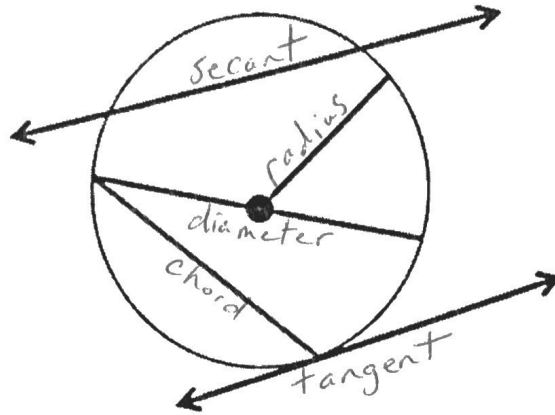


# Unit 7 Circles Quick Review Notes

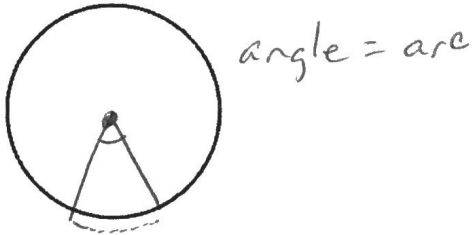
• Identify the parts of a circle:

- Radius
- Diameter
- Chord
- Tangent line
- Secant line

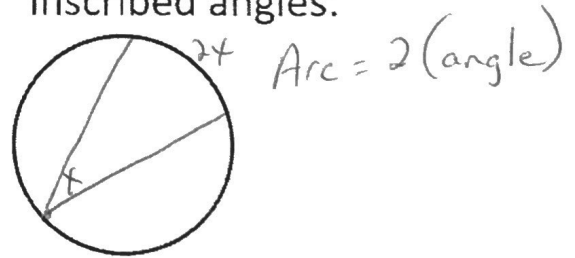


## Angles and Circles

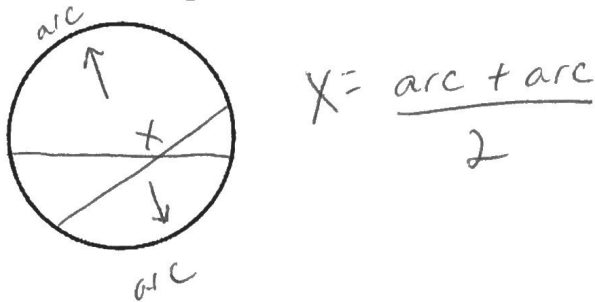
Central Angles:



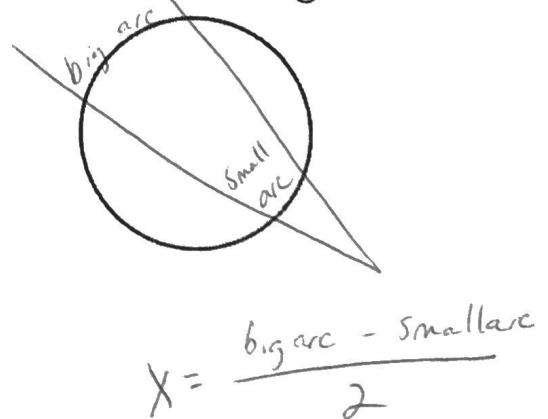
Inscribed angles:



Inside angles:



Outside angles:

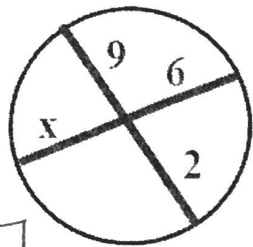


# Segments and Circles

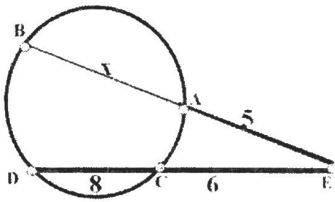
- 2 Chords:

part(part) = part(part)

$6(x) = 9(2)$   
 $6x = 18$   $x = 3$



- 2 Secants:



outside(whole) = outside(whole)

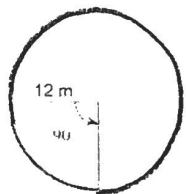
$5(5+x) = 6(14)$   
 $25 + 5x = 84$   $x = 11.8$

## Circumference & Arc Length

- Circumference: perimeter of the circle

$$2\pi r$$

- Arc length:



$$\frac{2\pi r \theta}{360} = \frac{2\pi(12)(90)}{360}$$

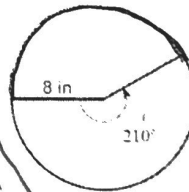
$$= \frac{2160\pi}{360} = 6\pi \text{ m}$$

or  
 $\approx 18.85 \text{ m}$

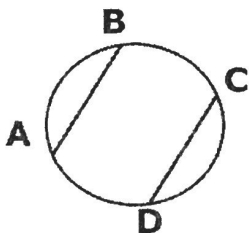
- Sector area:

$$\frac{\pi r^2 \theta}{360}$$

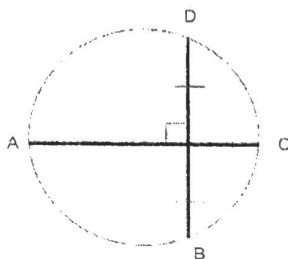
$$\frac{\pi(8^2)(210)}{360}$$



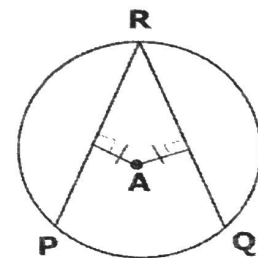
## Chords:



$\overline{AB} \cong \overline{CD}$   
 $\widehat{AB} \cong \widehat{CD}$



AC is the diameter  
 $\widehat{DC} \cong \widehat{CB}$



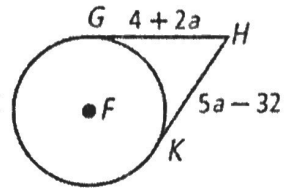
$\overline{PR} \cong \overline{RQ}$   
 $\widehat{PR} \cong \widehat{RQ}$

- 2 Tangents:

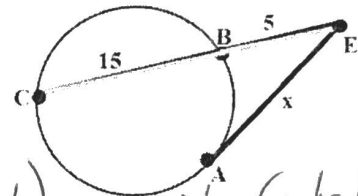
$$4 + 2a = 5a - 32$$

$$36 = 3a$$

$a = 12$



- Tangent and a Secant:



outside(whole) = outside(whole)

$$x^2 = 5(20)$$

$$x^2 = 100$$

$x = 10$

## Area & Sector Area