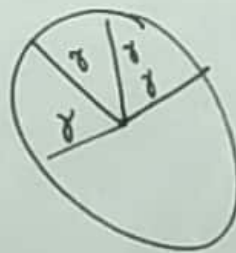
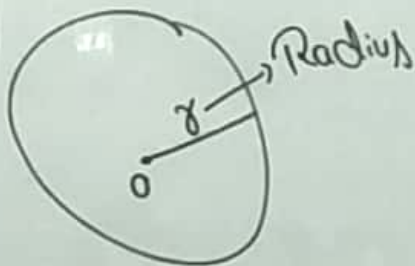


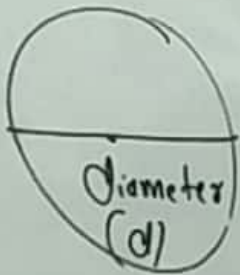
Circle

C - lo

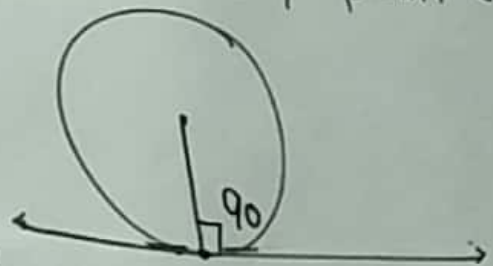


prop

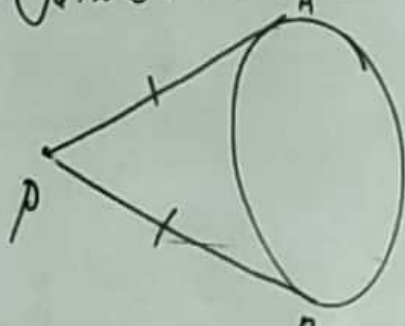
① Only One tangent
Can be draw from
Any point on the Circle



$$d = 2r$$

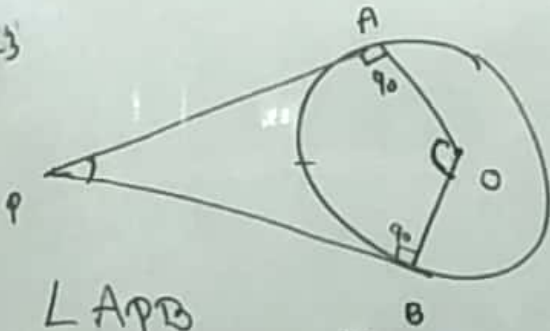


②nd If a point lie Outside the Circle then
pair of tangent
Can be drawn



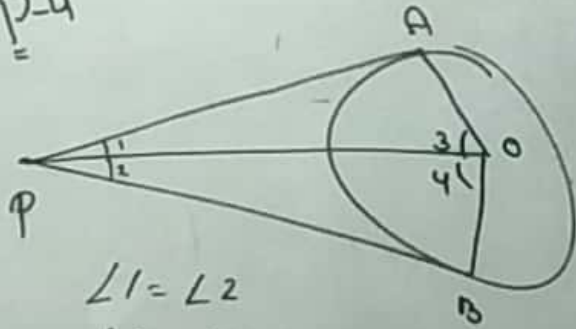
$$PA = PB$$

P-3



$$\angle APB + \angle AOB = 180^\circ$$

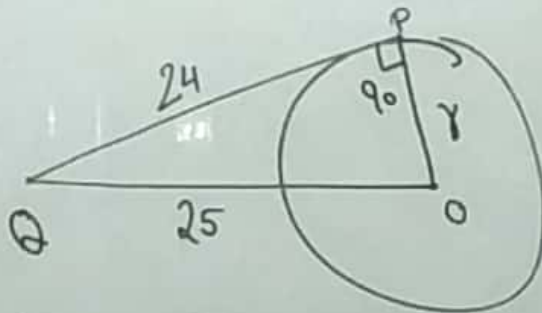
P-4



$$\begin{aligned} \angle 1 &= \angle 2 \\ \angle 3 &= \angle 4 \end{aligned}$$

angent

2017-18
①



In ΔPOQ

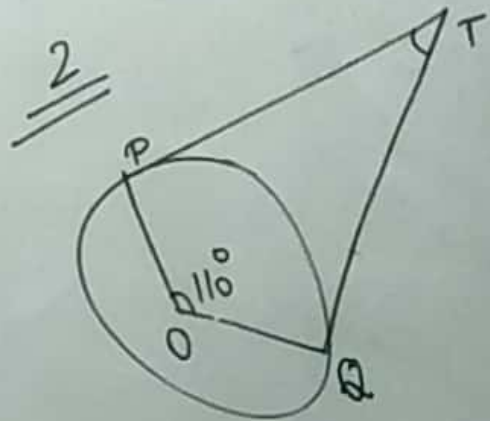
$$25^2 = 24^2 + \gamma^2$$

$$625 = 576 + \gamma^2$$

$$49 = \gamma^2$$

$$7^2 = \gamma^2$$

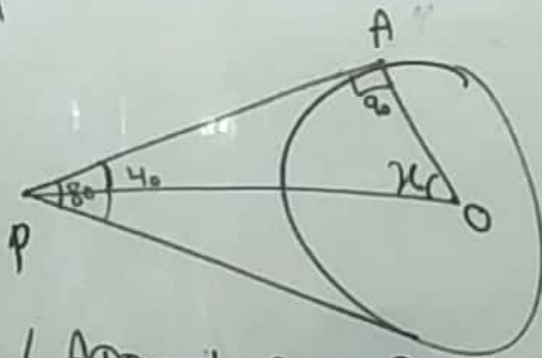
$$\boxed{\gamma = 7}$$



$$\begin{aligned} \angle PTQ &= 180^\circ - 110^\circ \\ &= 70^\circ \end{aligned}$$

2018, 2019

③



$$\angle APO = \frac{1}{2} \times 80$$

$$= 40$$

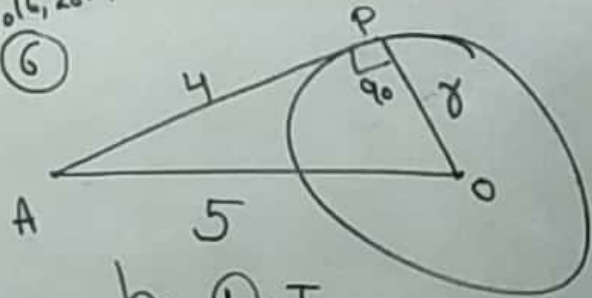
$$\therefore x + 90 + 40 = 180$$

$$x = 180 - 130$$

$$\boxed{x = 50}$$

2016, 2017

⑥



by P.T

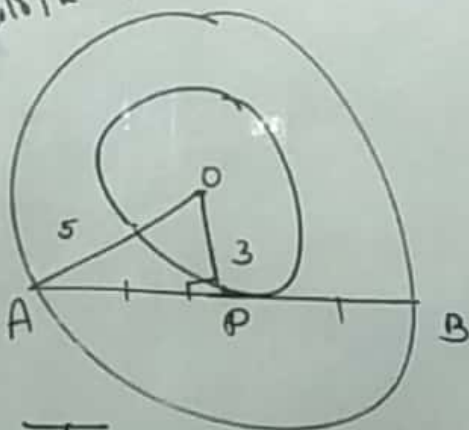
$$5^2 = 4^2 + y^2$$

$$25 = 16 + y^2$$

$$9 = y^2$$

$$\boxed{y = 3}$$

⑦ 2018, 2019, 2020



In $\triangle OAP$

$$OA^2 = OP^2 + AP^2$$

$$5^2 = 3^2 + AP^2$$

$$25 - 9 = AP^2$$



$$16 = AP^2$$

$$4^2 = AP^2$$

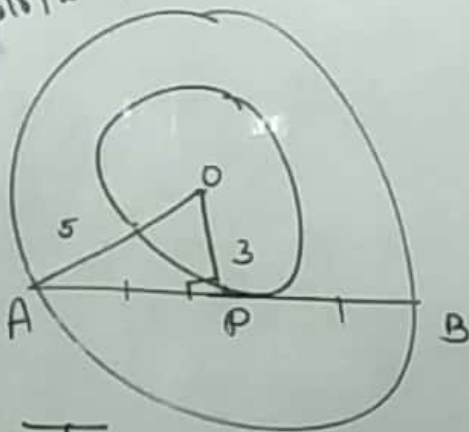
$$\boxed{AP = 4}$$

$$AB = 2AP$$

$$= 2 \times 4$$

$$\boxed{AB = 8\text{cm}}$$

⑦ 2018, 2019, 2020



In $\triangle OAP$

$$OA^2 = OP^2 + AP^2$$

$$5^2 = 3^2 + AP^2$$

$$25 - 9 = AP^2$$



$$16 = AP^2$$

$$4^2 = AP^2$$

$$AP = 4$$

$$AB = 2AP$$

$$= 2 \times 4$$

$$AB = 8 \text{ cm}$$

2019-7 Marks
Ex-3