

# Geometry

Date: \_\_\_\_\_

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

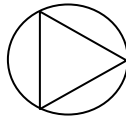
INDEX:

Vocabulary; Tangents

Score: \_\_\_\_/31

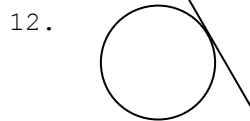
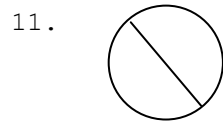
## 1-15. True or False?

1. The length of the radius is twice the length of the diameter of a circle.
2. The diameter is a secant line of the circle.
3. The radius is a chord of the circle.
4. The diameter with an endpoint at the point of tangency is perpendicular to the tangent line.
5. If two circles have the same radius, they are congruent.
6. Concentric circles are circles that lie in the same plane and have the same center.
7. If a line is tangent to a circle, then the line is parallel to the radius drawn to the point of tangency.
8. A common external tangent intersects the line segment joining the centers.
9. The circle circumscribes the triangle.

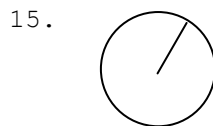
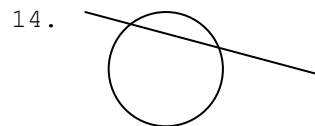


## 10-18. Match the vocabulary to the definitions or figure.

10. A line segment between two points on the circumference of the circle.



13. A line that intersects a circle at exactly one point.



Bank:

Secant line  
Tangent line  
Chord  
Diameter  
Radius

16. A line that intersects a circle at exactly 2 places.

17. The longest chord of a circle.

18. A line segment between the center of the circle and a point on the circumference of the circle

# Geometry

## 19-31. Short Answer

19-24. Use Figure 6.4 and justify your response.

19. What type of circles are shown?

20. What is the point of tangency?

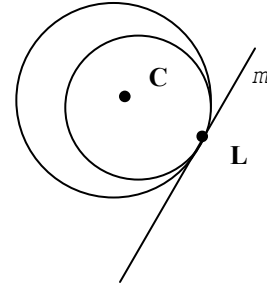
21. What does line  $m$  represent?

22. Using a ruler, connect the points  $C$ , the center of the larger circle, to point  $L$ . What angle does this create with line  $m$ ?

23. Draw two points on line  $m$  equidistant from point  $L$ . How can you use these points to create congruent triangles?

24. If we had taken the center of the smaller circle, what about the resulting triangles would change?

Figure 6.4



25-31 Use Figure 6.5 and justify your response.

25. Are the circles tangent to one another?

26. What type of line is shown?

27. Using a ruler, connect the centers of the two circles. Does this new line intersect the existing one?

28. Using a ruler, connect the center of each circle to the point of tangency. What can you say about the angle formed?

29. Can you find similar triangles in the figure? (Hint: find the intersection of  $FD$  and  $EC$ , call this point  $M$ )

30. Insert another common internal tangent. Using the two new points of tangency,  $G$  and  $H$ , can you find a pair of congruent triangles?

31. What can you say about  $DF$  and  $GH$ ?

Figure 6.5

