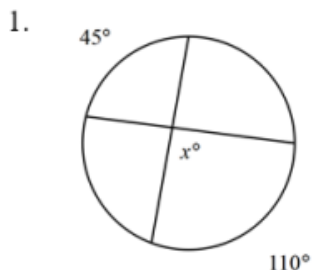


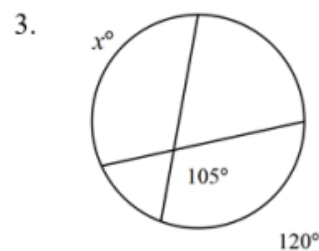
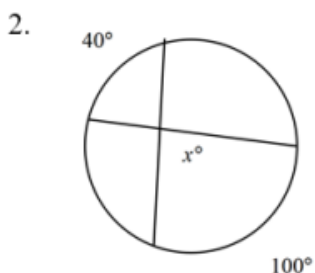
SM2 12.2—Inscribed Polygons and Tangent and Chord Theorems

Find the value of  $x$ .



$$x = \frac{1}{2}(110 + 45)$$

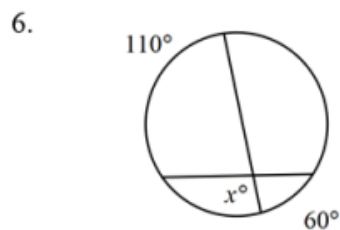
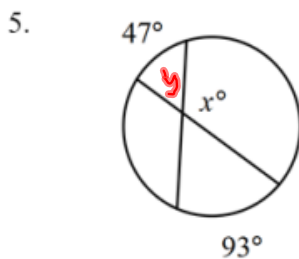
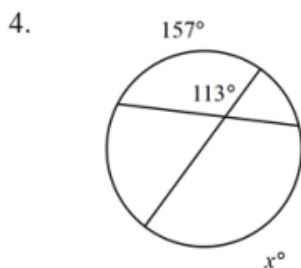
$x =$   
Solve for  $x$



$$105 = \frac{1}{2}(x + 120)$$

$$2(105) = x + 120$$

Solve for  $x$



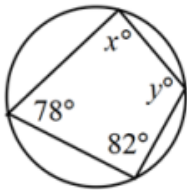
$$y = \frac{1}{2}(47 + 93)$$

$$x = 180 - y$$

Solve for  $y$  then  $x$

Find the values of  $x$  and  $y$ .

7.



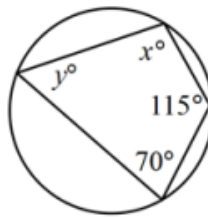
$$y = 180 - 78$$

$$y =$$

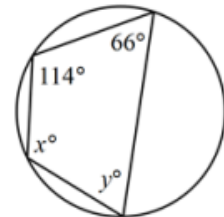
$$x = 180 - 82$$

$$x =$$

8.



9.

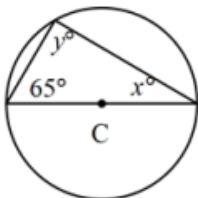


$$x = 180 - 66$$

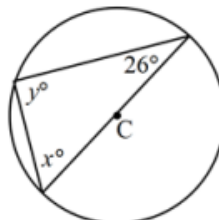
$$x =$$

$$y = 180 - 114$$

10.



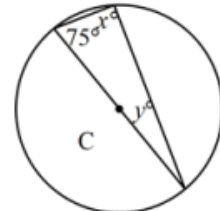
11.



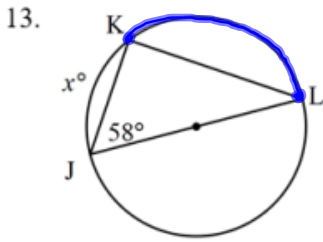
$$y = \frac{1}{2}(180)$$

$$x = 180 - 26 - y$$

12.

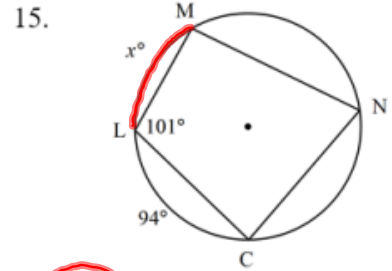
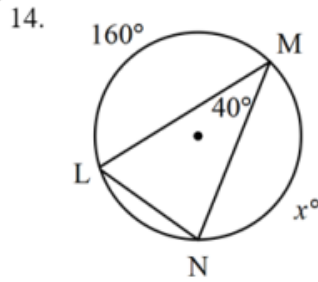


Find the measure of the arc or angle indicated.



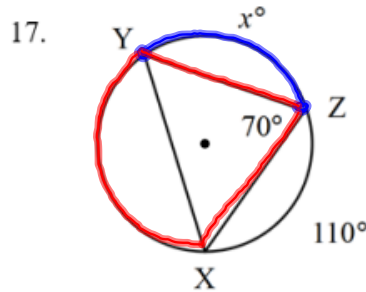
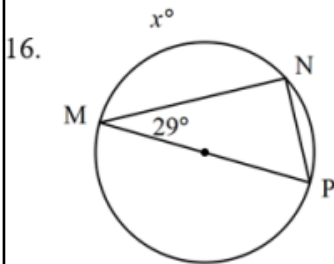
$$\widehat{KL} = 2(58)$$

$$x = 180 - m\widehat{KL}$$



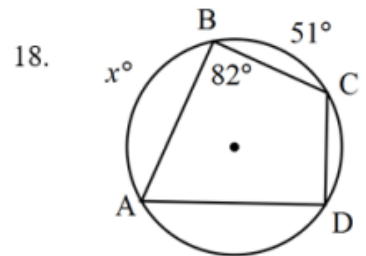
$$m\widehat{MNC} = 2(101)$$

$$x = 360 - 94 - m\widehat{MNC}$$



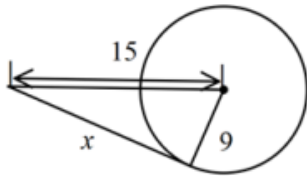
$$m\widehat{YZ} = 2(70)$$

$$x = 360 - 110 - m\widehat{YZ}$$



Find the segment length indicated. Assume that segments which appear to be tangent to the circle are tangent to the circle. If necessary, round your answers to the nearest tenth.

19.

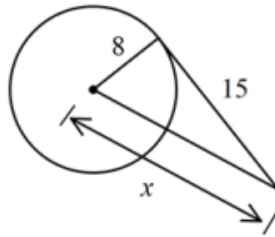


$$x^2 + 9^2 = 15^2$$

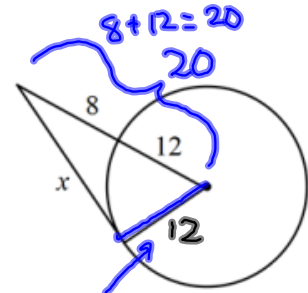
$$x^2 = 15^2 - 9^2$$

$$x = \sqrt{15^2 - 9^2}$$

20.



21.



radius

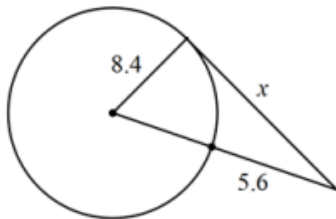
The radius is 12

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

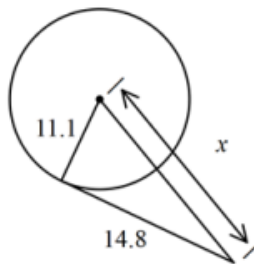
$$x^2 + 12^2 = 20^2$$

SOLVE for x

22.



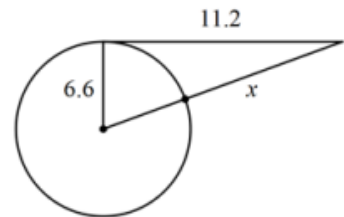
23.



$$11.1^2 + 14.8^2 = x^2$$

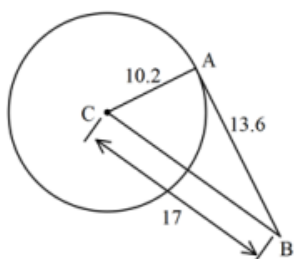
$$\sqrt{11.1^2 + 14.8^2} = x$$

24.

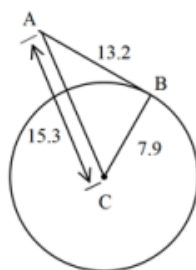


Determine if segment AB is tangent to the circle.

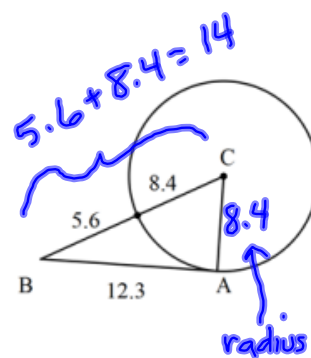
25.



26.



27.



Does  $a^2 + b^2 = c^2$ ?  
 If yes AB is tangent to circle

Does  
 $12.3^2 + 8.4^2 = 14^2$

Does the left side = right side?

$$10.2^2 + 13.6^2 = 17^2$$