

Geometry, Part 2: Finding the Perimeter of Polygons

(1.5 hours)

Lesson at a Glance

SUMMARY

Learners may think that finding the “perimeter” of a polygon is only applicable to passing tests. But in daily life, knowing about perimeter can be very useful, as anyone who has ever put up a fence around a garden well knows.

With the help of a professional baseball player, this lesson expands upon students’ knowledge of polygons and teaches a handy formula for finding their perimeters.

GOAL

- To understand the concept of perimeter

LEARNER OUTCOMES

Students will...

- Learn to distinguish a square from a rectangle and to recognize various other geometric shapes.
- Practice using the mathematical formula for finding the perimeter of simple polygons

MATERIALS

VIDEO:

Sports Smarts: Al Leiter and Perimeter
Episode 29: Length: 4:56, Start Time: 18:18

PRINT:

Getting Around Perimeter
Issue 29, p. 10–11

Build Your Vocabulary
Issue 28, p. 2

ADDITIONAL MATERIALS NEEDED:

- Rulers or measuring tape

ACTIVITIES

- View and discuss one **TV411** video segment.
- Complete one *In Print* article related to the video.
- Review five vocabulary words.

“360 feet. That’s
the diamond’s
perimeter!”

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Step by Step

1. INTRODUCING THE CONTENT

Pre-Viewing Activities

Discuss

Review the names of the basic polygons you explored in the previous lesson.

Then ask: What does perimeter mean?

[It's a measurement of the distance around something.]

For example, what is the perimeter of the classroom? For a fun visual learning tool, ask students to use their rulers to figure out whose foot is closest to 12 inches; then ask that person to pace out the perimeter of the room. What is the perimeter of the room in "feet"?

Teacher Talk

In this segment of **TV411**, baseball pitcher Al Leiter explains how you can find the perimeter of almost any polygon, or closed plane figure, by using a handy formula. As you watch, you may want to jot down the formula.

VOCABULARY REVIEW

- perimeter
- square
- rectangle
- polygon
- formula

2. MODELING THE STRATEGY

View Video

Sports Smarts: Perimeter, Episode 29: Length: 4:56, Start Time: 18:18

Baseball pitcher Al Leiter and his sidekick, Matt, figure out the perimeter of a baseball diamond, home plate, and just about everything else in the ballpark.

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Step by Step (cont.)

3. MINING THE STRATEGY

Post-Viewing Activities

Discuss

- How do you find the perimeter of a baseball diamond? Of a square? A rectangle? Home base? [The answer to all is: add up the measurements of all the sides.]
- What's the formula for finding the perimeter of a polygon? [P = S + S + S etc., where P stands for Perimeter and S stands for Side.]
- How can knowing this formula come in handy in life? [On math tests, of course, particularly the GED. But it also is useful if you want to figure out how much fencing to buy if you want to enclose a small garden or back yard; the size of a frame you need for a picture or photograph; the amount of molding you need to run along the edges of a ceiling; etc.]

4. EXTENDING AND PRACTICING THE STRATEGY

Workbook Activities

The Basics

Divide the class into small groups or pairs. Distribute copies of “Getting Around Perimeter,” (*In Print* issue 29, p. 10–11) and ask participants to collaborate on the activity.

When learners have completed the assignment, ask them to share their responses.

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Step by Step (cont.)

Hands-On

Distribute rulers and measuring tape to two “teams” of students. Send one team out of the room while the other finds the perimeter of three objects (perhaps the blackboard, a book, a desktop, or a piece of paper). Then let the other team do the same. The object is for each team to guess the other’s “mystery” objects by matching the perimeter to the object. [This activity also gives learners hands-on practice in measuring feet, inches, and fractions of inches.]

5. PORTFOLIO

Students save their completed work pages in their portfolio.

6. HOMEWORK

Ask students to find the perimeter in feet and inches of two rooms in their houses or apartments. If they don’t have measuring tape or a ruler at home, tell them to mark out the perimeter by using their stride. In the next class, you can measure their stride and convert their perimeter measurements into feet and inches, or even meters.

7. WEB CONNECTION

For a web lesson on how to find the perimeter of polygons, go to tv411.org, click on Math, and then click on Polygons and Perimeter. Check out our online index for other [TV411](#) lessons on math.