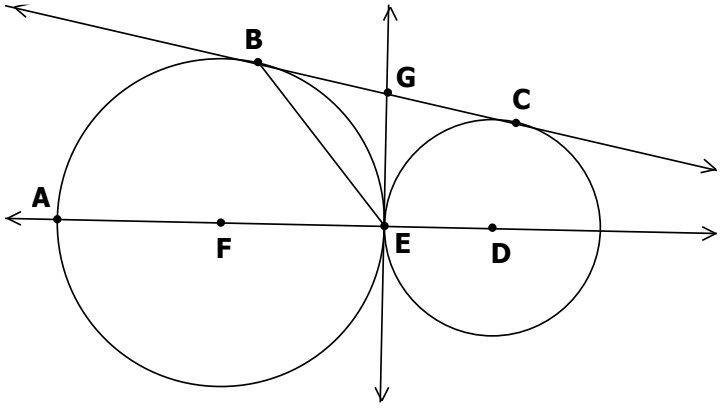
Name _____ Period _____ Geometry Unit 4A Study Guide 29 January 2020

Throughout the review, assume that things that <u>appear</u> to be tangent really <u>are</u> tangent.



1. Vocab. Match each object to the word/phrase that **best** describes it.

common external tangent	chord (not a diameter)	minor arc	
common internal tangent	diameter	secant	major arc
point of tangency	radius	center	semicircle

a. $\overline{AE}$ _____ **f.** $\overleftrightarrow{EG}$ _____

b. $\overleftrightarrow{AD}$ _____ **g.** $\overset{\frown}{BE}$ _____

c. $\overleftrightarrow{BC}$ _____ **h.** E _____

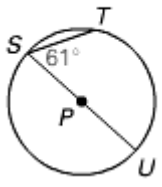
d. $\overline{DE}$ _____ **i.** $\overline{BE}$ _____

e. F _____ **j.** $\overset{\frown}{BEA}$ _____

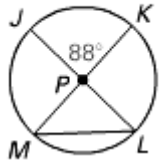
k. $\overset{\frown}{ABE}$ _____

2. Angle and Arc Measures. Find the requested measure.

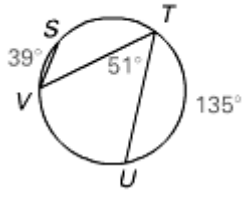
a. $m\overset{\frown}{ST}$



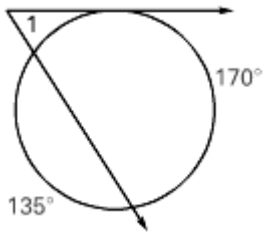
b. $m\angle JLM$



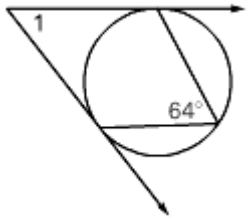
c. $m\overset{\frown}{VST}$



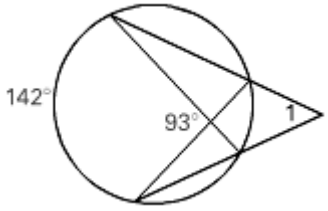
d. $m\angle 1$



e. $m\angle 1$

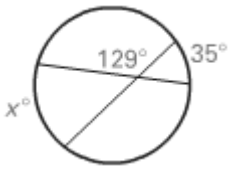


f. $m\angle 1$



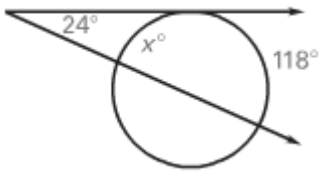
3. Angle and Arc Measures, continued. Find the value of *x*.

a.



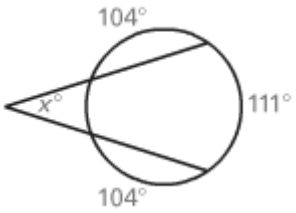
x = _____

b.



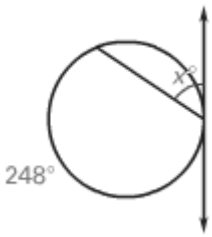
x = _____

c.



x = _____

d.

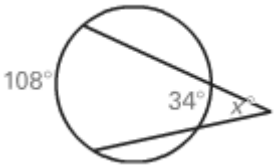


x = _____

e.

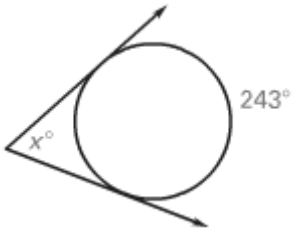
x = _____

f.



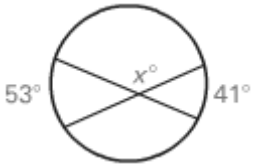
x = _____

g.



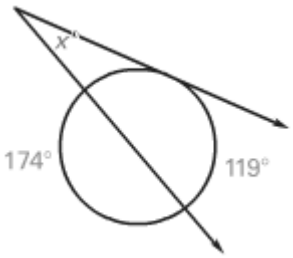
x = _____

h.



x = _____

i.



x = _____

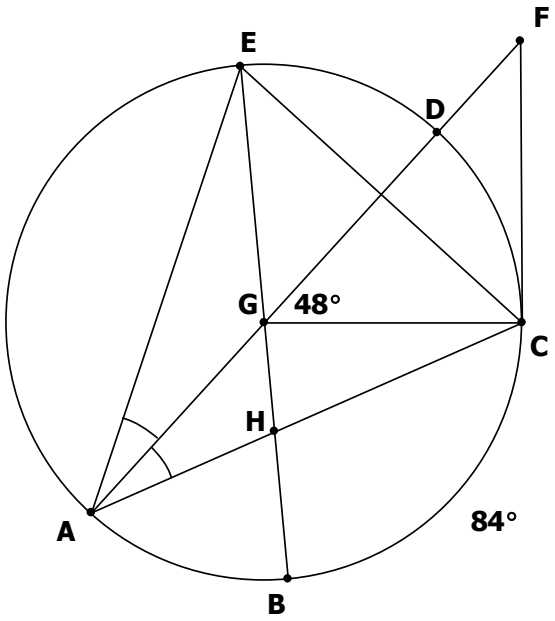
6. Arc length and sector area.

a. Find exact arc length if radius of a circle and central angle are: r = 10; angle = 140º

b. Find the central angle measure of a circle if arc length is approximately 26.70 cm and radius is 6cm.

		a.	**b.**	**c.**	**d.**
radius		10	6	18	
central angle		140°			130°
arc length	exact		*N/A*		*N/A*
	approximate		26.70		
area of sector	exact		*N/A*	270 π	*N/A*
	approximate				10.21

7. Circle Puzzles.



Given: $m\angle DGC = 48°$; $m\overset{\frown}{BC} = 84°$
$\overline{AD}$ & $\overline{BE}$ are diameters of ⊙P;
$\overline{CF}$ is tangent to ⊙P at C.

a. $m\overset{\frown}{CD}$ _____

b. $m\angle F$ _____

c. $m\angle FCG$ _____

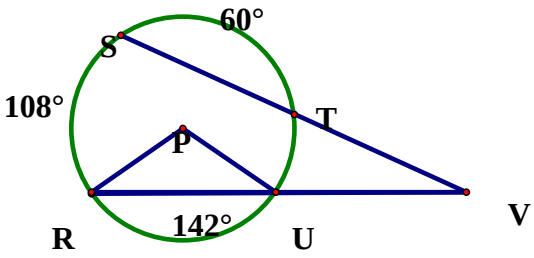
d. $m\overset{\frown}{ED}$ _____

e. $m\overset{\frown}{AC}$ _____

f. $m\angle GHC$ _____

g. $m\angle BEC$ _____

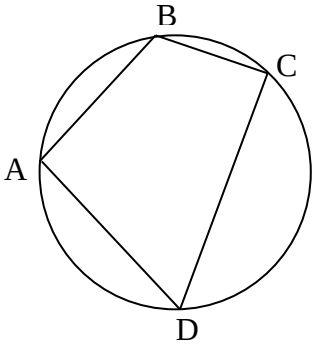
8. Find the $m\angle TVU$.



The quadrilateral is inscribed in the circle with angle A = 7x, angle B= 5y, angle C = 3x, and angle D= 3y. Solve for x and y.

12. x = _____

13. y = _____



Circles Test Practice KEY!

1. **a.** diameter
b. secant
c. common ext. tangent
d. radius
e. center
f. common int. tangent
g. minor arc
h. point of tangency
i. chord
j. major arc
k. semicircle

2. **a.** 58° **b.** 46° **c.** 123° **d.** 57.5° **e.** 52° **f.** 49°

3. **a.** 67° **b.** 70° **c.** 35° **d.** 56° **e.** 128° **f.** 37° **g.** 63° **h.** 133° **i.** 26°

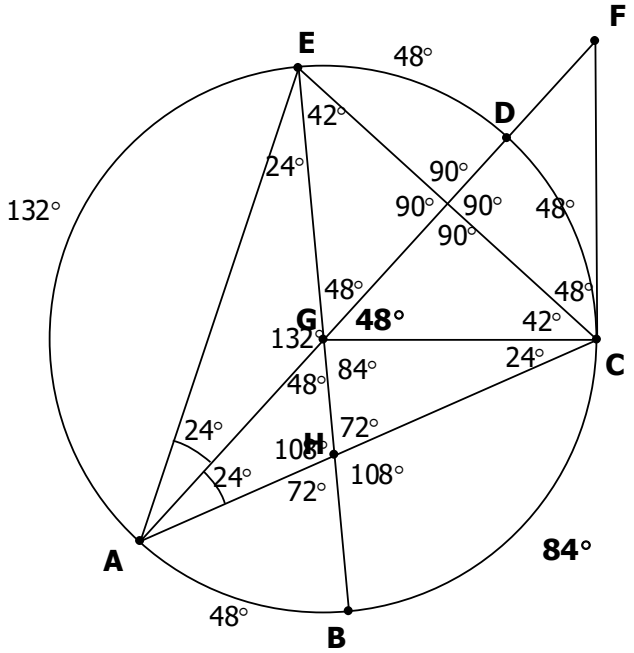
4. **a.** 20 **b.** 117 **c.** 5 **d.** 24 **e.** 1, -2.5 **f.** 11.25

5. **a.** 15 **b.** 2 **c.** 6 **d.** 5 **e.** 2 **f.** 30

6.

		a.	**b.**	**c.**	**d.**
radius		10	6	18	3
central angle		140°	254.97°	300°	130°
arc length	exact	$\frac{70}{9}\pi$	*N/A*	30π	*N/A*
	approx.	24.43	26.70	94.25	6.81
area of sector	exact	$\frac{350}{9}\pi$	*N/A*	270π	*N/A*
	approx.	122.11	80.1	848.23	10.21

7. Circle Puzzles.



a. 48°

b. 42°

c. 90°

d. 48°

e. 132°

f. 72°

g. 42°