Geometry A

Review for Quiz on Properties of Circles (10.1, 10.2, 10.4)

Name: _____

Date: _____ Period: _____

1) **Identify each line or segment that intersects ⊙*L*.**

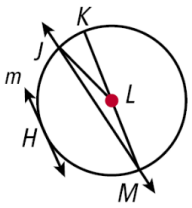
chords:

secant:

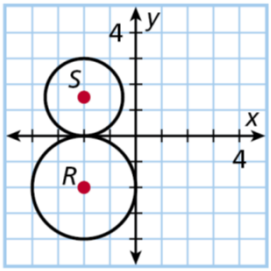
tangent:

diameter:

radii:



Use the diagram to the right to complete questions 3-6



2) Radius of ⊙*S*

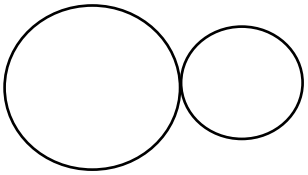
3) Diameter of ⊙*S*

4) Radius of ⊙*R*

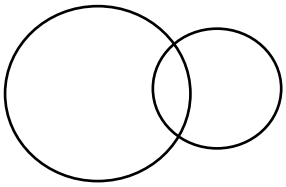
5) Diameter of ⊙*R*

How many common tangents do the two circles have? Draw them.

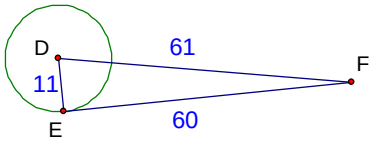
6)



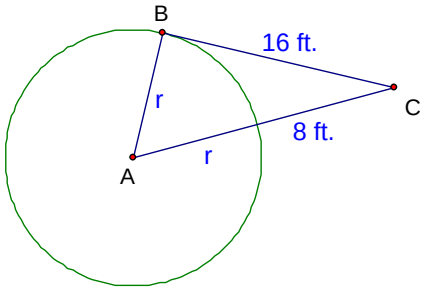
7)



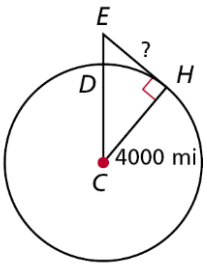
8) Is EF tangent to ⊙*D* ?



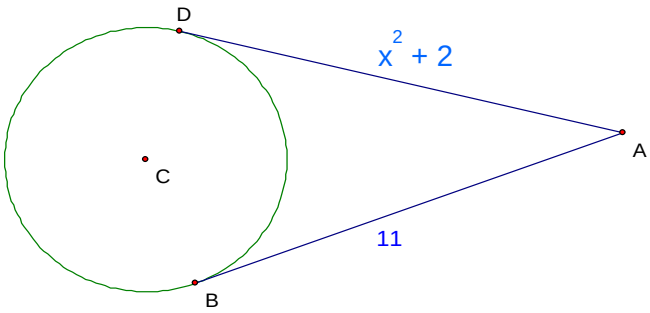
9) Find the radius of ⊙*A*



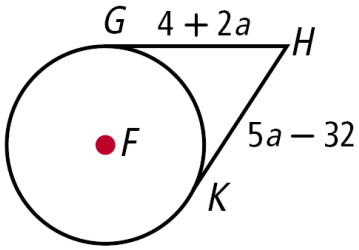
10) Early in its flight, the Apollo 11 spacecraft orbited Earth 120 miles above the Earth's atmosphere. What was the distance from the spacecraft to Earth's horizon rounded to the nearest mile? Let *C* be the center of Earth, *E* be the spacecraft, and *H* be a point on the horizon.



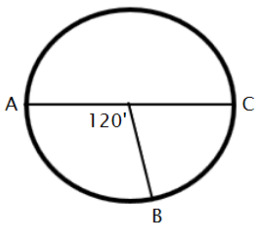
11) AB is tangent to ⊙*C* at B. AD is tangent to ⊙*C* at D. Find the value of x.



12) HK and HG are tangent to ⊙*F* . Find HG.



For the following questions use the following diagram



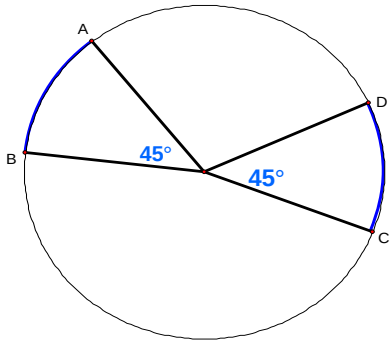
13) *AB*

14) *BC*

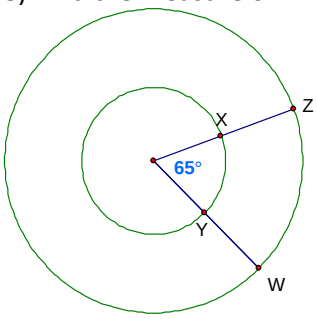
15) *CAB*

16) *CBA*

17) Find the measure of AB and DC. Are they congruent?

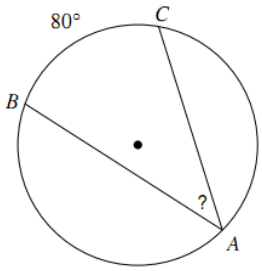


18) Find the measure of XY and WZ. Are they congruent?

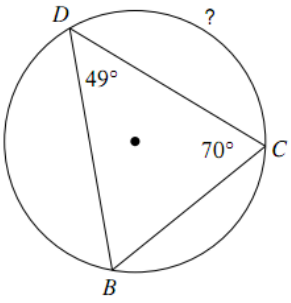


Find the measure of the arc or angle indicated.

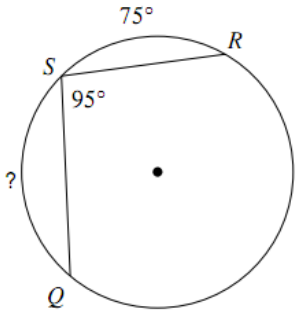
19)



20)

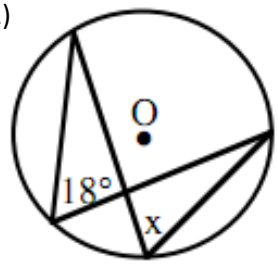


21)

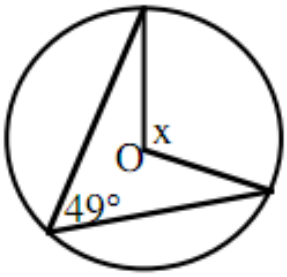


Solve for x.

22)

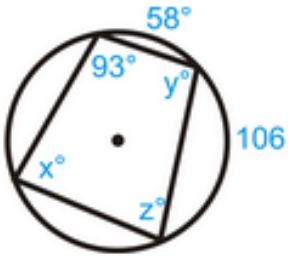


23)

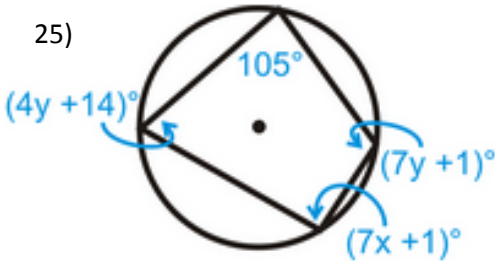


Find the values of the missing variables.

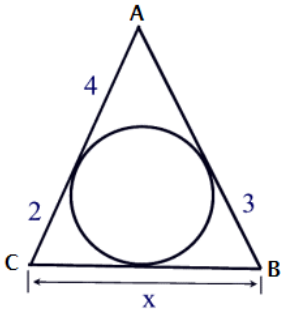
24)



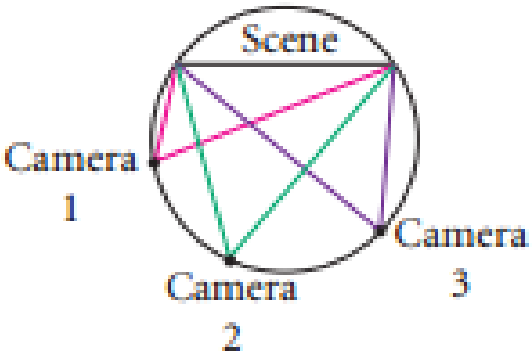
25)



26) In the figure, the segments that appear to be tangent are tangent. Find x and the perimeter of $\triangle ABC$.



27) The director of a telecast wants the option of showing the same scene from three different views. Explain why cameras in the position shown in the diagram will transmit the same scene.



Answer Key

1) chords: $\overline{JM}$ and $\overline{KM}$
   secant: $\overleftrightarrow{JM}$
   tangent: m
   diameter: $\overline{KM}$
   radii: $\overline{LK}$, $\overline{LJ}$, and $\overline{LM}$

2) 1.5 units
3) 3 units
4) 2 units
5) 4 units
6) 3 common tangents
7) 2 common tangents
8) Yes
9) 12 feet
10) 987 mi $\approx EH$
11) x = 3 or -3
12) HG=28
13) $mAB = 120°$
14) $mBC = 60°$
15) $mCAB = 300°$
16) $mCBA = 180°$
17) $mAB = 45°$, $mDC = 45°$, yes
18) XY and WZ have the same measure, but are not congruent because they are arcs of circles that are not congruent.
19) 40°
20) 122°
21) 95°
22) x = 18°
23) x = 98°
24) x = 82, y = 98, z = 87
25) x = 10.57 and y = 15
26) x = 5, P = 18 units
27) Theorem 10.8 – if two angles of a circle intercept the same arc, then the angles are congruent