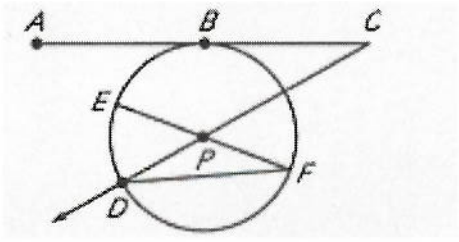
Geometry **REVIEW 10.1 – 10.4** Name Key

Hour _____

SECTION 10.1

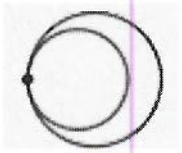
Give the name that best describes the figure.



$\overleftrightarrow{CD}$ secant $\overleftrightarrow{AB}$ tangent

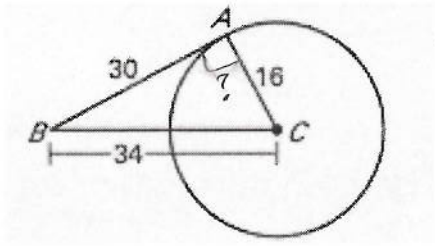
$\overline{FD}$ chord $\overline{EP}$ radius

Tell how many common tangents the circles have.



one

Is $\overline{AB}$ tangent to circle C? Explain.



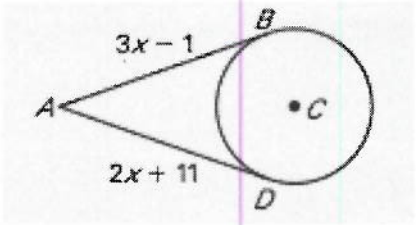
$30^2+16^2=34^2$

$1156=1156$

yes

tangent segments one $\perp$ to radius forming right triangle (Th. 10.1)

Find x.

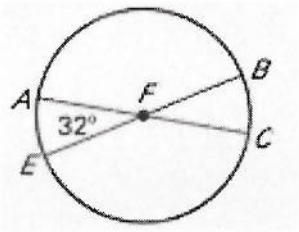


$3x-1=2x+11$

$x=12$ (Th 10.2)

SECTION 10.2

Use the diagram of circle F. Describe each arc as a minor arc, major arc, or semicircle. Find the arc measure.



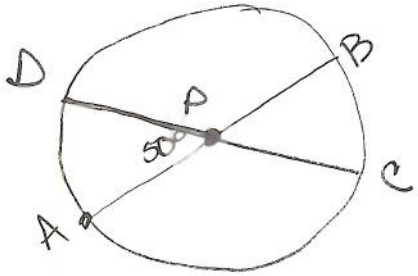
$\overset{\frown}{BC}$ 32° minor arc

$\overset{\frown}{CBE}$ 212° $180+32$ major arc

$\overset{\frown}{BCE}$ 180° semicircle

Explain why $\overline{AE} \cong \overline{BC}$. they are formed by vertical angles

Two diameters of circle P are $\overline{AB}$ and $\overline{CD}$. If $m\overset{\frown}{AD} = 50°$, find $m\overset{\frown}{ACD}$ and $m\overset{\frown}{AC}$.

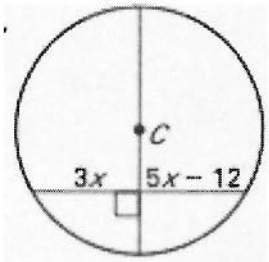


$m\overset{\frown}{ACD} = 360-50 = 310^\circ$

$m\overset{\frown}{AC} = 180-50 = 130^\circ$

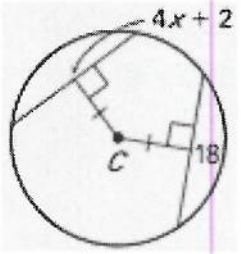
SECTION 10.3

Find the value of x in circle C. Explain.



$3x = 5x - 12$
$-2x = -12$
$x = 6$

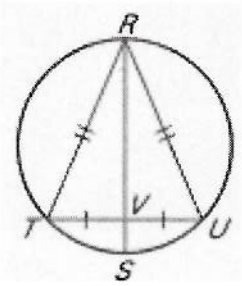
If diameter of circle is ⊥ to chord - it bisects the chord (Th. 10.5)



$4x + 2 = 18$
$4x = 16$
$x = 4$

two chords are congruent if they are equidistant from the center (Th. 10.6)

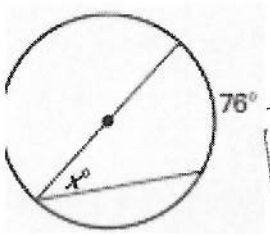
Determine whether $\overline{RS}$ is a diameter. Explain.



yes ① $\overline{RS}$ is ⊥ bisector of $\overline{TU}$ b/c pt. R is equidistant from endpoints T and U so it is on the ⊥ bisector of $\overline{TU}$ (Th. 5.3)
② Then $\overline{RS}$ is the diameter by 10.4, one chord is ⊥ bisector of another chord then it is the diameter.

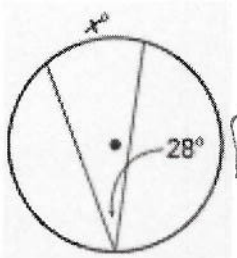
SECTION 10.4

Find the value of x.



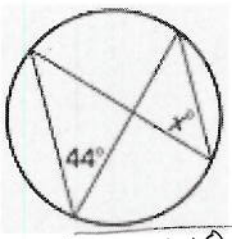
$x = 38°$

inscribed ∠ half arc measure (Th. 10.7)



$x = 56°$

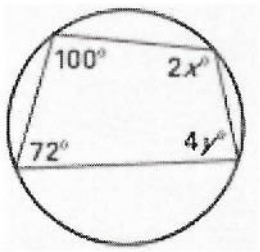
← same



$x = 44°$

two angles intercept same arc, they are ≅ (Th 10.8)

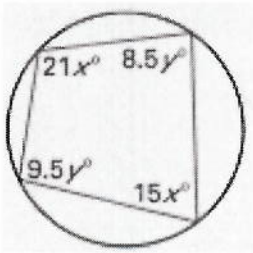
Find the value of each variable.



$100 = 4y$
$y = 25$

$2x = 72$
$x = 36$

(Th 10.10)



$15x + 21x = 180$
$36x = 180$
$x = 5$

$8.5y + 9.5y = 180$
$10y = 180$
$y = 18$