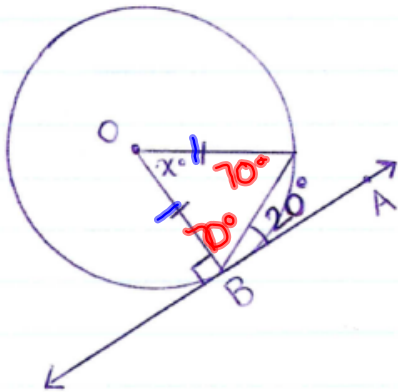


ANSWERS \Rightarrow EXERCISE 6.15

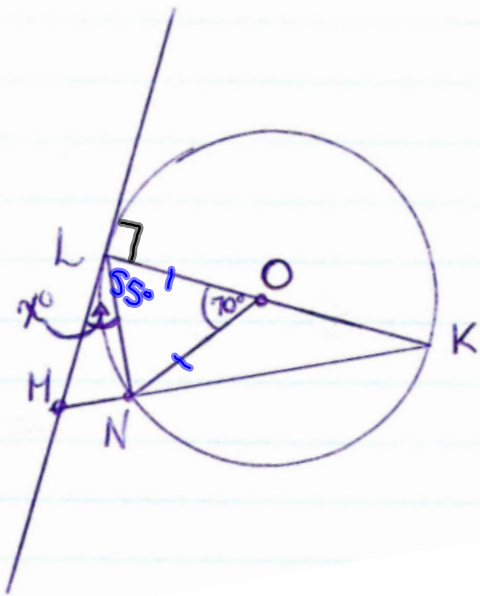
(a)

To find x° :

$$x = 40^\circ$$



b)

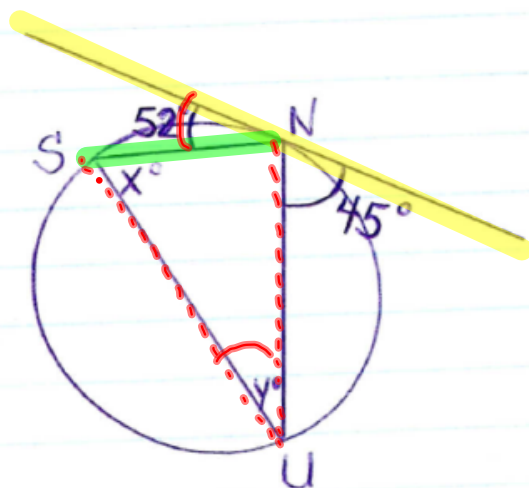


To find x° :

$$x = 180 - 90 - 55$$

$$x = 35^\circ$$

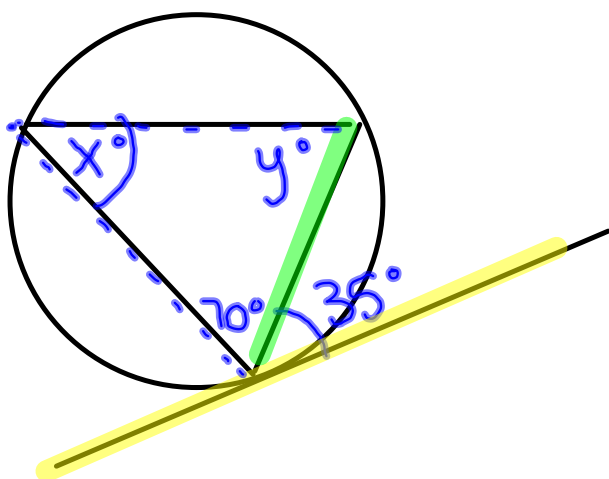
c)



$$x^\circ = 45^\circ$$

$$y^\circ = 52^\circ$$

Ex.

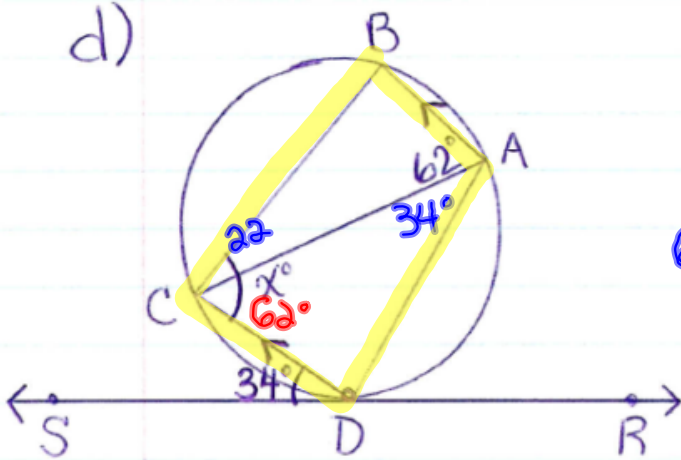


$$x = 35^\circ$$

$$y = 180 - 70 - 35^\circ$$

$$y = 75^\circ$$

d)



To find x° :

$$\angle A + \angle C = 180^\circ$$

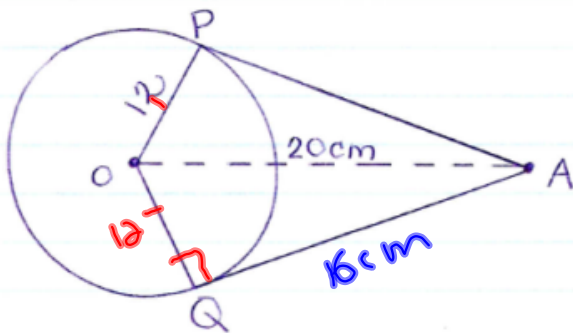
$$62 + 34 + 62 + y = 180^\circ$$

$$y = 22$$

$$\angle x = 62^\circ + 22$$

$$= 84^\circ$$

2.



To find AQ:

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

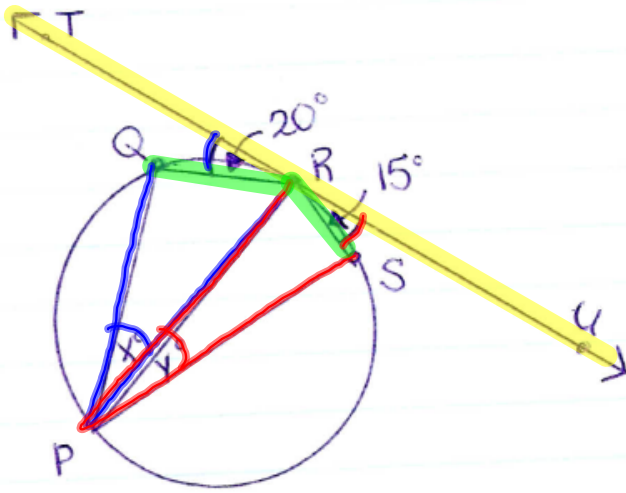
$$(12)^2 + b^2 = (20)^2$$

$$144 + b^2 = 400$$

$$b^2 = 256$$

$$b = 16 \text{ cm}$$

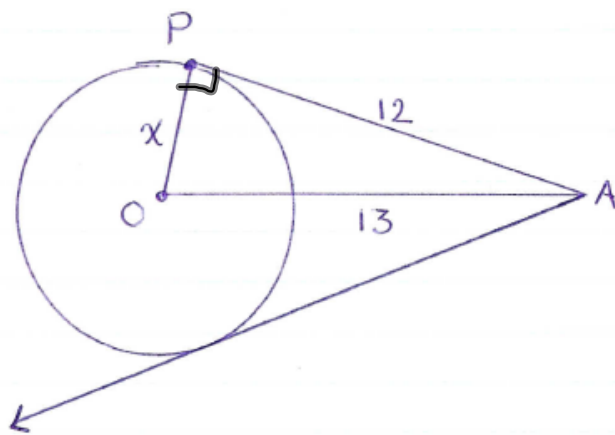
3.



$$x^\circ = 20^\circ$$

$$y^\circ = 15^\circ$$

4a)



To find OP :

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

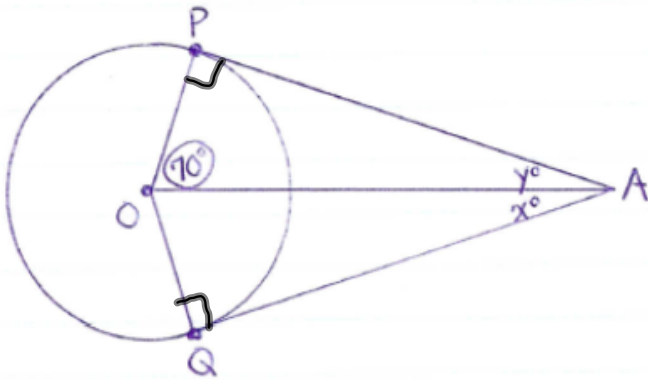
$$12^2 + x^2 = 13^2$$

$$144 + x^2 = 169$$

$$x^2 = 25$$

$$x = 5$$

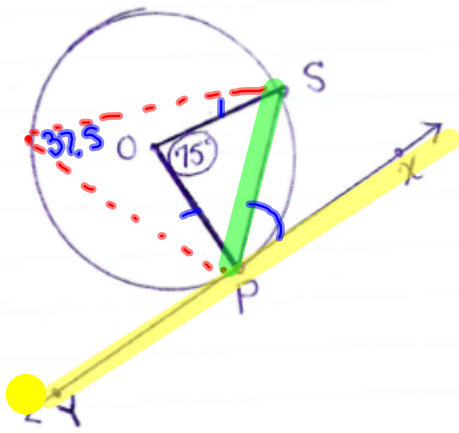
b)



$$y^\circ = 180 - 90 - 70 \\ = 20^\circ$$

$$x^\circ = 20^\circ$$

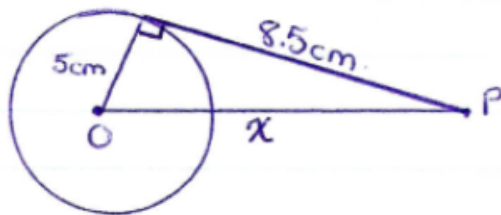
5.



To find $\angle SPX$:

$$\angle SPX = 37.5^\circ$$

8.



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

$$c^2 = (5)^2 + (8.5)^2$$

$$c^2 = 25 + 72.25$$

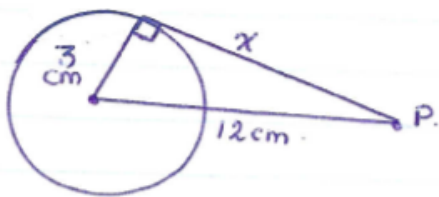
$$c^2 = 97.25$$

$$c = \sqrt{97.25}$$

$$c = 9.86 \text{ cm.}$$

9.

a)



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

$$(12)^2 = (3)^2 + b^2$$

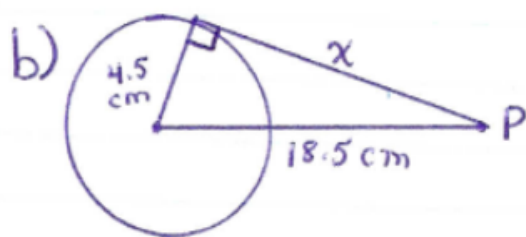
$$144 = 9 + b^2$$

$$144 - 9 = b^2$$

$$135 = b^2$$

$$\sqrt{135} = b$$

$$11.6 \text{ cm} = b$$



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

$$(18.5)^2 = (4.5)^2 + b^2$$

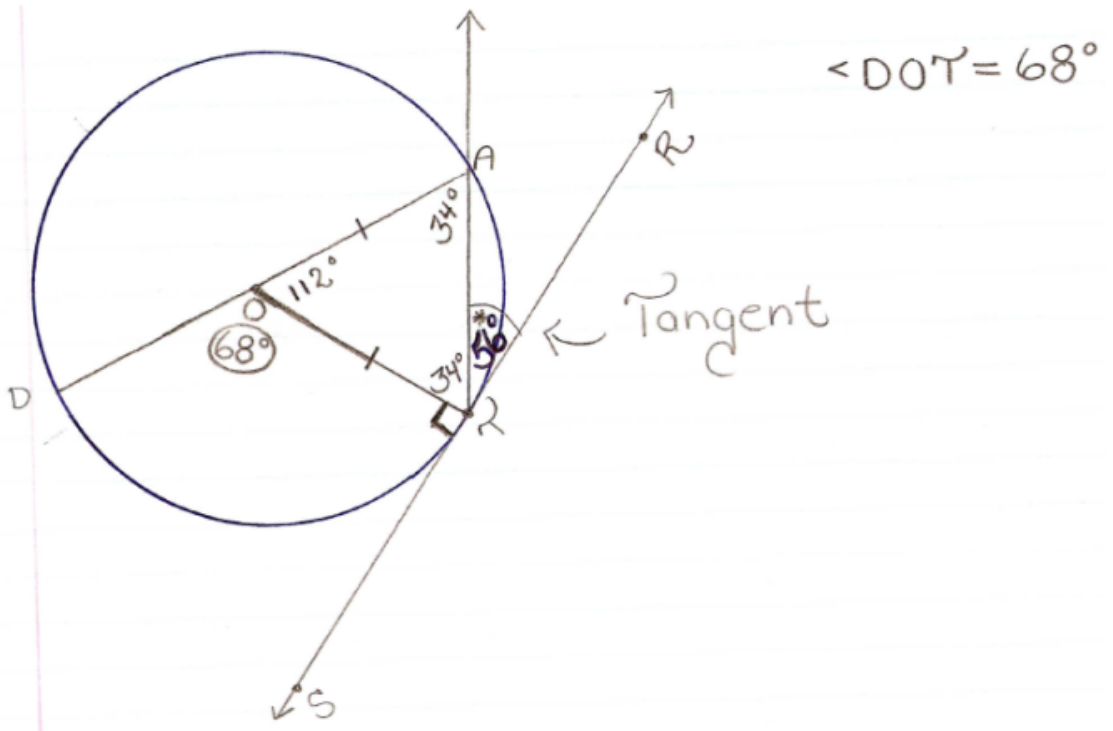
$$342.25 = 20.25 + b^2$$

$$342.25 - 20.25 = b^2$$

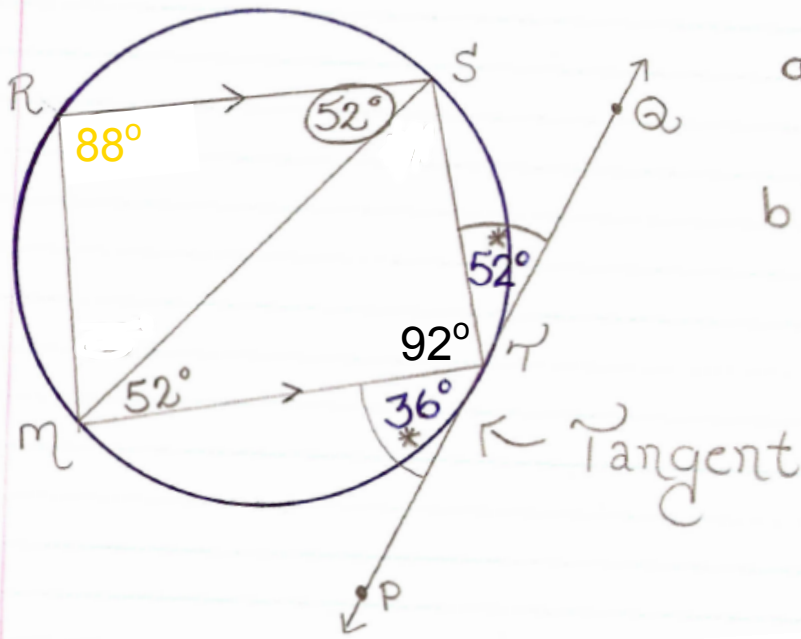
$$322 = b^2$$

$$17.94 \text{ cm} = b$$

10.



11.

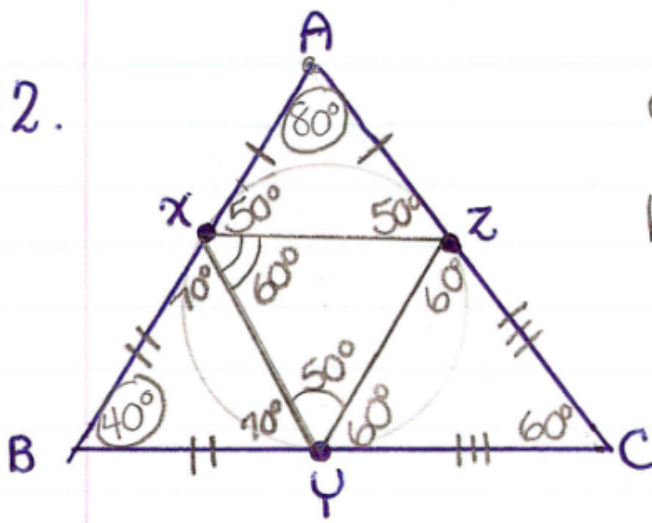


a) $\angle RSM = 52^\circ$

b) $\angle SRM = 88^\circ$

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12.



a) $\angle ZYX = 50^\circ$

b) $\angle YXZ = 60^\circ$