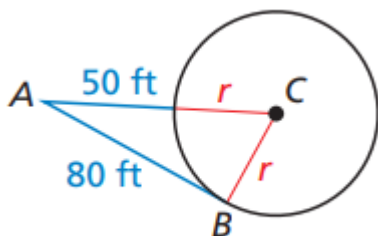


## Chapter 10 review

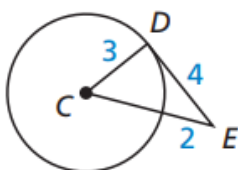
1. Tell how many common tangents the circles have and draw them. Use blue to indicate common external tangents and red to indicate common internal tangents.



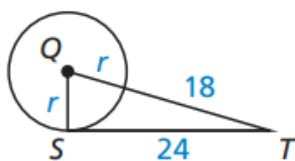
2. In the diagram, point B is a point of tangency. Find the radius  $r$  of  $\odot C$ .



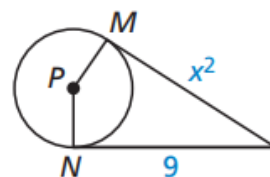
6. Is  $\overline{DE}$  tangent to  $\odot C$ ?



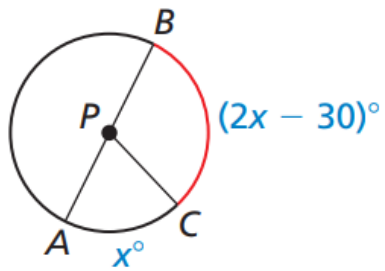
7.  $\overline{ST}$  is tangent to  $\odot Q$ . Find the radius of  $\odot Q$ .



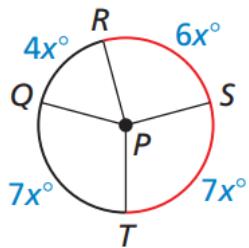
8. Points M and N are points of tangency. Find the value(s) of  $x$ .



3. Find the value of  $x$   
 (a)

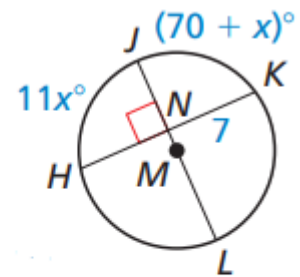


- (b)



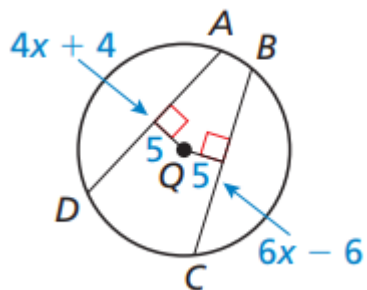
4.

- (a) Find  $HK$ .  
 (b) Find  $m\widehat{HK}$

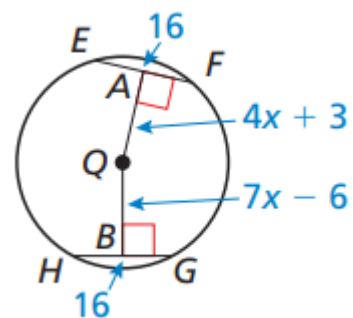


5. Find the radius of  $\odot Q$

- (a)

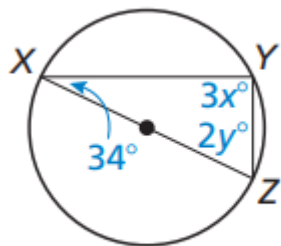


- (b)

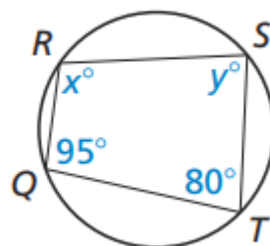


6. Find the value of each variable.

(a)



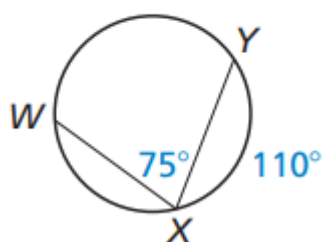
(b)



7. Find the indicated measure.

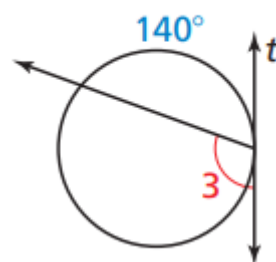
(a)

$m\widehat{WX}$



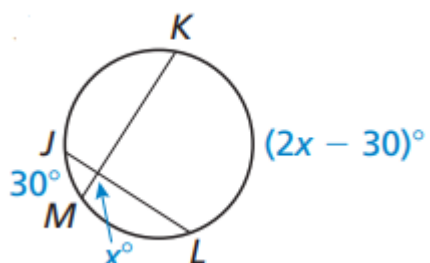
(b)

$m\angle 3$

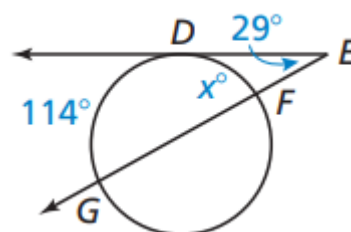


8. Find the value of  $x$ .

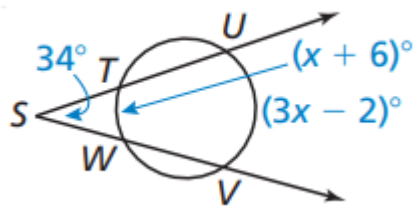
(a)



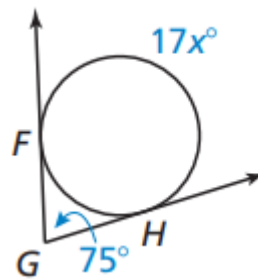
(b)



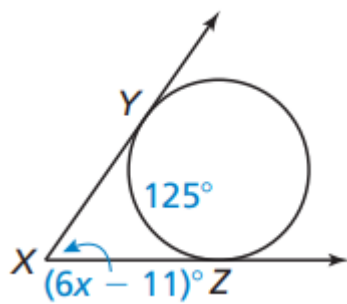
(c)



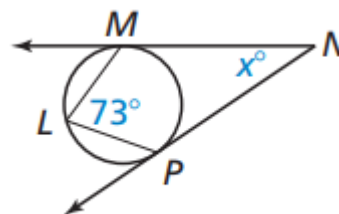
(d)



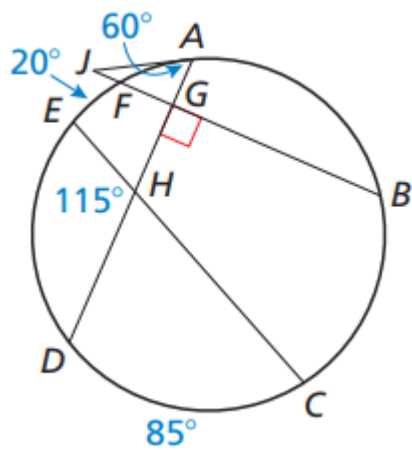
(e)



(f)

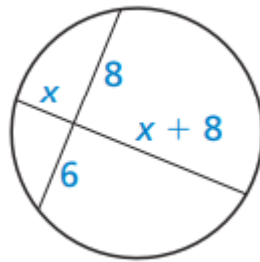


9. Find  $mAB$  and  $mED$

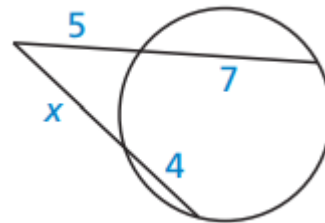


10. Find the value of  $x$ .

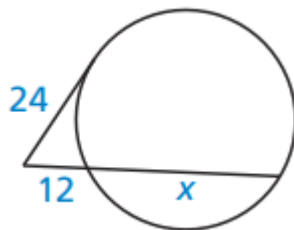
(a)



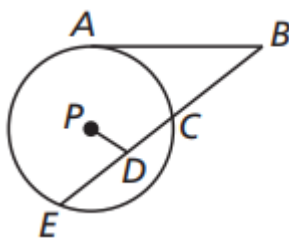
(b)



(c)



11. In the figure,  $AB = 12$ ,  $BC = 8$ ,  $DE = 6$ ,  $PD = 4$ , and  $A$  is a point of tangency. Find the radius of  $\odot P$ .



12. The point  $(-5, 6)$  is on a circle with center  $(-1, 3)$ . Write the standard equation of the circle.

13. Graphing a circle that has  $(-1, 1)$  and  $(5, -7)$  as endpoints of a diameter.

14. Prove or disprove that the point  $(\sqrt{2}, \sqrt{2})$  lies on the circle centered at the origin and containing the point  $(2, 0)$ .

15. Prove or disprove that the point  $(1, \sqrt{5})$  lies on the circle centered at the origin and containing the point  $(0, 1)$ .

16. The equation of a circle is  $x^2 + y^2 - 8x + 4y - 16 = 0$  . Find the center and the radius of the circle.