

- ⑤ let $AB+AC$ represent
unbroken tree

In rt $\triangle ABC$

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

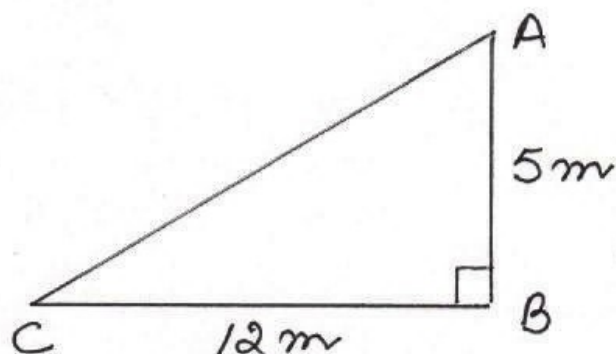
$$= 5^2 + 12^2$$

$$= 25 + 144$$

$$= 169$$

$$AC = \sqrt{169}$$

$$= 13 \text{ m}$$



$$\text{original height of tree} = AB + AC$$

$$= 5 + 13$$

$$= 18 \text{ m}$$

- ⑥ In $\triangle PQR$

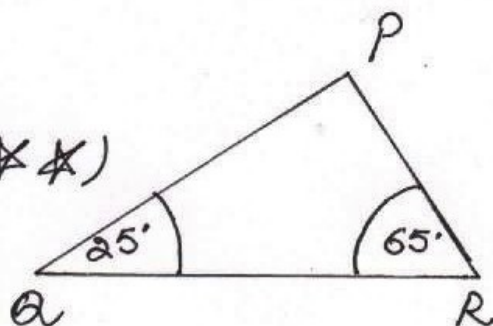
$$\angle P + \angle Q + \angle R = 180^\circ \quad (**)$$

$$\angle P + 25 + 65 = 180$$

$$\Rightarrow \angle P = 180 - 90^\circ$$

$$= 90^\circ$$

$$PQ^2 + PR^2 = QR^2 \quad (*)$$



* Pythagoras theorem

** angle sum property of \triangle