March 21, 2016

# Others Angles in Circles

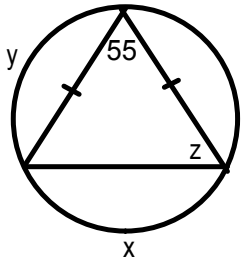
## What kind of angle is created between two chords?

MCC9-12.G.C.2 Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles, the radius of a circle is perpendicular to the tangent where the radius intersects the circle.

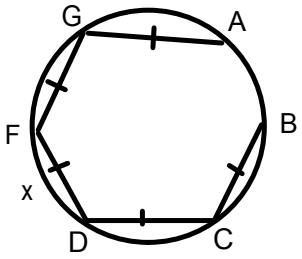
Nov 5-3:52 PM

# Warm up

1)



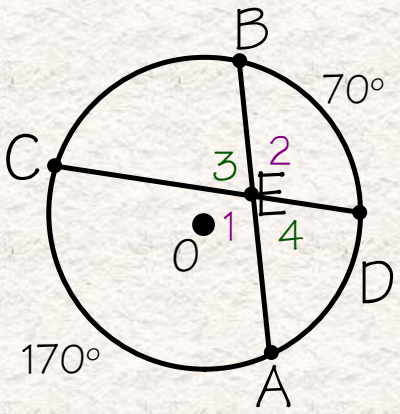

2)




arc AB = 40

Oct 26-5:56 PM

# Angle Formed Inside of a Circle by Two Intersecting Chords



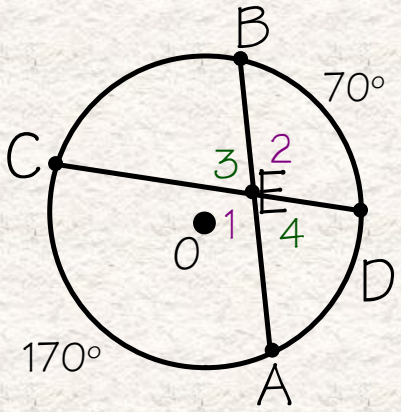

$\angle 1 = \angle 2$

$\angle 3 = \angle 4$

} vertical angles

Nov 19-6:47 PM

## Angle Formed Inside by Two Chords = ½Sum of Intercepted Arcs

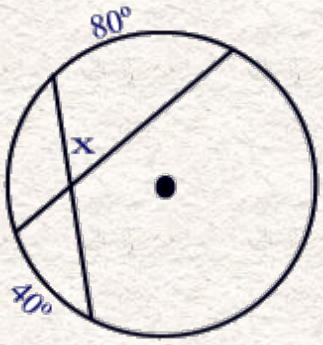



$$m\angle BED = \frac{1}{2}(70+170) = \frac{1}{2}(240) = 120^\circ$$

Nov 19-6:47 PM

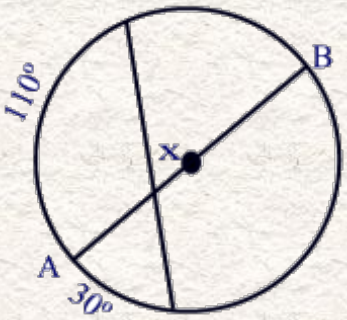
# examples

**1.**



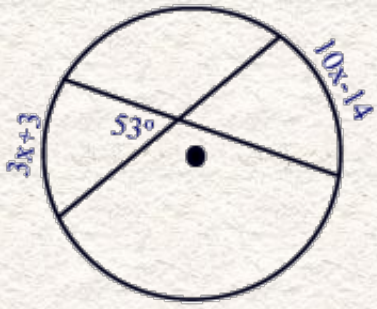

$x = 60^{o}$

**2.**




$x = 50^{o}$

**3.**



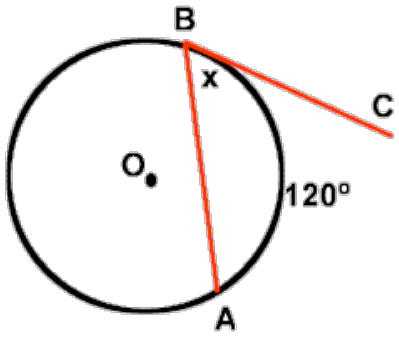

$x = 9$

Nov 19-7:28 PM

# TANGENT CHORD ANGLE

An angle formed by an intersecting tangent and chord has its vertex "on" the circle.

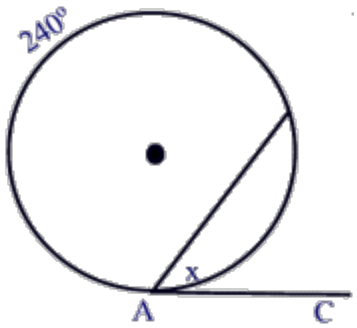
**Tangent Chord Angle = ½Intercepted Arc**




∠ABC is an angle formed by a tangent and chord.
Its *intercepted arc* is the minor arc from A to B.
m∠ABC = 60°

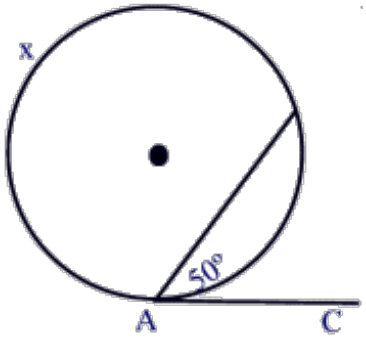
# EXAMPLES

**4.**



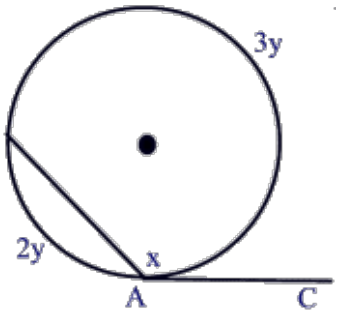

x = 60 °

**5.**




x = 260 °

**6.**



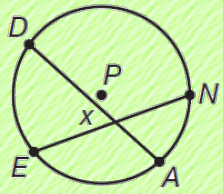

x = 108 °

y = 72 °

Nov 4-5:41 PM

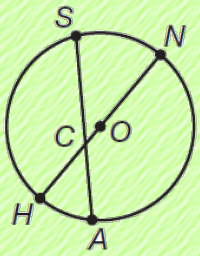
# You Try!

7. In circle $P$ shown below, $m\overset{\frown}{DE} = 75°$ and $m\overset{\frown}{NA} = 49°$. Find the value of $x$.

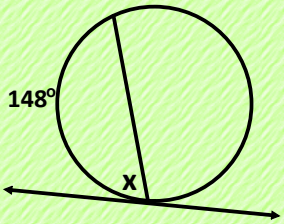



$x = 62^0$

8. In circle $O$ shown below, $m\overset{\frown}{SN} = 55°$ and $m\overset{\frown}{HA} = 35°$. Find $m\angle SCH$.



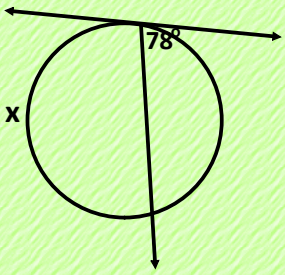

$x = 135^0$




9.

$x = 74^0$

10.




$x = 204^0$

Nov 5-4:27 PM

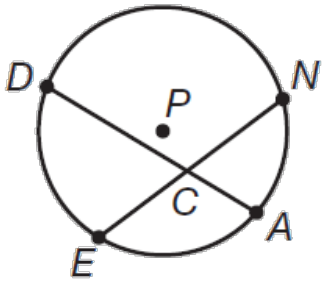
# Homework: Worksheet

Nov 6-6:37 AM

# Homework Problems

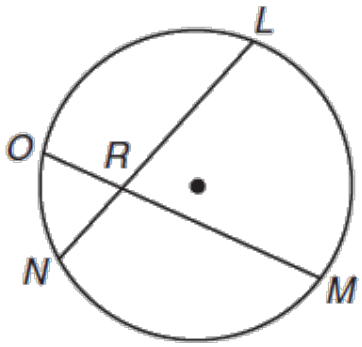
1.

In circle $P$ shown below, $m\overset{\frown}{DN} = 144°$ and $m\angle NCA = 68°$. Find $m\overset{\frown}{EA}$.




$x = 80°$

2.



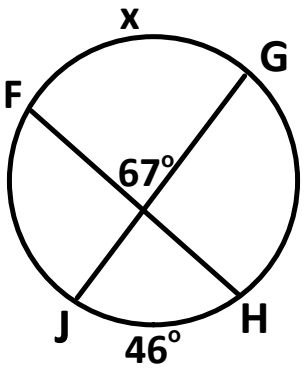

$m\overset{\frown}{LM} = 90°$

$m\overset{\frown}{ON} = 36°$

$m\angle LRM =$ 63°

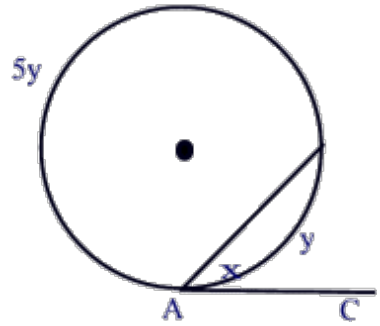
$m\angle NRM =$ 117°

3.




$x =$ 88°

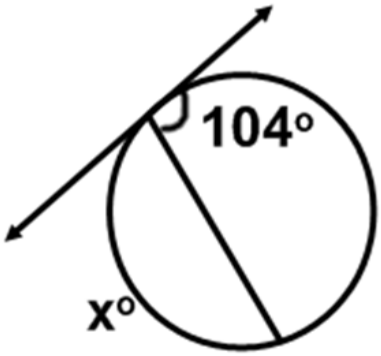
4.




x = [redacted]

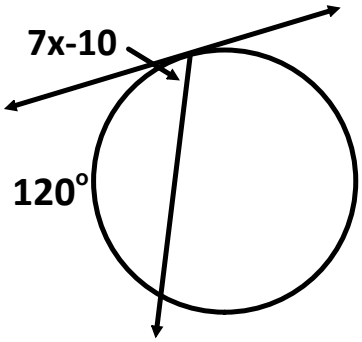
y = [redacted]

5.




x = 152°

6. 7x-10




x = 10°