Lesson 16: Comparemos perímetros de rectángulos

Standards Alignments

Addressing 4.MD.A.3, 4.NF.B.4, 4.OA.A.2

Teacher-facing Learning Goals

- Solve problems involving the perimeter of rectangles using multiplicative comparison.

Student-facing Learning Goals

- Resolvamos problemas sobre rectángulos de diferentes tamaños.

Lesson Purpose

The purpose of this lesson is for students to apply multiplicative reasoning and their knowledge of fractions to solve problems about perimeters of rectangles.

This lesson reinforces students' understanding of the relationship between the side lengths and the perimeter of a rectangle and their ability to reason multiplicatively in a geometric context.

Access for:

Students with Disabilities

- Action and Expression (Activity 1)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Number Talk (Warm-up)

Materials to Gather

- Pipe cleaners: Activity 1, Activity 2
- Rulers (inches): Activity 2
- Rulers or straightedges: Activity 3
- Tape: Activity 2

Materials to Copy

- Centimeter Grid Paper - Standard (groups of 2): Activity 3

Lesson Timeline

Warm-up	10 min
Activity 1	10 min

Teacher Reflection Question

What evidence do you have that students' ideas about perimeter shifted or broadened as a result of this lesson?

Activity 2	15 min
Activity 3	10 min
Lesson Synthesis	10 min
Cool-down	5 min

Cool-down (to be completed at the end of the lesson) 5 min

Los rectángulos Y y Z

Standards Alignments

Addressing 4.MD.A.3, 4.OA.A.2

Student-facing Task Statement

1. El rectángulo Y tiene un perímetro de 20 pulgadas. Escribe una posible pareja de longitudes de los lados que podría tener el rectángulo Y.
2. El rectángulo Z tiene un perímetro de 180 pulgadas.
   a. Completa esta afirmación:

      El perímetro del rectángulo Z es _____ veces el perímetro del rectángulo Y.
   b. Si el largo del rectángulo Z es 70 pulgadas, ¿cuántas pulgadas mide su ancho? Explica o muestra tu razonamiento. Si te ayuda, dibuja un diagrama.

Student Responses

1. Sample response: 8 inches and 2 inches
2. a. 9 times
   b. 20 inches. Sample response: The two sides (lengths) add up to 140 ($70 + 70 = 140$). This means the two other sides (the width) add up to $180 - 140$ or 40 inches, and each side is 20 inches.