Lesson 12: Partition Rectangles into Squares

Standards Alignments

Addressing	2.G.A.2, 2.OA.C.4
Building Towards	3.MD.C

Teacher-facing Learning Goals

- Partition rectangles into rows and columns of equal-size squares, and count to find the total number of squares.

Student-facing Learning Goals

- Let's partition rectangles into squares.

Lesson Purpose

The purpose of this lesson is for students to partition rectangles into equal-size squares.

Students have arranged tiles to make arrays and rectangles, represented their rectangles by shading squares on a grid, and completed the partitioning of rectangles into equal-size squares. In this lesson, students partition rectangles into equal-size squares with and without guiding marks and represent the total number of squares within the rectangles with equations that show the sum of the number of squares in each row or the number of squares in each column. Monitor for the ways students use what they know about the structure of arrays to plan and partition their rectangles. It is not important that students partition the rectangles into exactly equal-size squares.
This lesson has a Student Section Summary.

Access for:

Students with Disabilities

- Action and Expression (Activity 2)

English Learners

- MLR2 (Activity 1)

Instructional Routines

Estimation Exploration (Warm-up)

Materials to Gather

- Inch tiles: Activity 1, Activity 2
- Rulers: Activity 1, Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	20 min
Lesson Synthesis	10 min
Cool-down	5 min

Teacher Reflection Question

How did the work of arranging objects to make arrays support the understanding of partitioning rectangles into equal-size squares? What additional support is needed as students build this understanding?

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

5 min

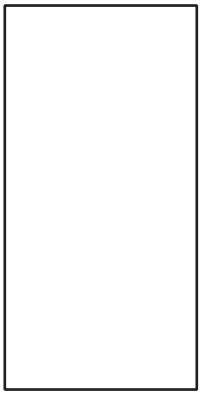
How Many Squares?

Standards Alignments

Addressing 2.G.A.2, 2.OA.C.4

Student-facing Task Statement

1. Partition the rectangle into equal-size squares.



2. How many rows of equal-size squares did you make?
3. How many columns of equal-size squares did you make?
4. Write an equation that represents the number of squares in the rectangle.

Student Responses

Sample response:

1. The rectangle is split into 4 rows of 2 equal-size squares.
2. 4 rows
3. 2 columns
4. $4 + 4 = 8$ or $2 + 2 + 2 + 2 = 8$