27^2 + 36^2 = 729 + 1296 = 2025$$

$$27^2 + 36^2 = 45^2$$

Yes, they represent a Pythagorean triplet.

$$(iv) \quad 39^2 = 1521$$

$$15^2 + 36^2 = 225 + 1296 = 1521$$

$$15^2 + 36^2 = 39^2$$

Yes, they represent a Pythagorean triplet.

***** END *****