

March ~~22~~, 2016

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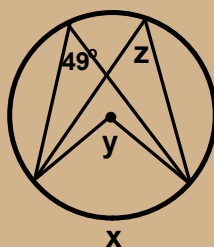
Today we will continue
with other angles in
circles.

**Where is an angle that is
formed by a tangent and a
secant located?**

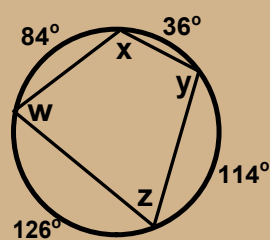
MCC9-12.G.C.2 Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles, the radius of a circle is perpendicular to the tangent where the radius intersects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

Warm up

1)



2)



Homework Answers

1) $EA = 80$

2) 63; 117

3) 88

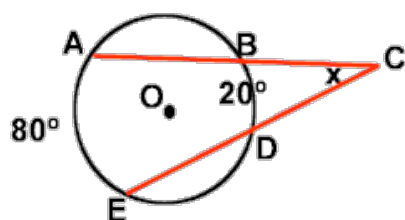
4) 30; 60

5) 152

6) 10

Two Secants:

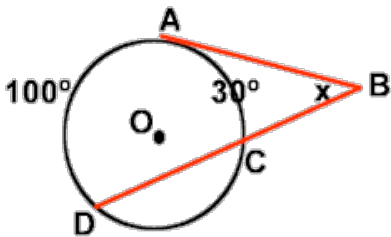
$\angle ACE$ is formed by two secants intersecting outside of circle O .
The *intercepted arcs* are minor arcs BD and AE .



$$m\angle ACE = \frac{1}{2}(80 - 20) = \frac{1}{2}(60) = 30^\circ$$

A Tangent and a Secant:

$\angle ABD$ is formed by a tangent and a secant intersecting outside of circle O .
The *intercepted arcs* are minor arcs AC and AD .

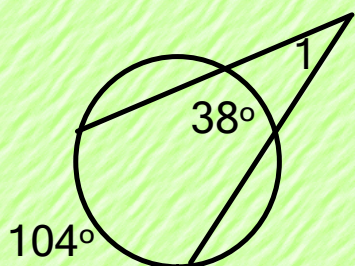


$$m\angle ABD = \frac{1}{2}(100 - 30) = \frac{1}{2}(70) = 35^\circ$$

EXAMPLES

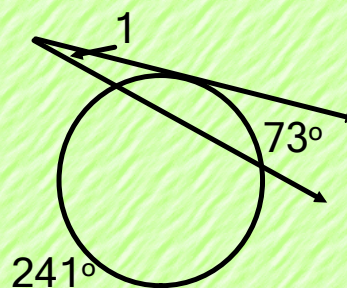
Find the measure of $\angle 1$.

1.



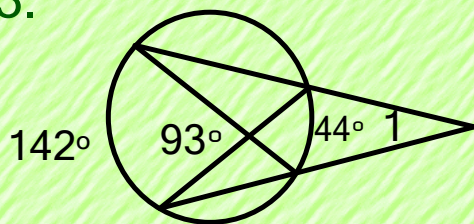
$$m\angle 1 = \underline{33^\circ}$$

2.



$$m\angle 1 = \underline{13.5^\circ}$$

3.



$$m\angle 1 = \underline{49^\circ}$$

Homework:
Complete Worksheet