5. Cont.

also ar $(\triangle O'PO) = \frac{1}{2} b h$

$$6 = \frac{1}{2} \times OO' \times PS$$

$$12 = 5 \times PS$$

$$\Rightarrow PS = \frac{12}{5} \text{ cm}$$

Similarly $QS = \frac{12}{5}$ cm

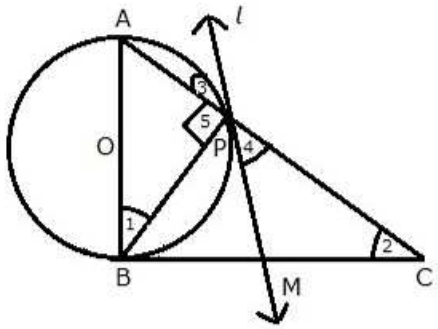
$$PQ = PS + QS$$

$$= \frac{12}{5} + \frac{12}{5}$$

$$= \frac{24}{5}$$

$$= 4.8 \text{ cm}$$

(6)



given - In fig. $\angle ABC = 90^\circ$

to prove l bisects BC

proof In rt $\triangle ABC$

$\angle A + \angle ABC + \angle C = 180^\circ$ (angle sum prop. of $\triangle$)

$\angle A + \angle C = 180 - 90^\circ$ ($\because \angle ABC = 90^\circ$)

$\Rightarrow \angle A + \angle C = 90^\circ$ ... (i)

$\angle 5 = 90^\circ$ (angle in semi ⊙)

In rt $\triangle APC$

$\angle A + \angle 1 + \angle 5 = 180^\circ$ (angle sum prop. of $\triangle$)

$\Rightarrow \angle A + \angle 1 = 180^\circ - 90$

$\Rightarrow \angle A + \angle 1 = 90^\circ$ ... (ii)