Lesson 6.6 Assignment   Name:_____

In Exercises 1-7, round answers to the nearest unit. Use the π button on your calculator.

1. A satellite in a nearly circular orbit is 2000 km above Earth's surface. The radius of Earth is approximately 6400 km. If the satellite completes its orbit in 12 hours, calculate the speed of the satellite in kilometers per hour.

2. Wilbur Wrong is flying his remote-control plane in a circle with a radius of 28 meters. His brother, Orville Wrong, clocks the plane at 16 seconds per revolution. What is the speed of the plane? Express your answer in meters per second. The brothers may be wrong, but you could be right!

3. Here is a tiring problem. The diameter of a car tire is approximately 60 cm (0.6 m). The warranty is good for 70,000 km. About how many revolutions will the tire make before the warranty is up? More than a million? A billion? (1 km = 1000 m)

4. If the front tire of this motorcycle has a diameter of 50 cm (0.5 m), how many revolutions will it make if it is pushed 1 km to the nearest gas station? In other words, how many circumferences of the circle are there in 1000 meters?

5. Goldi's Pizza Palace is known throughout the city. The small Baby Bear pizza has a 6-inch radius and sells for $9.75. The savory medium Mama Bear pizza sells for $12.00 and has an 8-inch radius. The large Papa Bear pizza is a hefty 20 inches in diameter and sells for $16.50. The edge is stuffed with cheese, and it's the best part of a Goldi's pizza. What size has the most pizza edge per dollar? What is the circumference of this pizza?

6. Zach wants a circular table so that 12 chairs, each 16 inches wide, can be placed around it with at least 8 inches between chairs. What should be the diameter of the table? Will the table fit in a 12-by-14-foot dining room? Explain.

7. A helicopter has three blades each measuring about 26 feet. What is the speed in feet per second at the tips of the blades when they are moving at 400 rpm?

8. $b =$ _____
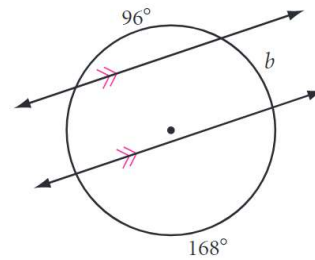
Match each term with one of the figures A-N.

9. Minor arc

10. Major arc

11. Semicircle

12. Central angle

13. Inscribed angle

14. Chord

15. Secant

16. Tangent

17. Inscribed Triangle

A. $\overline{OC}$ **B.** $\overline{AB}$

C. $\overline{OF}$ **D.** $\angle COD$

E. $\angle DAC$ **F.** $\angle ACF$

G. $\overleftrightarrow{CF}$ **H.** $\overleftrightarrow{AC}$

I. $\overrightarrow{GB}$ **J.** $\overset{\frown}{BAD}$

K. $\overset{\frown}{ABD}$ **L.** $\overset{\frown}{CD}$

M. $\triangle OCD$ **N.** $\triangle ACD$