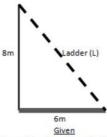


Properties of Triangles Ex 15.5 Q9



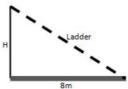
Let the length of the ladder be Lm.

By using the Pythagoras theorem, we can find the length of the ladder.

$$6^{2} + 8^{2} = L^{2}$$

 $\Rightarrow L^{2} = 36 + 64 = 100$
 $\Rightarrow L = 10$

Thus, the length of the ladder is 10 m.



When ladder is shifted

When the ladder is shifted:

Let the height of the ladder after it is shifted be H m.

By using the Pythagoras theorem, we can find the height of the ladder after it is shifted.

$$8^{2} + H^{2} = 10^{2}$$

 $\Rightarrow H^{2} = 100 - 64 = 36$
 $\Rightarrow H = 6$

Thus, the height of the ladder is 6 m.

********** END ********