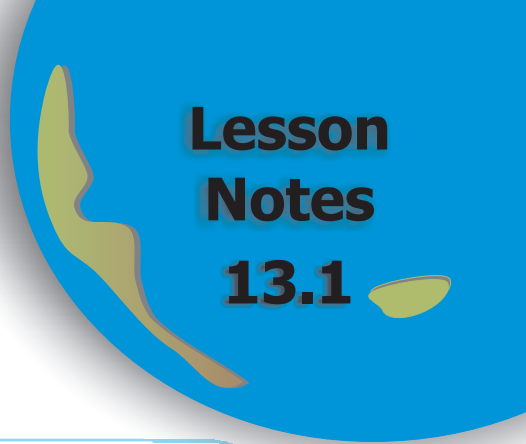


NAME \_\_\_\_\_

Module 13 Perimeter, Area, and Volume  
Lesson 1 Perimeter and Circumference



# Lesson Notes

## 13.1

### Lesson Objectives

- Establish and apply formulas to perimeter of triangles, rectangles, and parallelograms.
- Develop and use strategies to solve problems involving circumference of a circle.
- Use linear units to describe perimeter or circumference.

### Subtopic 1 Perimeter

Perimeter

“Peri” means outside.

“Meter” means measure.

Distance around a shape or figure measured in units of length like inches, feet, or kilometers

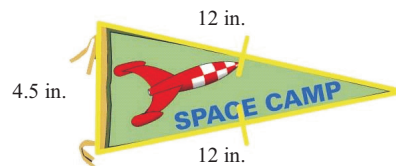
Parallelogram

$$P = 2b + 2s$$

Square

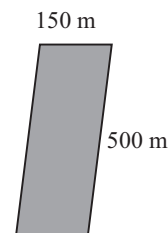
$$P = 4s$$

- 1** What is the perimeter of the triangular space camp banner?



$$P = 12 + 12 + 4.5 = 28.5 \text{ in.}$$

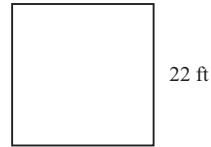
- 2** A public walkway on Earth is shaped like a parallelogram. What is the perimeter of the walkway?



$$\begin{aligned} P &= 2b + 2s \\ P &= 2(150) + 2(500) \\ P &= 300 + 1,000 = 1,300 \text{ m} \end{aligned}$$

- 3 A square garden measures 22 feet on each side. What is the perimeter of the garden?

$$\begin{aligned}P &= 4s \\P &= 4(22) \\P &= 88 \text{ ft}\end{aligned}$$



The garden's perimeter is 88 ft.

## Subtopic 2 Circumference

Perimeter of a Circle

The perimeter of a circle is called the circumference.

- 4 A Ferris wheel has a diameter of 80 feet. Estimate the circumference.

$$\begin{aligned}C &= \pi d \\C &= 3.14(80) \\C &\approx 251 \text{ ft}\end{aligned}$$

- 5 The circumference of a DVD is 37.68 centimeters. Find the radius.

$$\begin{aligned}C &= 2\pi r \\ \frac{C}{2\pi} &= r \\ \frac{37.68}{2\pi} &= r \\ r &\approx 6 \text{ cm}\end{aligned}$$