Family Letters and Activities

Chapter 11 Circumference and Area of a Circle

Dear Family,

In this chapter, your student will learn about circles. Some of the skills your student will practice are:

- *finding the circumference or area of a circle, given its radius or diameter*

- *finding the lengths of arcs and areas of semicircles and quadrants*

Activity

The circumference and area of a circle both involve π, an irrational number that is used in many different fields of science and mathematics. Because π is irrational, its exact value is approximated, as in this activity.

- Collect several circular objects, such as food containers or lids, dishes, or bottles. You will also need some string, a ruler, and a calculator.

- Working with your student, wrap the string around the circumference of one of the circular objects. Unwrap the string and measure its length with the ruler. Next, measure the diameter of the object. Write your measurements in a table like the one below.

- Measure several more objects in the same way, recording your results.

Object	Circumference	Diameter	$\dfrac{\text{Circumference}}{\text{Diameter}}$

- Use a calculator to divide the circumference of each object by its diameter. What result do you get? Discuss this method of approximating the value of π with your student.

Vocabulary to Practice

A **radius** is a line segment that connects the center of a circle and a point on the circle.

A **diameter** is a line segment that connects two points on the circle and contains the center of the circle. The diameter is twice as long as the radius.

The **circumference** of a circle is the distance around the circle. You can find the length of the circumference by multiplying the length of the diameter by π. Two ways to approximate π, read "pi," are $\dfrac{22}{7}$ and 3.14.

Half of a circle is a **semicircle**, and one-fourth of a circle is a **quadrant**.

Online Resources

For additional Parent Resources *my.hrw.com*