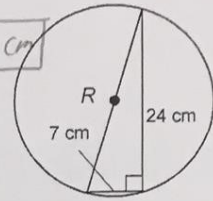
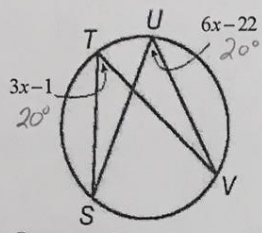
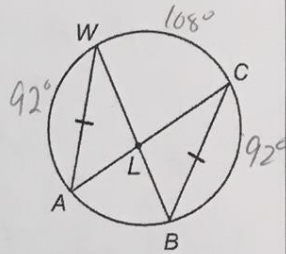
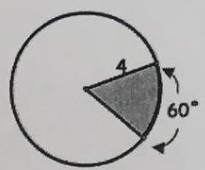
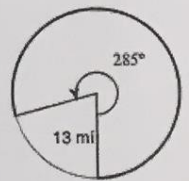
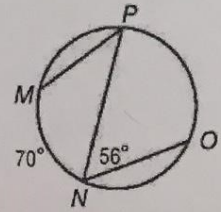
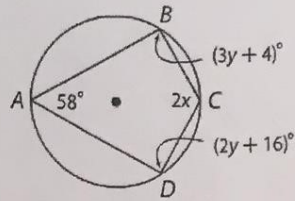


Unit 8: Circles
Chapter 10

<p>1. Find the <u>radius</u> of each circle given the circumference.</p> <p>a) $C = 40\pi$ $2\pi r = 40\pi$ $2r = 40$ $r = 20$</p> <p>b) $C = 40$ $2\pi r = 40$ $r = \frac{40}{2\pi}$ $r \approx 6.37$</p>	<p>2. Find the <u>exact</u> circumference (in terms of π) of each circle using the given inscribed or circumscribed polygon.</p> <p>$7^2 + 24^2 = d^2$ $49 + 576 = d^2$ $625 = d^2$ $d = 25$</p> <p>$C = 25\pi \text{ cm}$</p> 
<p>3. Use the diagram to the right to answer the following questions.</p> <p>a) $m\angle T = 20^\circ$ $3(7) - 1 = 20$</p> <p>b) $m\widehat{SV} = 40^\circ$</p>  <p>$3x - 1 = 6x - 22$ $21 = 3x$ $x = 7$</p>	<p>4. Given: $m\widehat{WA} = 92^\circ$, $m\widehat{WC} = 108^\circ$. *Label the diagram*</p> <p>a) Find $m\angle A$. <u>54°</u></p> <p>b) Find $m\angle B$. <u>54°</u></p> <p>c) Find $m\widehat{CB}$. <u>92°</u></p> <p>d) Find $m\widehat{AB}$. <u>68°</u></p> 
<p>5. Find the area of the shaded sector. Round the hundredth if needed.</p> <p>$\frac{\text{Sector area}}{\text{Circle area}} = \frac{\text{Arc measure}}{360}$</p> <p>$\frac{x}{16\pi} = \frac{60}{360}$ $360x = 960\pi$ $x \approx 8.38 \text{ units}^2$</p> 	<p>6. Find the length of the darkened arc. Round the hundredth if needed.</p> <p>$\frac{\text{arc length}}{\text{Circumference}} = \frac{\text{arc measure}}{360}$</p> <p>$\frac{x}{26\pi} = \frac{285}{360}$ $360x = 7410\pi$ $x \approx 64.66 \text{ mi}$</p> 
<p>7. Use the circle below to find the measures.</p> <p>a) $m\angle P = 35^\circ$</p> <p>b) $m\widehat{PO} = 112^\circ$</p> 	<p>8. The polygon is inscribed in the circle. Find the values of x and y.</p> <p>$2x + 58 = 180$ $2x = 122$ $x = 61$</p> <p>$3y + 4 + 2y + 16 = 180$ $5y + 20 = 180$ $5y = 160$ $y = 32$</p> <p>$x = 61$, $y = 32$</p> 

9. Write an equation for the circle with center at (5, -3) and the radius is 10

$$(x-5)^2 + (y+3)^2 = 100$$

10. Write an equation for the circle with Center is (-3, 2) and passes through (1, 6)

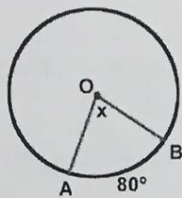
$$\begin{aligned} r &= \sqrt{(-3-1)^2 + (2-6)^2} \\ &= \sqrt{(-4)^2 + (-4)^2} \\ &= \sqrt{16 + 16} \\ &= \sqrt{32} \end{aligned}$$

$$(x+3)^2 + (y-2)^2 = 32$$

11. Find the value of x in each diagram.

$$x = 80^\circ$$

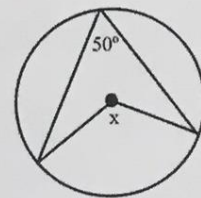
Central angle is same measure as intercepted arc



12. Find the value of x in each diagram.

$$x = 100^\circ$$

Central angle is twice the measure of inscribed angle



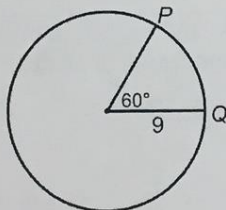
13. Find the length of \widehat{PQ} in the diagram below.

$$\frac{x}{18\pi} = \frac{60}{360}$$

$$360x = 1080\pi$$

$$x = \frac{1080\pi}{360}$$

$$x = 9.42$$



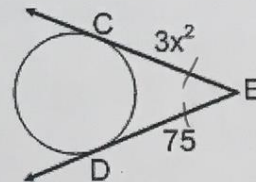
14. Find x, if \overline{EC} and \overline{ED} are tangents

$$3x^2 = 75$$

$$x^2 = 25$$

$$\sqrt{x^2} = \sqrt{25}$$

$$x = \pm 5$$



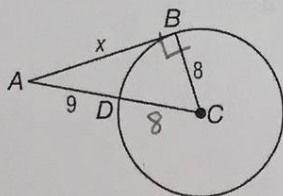
15. Find the value of x in each diagram below given \overline{AB} is tangent to $\odot C$

$$x^2 + 8^2 = 17^2$$

$$x^2 + 64 = 289$$

$$x^2 = 225$$

$$x = 15$$



16. Find the value of x in each diagram below given \overline{JH} is tangent to $\odot G$

$$x^2 + 5^2 = 13^2$$

$$x^2 + 25 = 169$$

$$x^2 = 144$$

$$x = 12$$

