

10.1 - 10.4 Quiz Review

Geometry

Name: Answer Key

10.1 I am able to identify special segments and lines in circles.

1. Using the diagram, determine an example of the following:

- a. Radius AC or BC or CO multiple AD
- b. Diameter BD multiple ADB
- c. Chord EF KJ (give 2)
- d. Secant KJ
- e. Tangent HG

2. Determine the number of common tangents, whether they are internal/external, and draw the common tangents.

of tangents: 4
Internal/External: 2ex, 2in

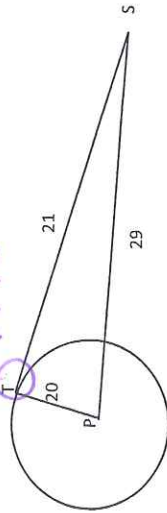
of tangents: 4
Internal/External: 0

3. What is the center, radius, and diameter of the circle to the right?

Center: (2, 5) radius: 3 units diameter: 6 units

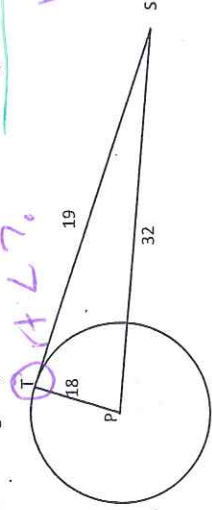
10.1 I am able to verify that a line is tangent to a circle.

4. In the diagram, \overline{PT} is a radius of circle P. Is \overline{ST} tangent to circle P? Why or why not?



$29^2 = 20^2 + 20^2$
 $841 = 841$ ✓
yes

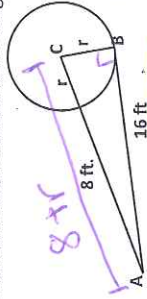
5. In the diagram, \overline{PT} is a radius of circle P. Is \overline{ST} tangent to circle P? Why or why not?



$18^2 + 19^2 = 32^2$
 $685 = 1024$
No!

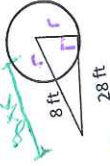
10.1 I am able to use tangents to find the radius of a circle.

6. Find the length of the radius of circle C when \overline{AB} is tangent to circle C at B.



$16^2 + r^2 = (8+r)^2$
 $256 + r^2 = 64 + 16r + r^2$
 $-64 - r^2 = -64 + 16r - r^2$
 $192 = 16r$
 $r = 12$

7. A green on a golf course is in the shape of a circle. A golf ball is 8 ft from the edge of the green and 28 ft from a point of tangency on the green as shown below. Assume the green is flat.



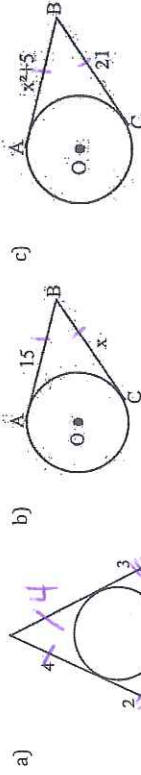
a) What is the radius of the green?

$28^2 + r^2 = (8+r)^2$
 $784 + r^2 = 64 + 16r + r^2$
 $720 = 16r$
 $r = 45$ feet

b) How far is the golf ball from the cup at the center?

$8 + 45 = 53$ feet

8. The segments shown are tangents. Find x.

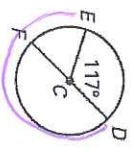


a) $x = 4$
b) $x = 15$
c) $x^2 + 5 = 21$
 $x^2 = 16$
 $x = 4$

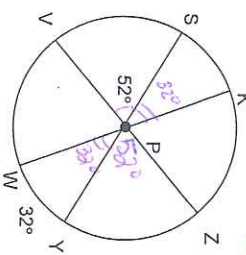
10.2	I am able to identify the special arcs in circles.		
10.2	I am able to use angle measures to find arc measures.		

9. Find the measure of each arc of $\odot C$, where DF is a diameter.

a) $\widehat{DE} = 117^\circ$ b) $\widehat{DFE} = 360 - 117 = 243^\circ$ c) $\widehat{DEF} = 180^\circ$



10. Find the measure of the following
 a) $m\angle KPV = 84^\circ$ b) $m\widehat{KZ} = 96^\circ$



c) $m\angle SPW = 148^\circ$ d) $m\widehat{YK} = 212^\circ$

e) $m\widehat{WSZ} = 276^\circ$ f) $m\angle SPZ = 138^\circ$

g) $m\widehat{SYK} = 338^\circ$ h) $m\widehat{VY} = 128^\circ$

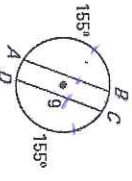
11. A game wheel is divided up into 40 equal spots. The probability of landing on each spot is the same. What is the degree measure of each of the equal spots?

$\frac{360}{40} = 9^\circ$

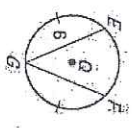
10.3	I am able to use relationships of arcs and chords in a circle to find arc measures.		
10.3	I am able to use relationships of arcs and chords in a circle to find chord lengths.		

12. Find the chord length.

a. $AB = 9$

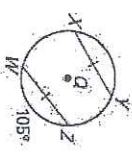


b. $FG = 6$

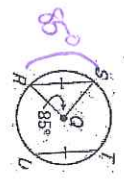


13. Find the arc length.

a. $m\widehat{XY} = 105^\circ$

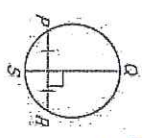


b. $m\widehat{TU} = 85^\circ$

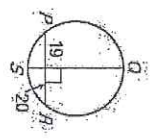


14. Tell whether \overline{QS} is a diameter. If not, explain why.

a. **Yes, \perp bisector**

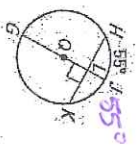


b. **No, \perp but not bis.**

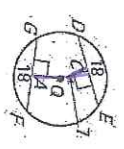


15. Find the given measure.

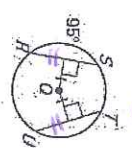
a. $m\widehat{JK} = 155^\circ$



b. $\widehat{AQ} = 7$



c. $m\widehat{TU} = 95^\circ$



$45 = 36$