

**WARM-UP**

$\overline{CA}$  is tangent to circle F at B.  $\overline{CD}$  is tangent to circle F at D.

- Find the value of r.  
 $a^2 + b^2 = c^2$   
 $21^2 + r^2 = 29^2$   
 $441 + r^2 = 841$   
 $r^2 = 400$   
 $r = 20$
- Find the value of x.  
 $9x - 5 = 8x + 2$   
 $x = 7$
- You are standing 6 feet from the edge of a large circular fountain. The distance to a point of tangency is 12 feet. What is the radius of the fountain?  
 $a^2 + b^2 = c^2$   
 $12^2 + r^2 = (r+6)^2$   
 $144 + r^2 = (r+6)(r+6)$   
 $144 + r^2 = r^2 + 6r + 6r + 36$   
 $144 + r^2 = r^2 + 12r + 36$   
 $144 = 12r + 36$   
 $108 = 12r$   
 $r = 9$

Apr 8-7:44 PM

Intercepted Arcs have the same measure as their central angles.

$m\angle ABC = 120^\circ$   
 $m\widehat{AC} = 120^\circ$

Mar 6-10:27 AM

**Find the length of the given arc**  
 Pg 595  
 Formula for arc length  $\frac{m\widehat{ABC}}{360^\circ} \cdot 2\pi r$

①

length of this part of circumference  $\frac{60}{360} \cdot 2 \cdot \pi \cdot 4$   
 $4.19 \text{ cm}$   
 $m\angle ABC$  is the central angle.  
 Circumference of circle length of the whole circle "perimeter of circle"  $C = 2\pi r$

Mar 6-10:29 AM

**Find the length of the given arc**

$\frac{240}{360} \cdot 2 \cdot \pi \cdot 12$   
 $50.26$   
 central angle = measure of arc

Mar 6-10:29 AM

**Find the length of the given arc**

$\frac{150}{360} \cdot 2 \cdot \pi \cdot 8$   
 $20.93$

Mar 6-10:30 AM

**Find the length of the given arc**

Length of arc ABC  
 Find central angle  $360 - 150 = 210^\circ$   
 $\frac{210}{360} \cdot 2 \cdot \pi \cdot 8$   
 $29.30$

Apr 17-8:50 AM

10.5 Angles in circles

Tangents & Chords Theorem

$\angle 1$  is created from the tangent and the chord

$\angle 2$  is created from the tangent and the chord

$m\angle 1 = \frac{1}{2} m\widehat{AB}$   
 $m\angle 1 = \frac{1}{2} 130$   
 $m\angle 1 = 65^\circ$

$m\angle 2 = \frac{1}{2} m\widehat{BCA}$   
 $m\angle 2 = \frac{1}{2} 230$   
 $m\angle 2 = 115^\circ$

Feb 21-11:54 AM

1.)

$m\widehat{AB} = 130^\circ$   
 $\angle 1 = \frac{1}{2} (130)$   
 $\angle 1 = 65^\circ$

2.)

$m\angle KJL = 2 \text{ angle}$   
 $m\angle KJL = 2(125)$   
 $m\angle KJL = 250^\circ$

Apr 12-7:07 PM

Circumscribed Angle Theorem

$m\angle ADB = 180 - m\angle ACB$

Apr 12-7:12 PM

1.)

$180 - 135 = x$   
 $x = 45^\circ$

2.)

$180 - x = 30$   
 $x = 150^\circ$

Apr 12-7:16 PM

HW. PG 566, #3-6, 13,14,  
Pg 598, #7, 8,9

Apr 12-7:20 PM