

Geometry H

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

Name: _____

Date: _____ Period: _____

1) Identify each line or segment that intersects $\odot L$.

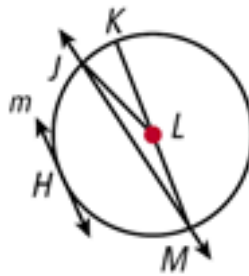
chords:

secant:

tangent:

diameter:

radii:



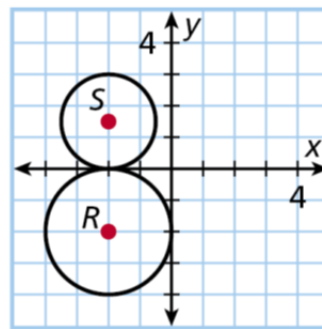
Use the diagram to the right to complete questions 2 - 5

2) Radius of $\odot S$

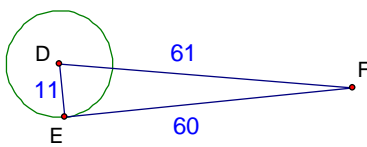
3) Diameter of $\odot S$

4) Radius of $\odot R$

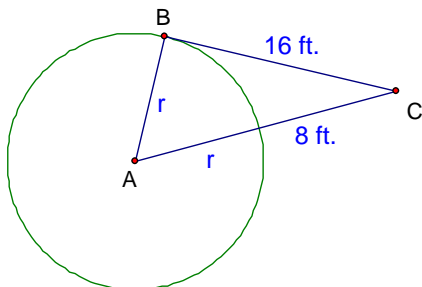
5) Diameter of $\odot R$



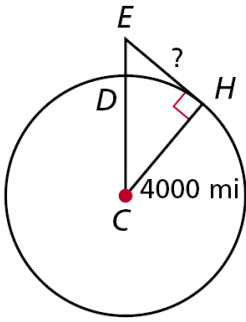
6) Is \overline{EF} tangent to $\odot D$?



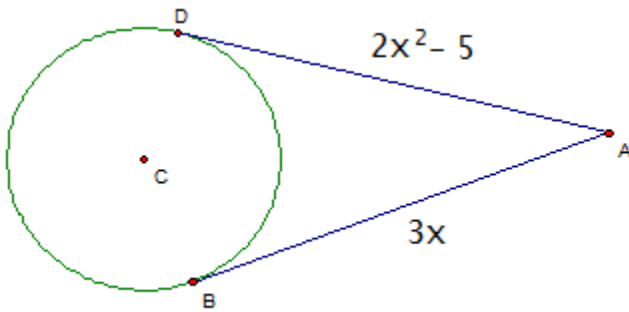
7) Find the radius of $\odot A$



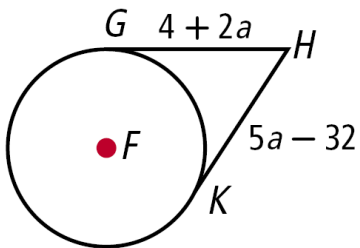
- 8) Early in its flight, the Apollo 11 spacecraft orbited Earth 120 miles above the Earth's atmosphere (ED). What was the distance from the spacecraft to Earth's horizon rounded to the nearest mile? Let C be the center of Earth, E be the spacecraft, and H be a point on the horizon.



- 9) AB is tangent to $\odot C$ at B . AD is tangent to $\odot C$ at D . Find the value(s) of x .



- 10) HK and HG are tangent to $\odot F$. Find HG .



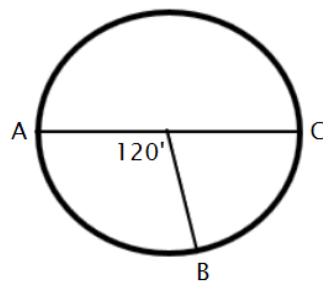
For questions 11- 14, use the following diagram.

11) $m\widehat{AB}$

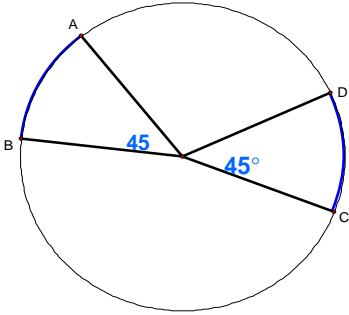
12) $m\widehat{BC}$

13) $m\widehat{CAB}$

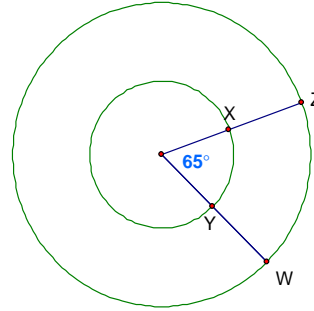
14) $m\widehat{CBA}$



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

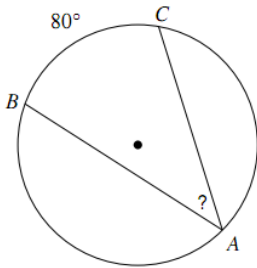


16) Find the measure of XY and WZ .
Are they congruent?

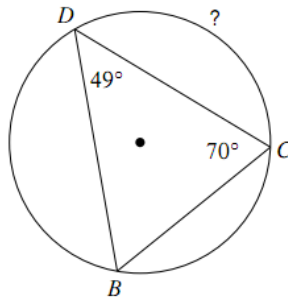


Find the measure of the arc or angle indicated.

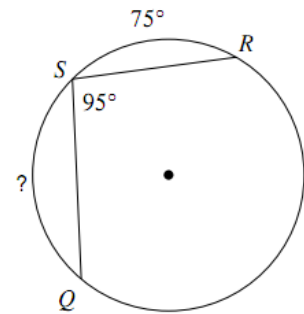
17)



18)

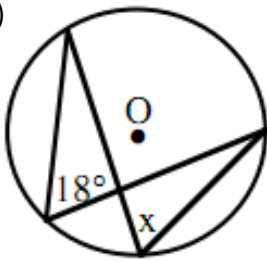


19)

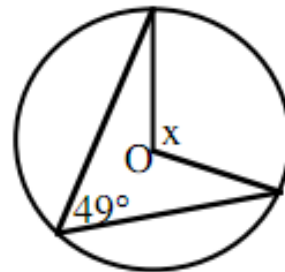


Solve for x

20)

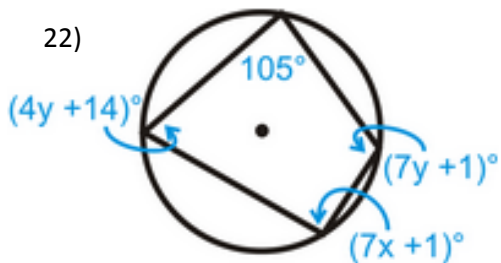


21)

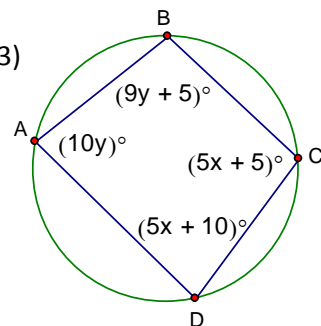


Find the values of the missing variables.

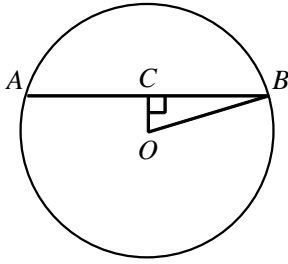
22)



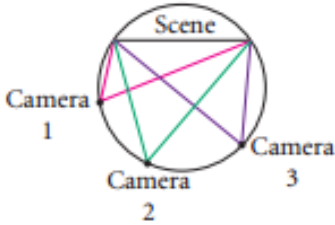
23)



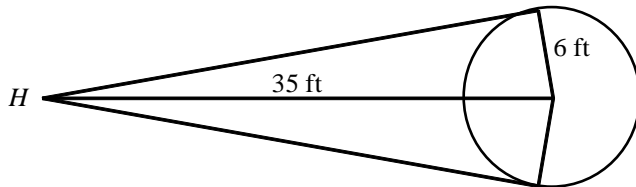
24) Given $\odot O$ with radius 25 and $OC = 7$ and $AC = CB$, please find AB .



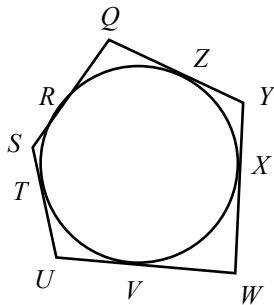
25) The director of a telecast wants the option of showing the same scene from three different views. Explain why cameras in the position shown in the diagram will transmit the same scene.



26) Harry is standing 35 feet from the center of a cylindrical statue with a radius of 6 feet. His lines of site form two tangents with the statue. What is the measure of the arc on the statue that Harry can see?



27) The circle is circumscribed by the pentagon as shown (not drawn to scale). If $QZ = 10$, $YX = 9$, $XW = 9$, $UW = 17$, and $SU = 10$, find the perimeter of the pentagon.



Answer Key

- 1) chords: \overline{JM} and \overline{KM}
secant: \overleftrightarrow{JM}
tangent: line 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) Yes, by Converse of Pythagorean Theorem \overline{EF} is tangent to $\odot D$
- 7) 12 feet
- 8) 987 mi $\approx EH$
- 9) $X = 5/2$
- 10) $HG = 28$
- 11) $AB = 120^\circ$
- 12) $BC = 60^\circ$
- 13) $CAB = 300^\circ$
- 14) $CBA = 180^\circ$
- 15) $mAB = 45^\circ$, $mDC = 45^\circ$; yes they are congruent– they have same measure and are arcs of the same circle
- 16) $mXY = 65^\circ$, $mZW = 65^\circ$; XY and WZ have the same measure, but are not congruent because they are arcs of circles that are not congruent.
- 17) 40°
- 18) 122°
- 19) 95°
- 20) $x = 18^\circ$
- 21) $x = 98^\circ$
- 22) $x = \frac{74}{7}$ and $y = 15$
- 23) $x = 15$ and $y = 10$
- 24) 48
- 25) Theorem 10.8 – if two angles of a circle intercept the same arc, then the angles are congruent
- 26) 160.26°
- 27) 76 units