

3. let AC represent ladder,  
AB wall

In rt  $\triangle ABC$

$$AC^2 = AB^2 + BC^2 \quad (*)$$

$$15^2 = 12^2 + a^2$$

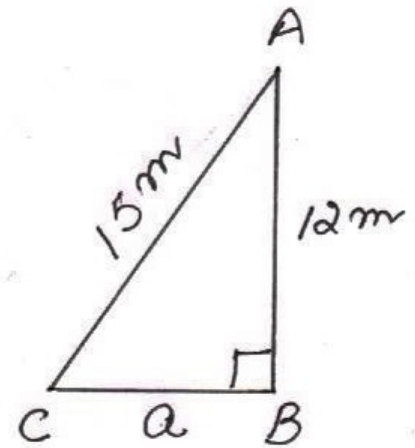
$$\Rightarrow a^2 = 225 - 144$$

$$= 81$$

$$\Rightarrow a = \sqrt{81}$$

$$= 9$$

$\therefore$  required distance = 9m



4① let  $a = 2.5$  cm,  $b = 6.5$  cm,  $c = 6$  cm

$$a^2 + c^2 = 2.5^2 + 6^2$$

$$= 6.25 + 36$$

$$= 42.25$$

$$b^2 = 6.5^2$$

$$= 42.25$$

$$\therefore a^2 + c^2 = b^2$$

these can be sides of a right  $\triangle$   
by converse of pythagoras  
theorem.

\* Pythagoras theorem