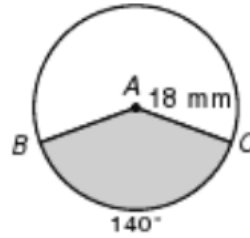
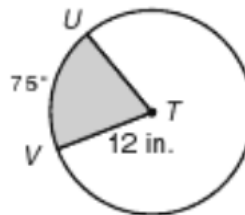


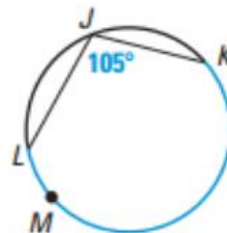
- Find the area of sector BAC, and the length of \widehat{BC} . Give your answer in terms of π and as a decimal rounded to the nearest hundredth.



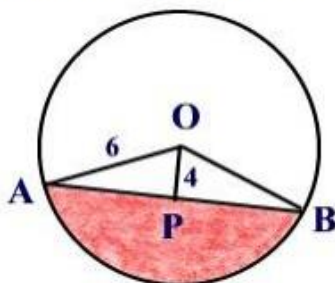
- Find the area of sector VTU, and the length of \widehat{VU} . Give your answer in terms of π and as a decimal rounded to the nearest hundredth.



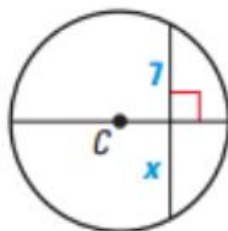
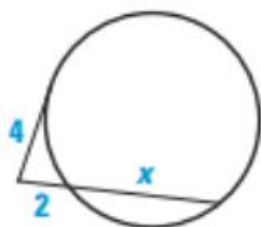
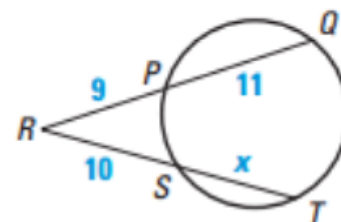
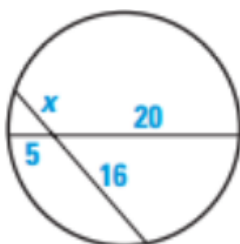
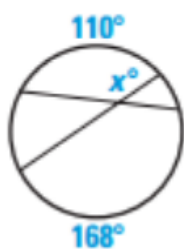
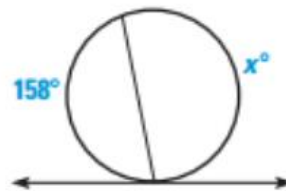
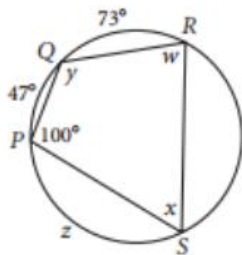
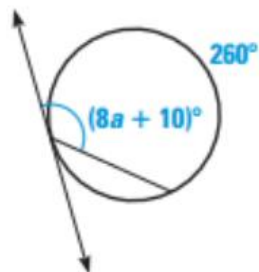
- Given a circumference of 50π feet find the area of a sector whose central angle measurement is 40° .
- Find the diameter of a circle that has 100° central angle with an intercepted arc that is 3π units long.
- Find the length of \widehat{LMK} below if the circle has a diameter of 9. Leave your answer in terms of pi.



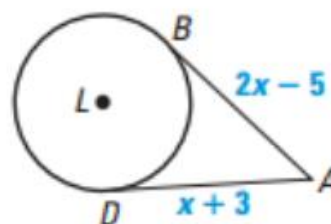
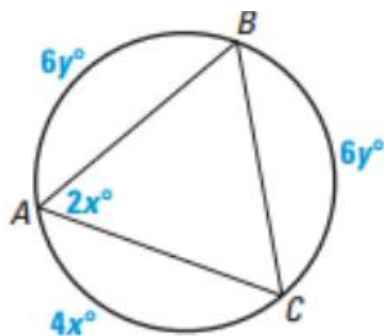
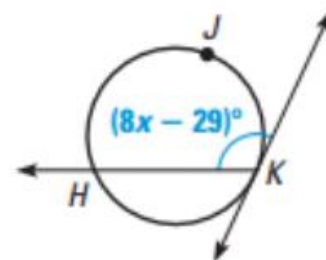
- Find the area of the shaded portion of circle O, if \overline{OP} is perpendicular to \overline{AB} .



7. Solve for the value of the variable(s) in all of the diagrams below. (Lines that appear tangent to the circle are tangent, angles that appear to be inscribed are inscribed).

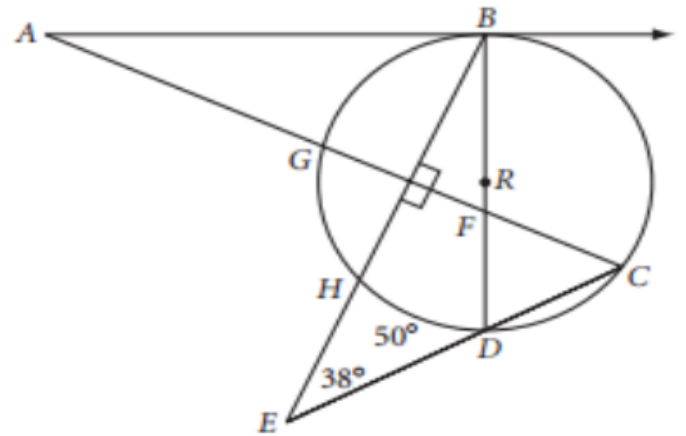


$$m\widehat{HJK} = (10x + 50)^\circ$$

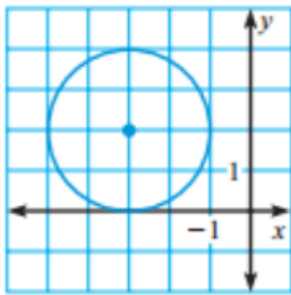


8. \overline{AB} is tangent to circle R , $\overline{AC} \perp \overline{BE}$, $m\angle BED = 38^\circ$, and $m\widehat{HD} = 50^\circ$.

- $m\angle EBD =$ _____
- $m\angle ACE =$ _____
- $m\widehat{GB} =$ _____
- $m\widehat{GBD} =$ _____
- $m\angle DBA =$ _____
- $m\widehat{GD} =$ _____
- $m\angle DFC =$ _____



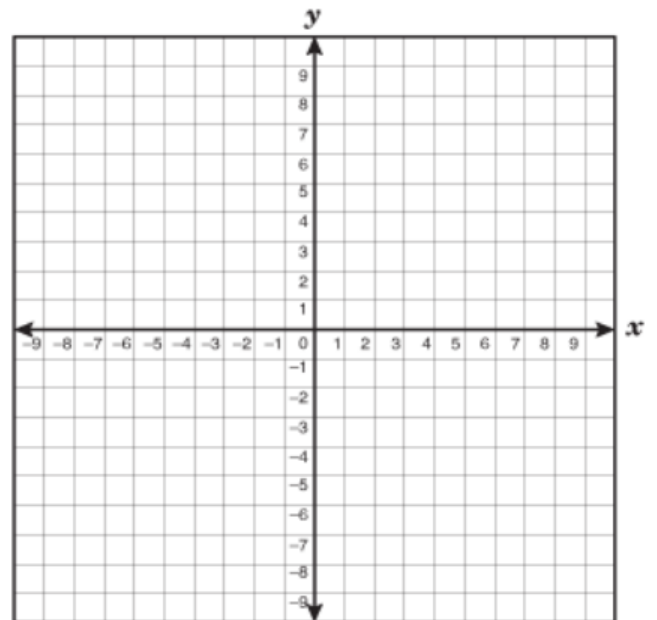
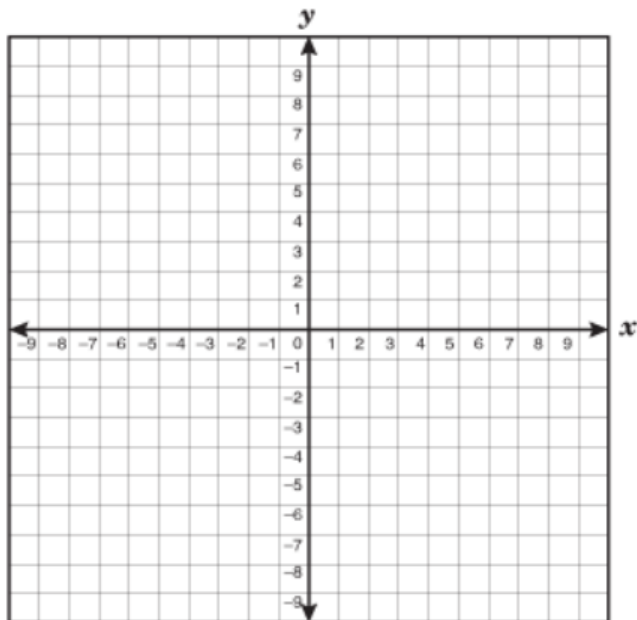
9. Write the equation for the circle shown below.



10. Sketch a graph the following equations.

$$(x - 4)^2 + (y - 3)^2 = 16$$

$$x^2 + y^2 = 4$$



11. Write the equations (in standard form) for the circles described below:

The center is $(1, 2)$, a point on the circle is $(4, 6)$.

Center $(-6, 0)$, radius $\sqrt{10}$

The center is $(-5, 3)$ and the diameter is 8.

A circle whose diameter has endpoints $(-5, 2)$ and $(1, -1)$

A circle with a center at $(4, 5)$ that is tangent to the y -axis.

12. **MULTIPLE CHOICE** What is the standard form of the equation of a circle with center $(-3, 1)$ and radius 2?

- A $(x - 3)^2 + (y - 1)^2 = 2$ B $(x + 3)^2 + (y - 1)^2 = 2$
 C $(x - 3)^2 + (y - 1)^2 = 4$ D $(x + 3)^2 + (y - 1)^2 = 4$

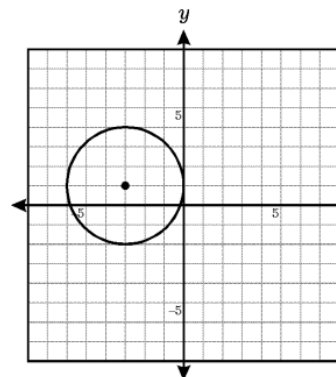
13. **MULTIPLE CHOICE** The center of a circle is $(-3, 0)$ and its radius is 5. Which point does *not* lie on the circle?

- A $(2, 0)$ B $(0, 4)$ C $(-3, 0)$ D $(-3, -5)$ E $(-8, 0)$

14. The equation of a circle is given as $2x^2 + 2y^2 + 4x + 12y + 6 = 0$. What are the center, C , and the radius, r , of the circle?

- A. $C(-1, -3); r = \sqrt{7}$ B. $C(-1, -3); r = 7$
C. $C(1, 3); r = \sqrt{7}$ D. $C(1, 3); r = 7$

15. Which of the following is an equation for the circle shown?



- A. $x^2 + y^2 + 6x - 2y + 1 = 0$
B. $x^2 + y^2 - 6x - 2y + 1 = 0$
C. $x^2 + y^2 + 6x + 2y + 7 = 0$
D. $x^2 + y^2 - 6x - 2y + 7 = 0$