

⑨ let AC represent ladder

In rt  $\Delta ABC$

$$AC^2 = AB^2 + BC^2 \quad (\text{Pythagoras theorem})$$

$$15^2 = 12^2 + d^2$$

$$\Rightarrow d^2 = 15^2 - 12^2$$

$$= (15 - 12)(15 + 12)$$

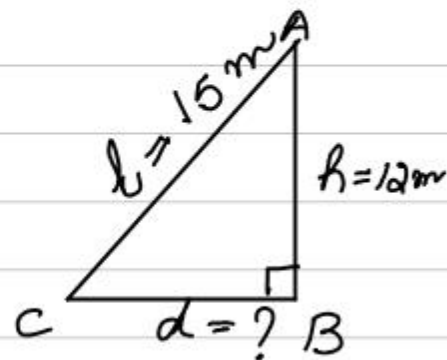
$$= 3 \times 27$$

$$d = \sqrt{3 \times 3 \times 3 \times 3}$$

$$= 3 \times 3$$

$$= 9$$

$\therefore$  distance = 9m



⑩ let AC represent ladder

In rt  $\Delta ABC$

$$AC^2 = AB^2 + BC^2 \quad (\text{Pythagoras theorem})$$

$$5^2 = 4.8^2 + BC^2$$

$$\Rightarrow BC^2 = 5^2 - 4.8^2$$

$$= (5 - 4.8)(5 + 4.8)$$

$$= 0.2 \times 9.8$$

$$= 1.96$$

$$BC = \sqrt{1.96}$$

$$= \sqrt{\frac{196}{100}}$$

$$= \sqrt{\frac{2 \times 2 \times 7 \times 7}{10 \times 10}}$$

$$= \frac{14}{10}$$

$$= 1.4$$

reqd. distance = 1.4m

