



NAME _____

DATE _____

PERIOD _____

Lesson 3: Applying Circumference

1. Complete the table. Explain or show your reasoning.

object	radius	circumference
ceiling fan	2.8 ft	
water bottle cap	13 mm	
bowl		56.5 cm
drum		69 in

2. Here is a picture of a Ferris wheel. It has a diameter of 80 meters.



- On the picture, draw and label the diameter.
- How far does a rider travel in one complete rotation around the Ferris wheel?



NAME _____

DATE _____

PERIOD _____

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5. Circle A has a diameter of 1 foot. Circle B has a circumference of 1 meter. Which circle is bigger? Explain your reasoning. (1 inch = 2.54 centimeters)

6. New Quebec Crater has a diameter of about 3.5 km.



How long would it take someone to walk around the entire rim of the crater if they walk at 5 km per hour?



NAME _____

DATE _____

PERIOD _____

7. The tires on a car are 2 feet in diameter. If the car is traveling 60 miles per hour, how many complete rotations does each wheel make in 1 minute? Explain or show your reasoning. (1 mile = 5,280 feet)
8. The Carousel on the National Mall has 4 rings of horses. Andre is riding on the inner ring, which has a radius of 9 feet. Jada is riding on the outer ring, which is 8 feet farther out from the center than the inner ring is.
- In one rotation of the carousel, how much farther does Jada travel than Andre?
 - One rotation of the carousel takes 12 seconds. How much faster does Jada travel than Andre?

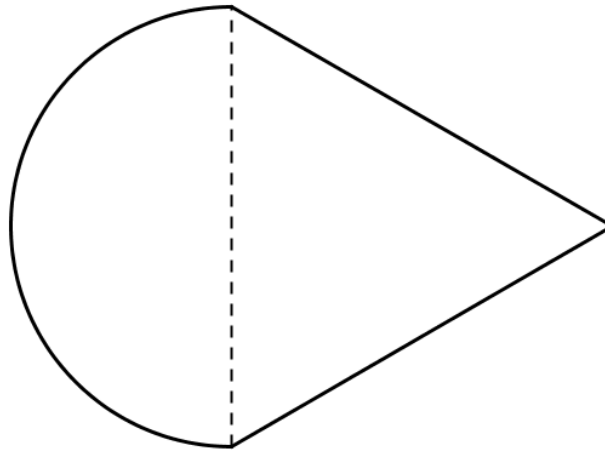


NAME _____

DATE _____

PERIOD _____

9. A half-circle is joined to an equilateral triangle with side lengths 12. What is the perimeter of the resulting shape?



10. Identify each measurement as the diameter, radius, or circumference of the circular object. Then, estimate the other two measurements for the circle.
- The length of the minute hand on a clock is 5 in.
 - The distance across a sink drain is 3.8 cm.
 - The tires on a mining truck are 14 ft tall.
 - The fence around a circular pool is 75 ft long.
 - The distance from the tip of a slice of pizza to the crust is 7 in.
 - Breaking a cookie in half creates a straight side 10 cm long.
 - The length of the metal rim around a glass lens is 190 mm.
 - From the center to the edge of a DVD measures 60 mm.