

# Lesson 5: Multiply a Unit Fraction by a Non-unit Fraction

## Standards Alignments

Addressing 5.NF.B.4.b

### Teacher-facing Learning Goals

- Find the product of a unit fraction and a non-unit fraction.

### Student-facing Learning Goals

- Let's multiply a unit fraction and a non-unit fraction.

## Lesson Purpose

The purpose of this lesson is for students to use diagrams and expressions to calculate the product of a unit fraction and a non-unit fraction.

While the previous lesson used a context to help visualize fractions and their product, in this lesson the fractions are more complex and there is no context so students can focus on how the diagrams and expressions relate to the value of the product. In this lesson students also begin to work with side lengths that are fractions greater than 1. Students also practice estimating areas of rectangles where the side lengths are not shown.

### Access for:

#### Students with Disabilities

- Action and Expression (Activity 2)

#### English Learners

- MLR8 (Activity 1)

## Instructional Routines

Estimation Exploration (Warm-up)

### Lesson Timeline

|            |        |
|------------|--------|
| Warm-up    | 10 min |
| Activity 1 | 15 min |
| Activity 2 | 20 min |

### Teacher Reflection Question

How did the work of the previous lessons lay the foundation for students to be successful in Activity 1 of this lesson?

Lesson Synthesis

10 min

Cool-down

5 min

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

 5 min

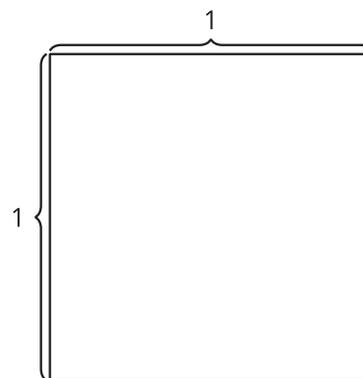
Write an Equation

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### Student-facing Task Statement

Find the value of  $\frac{1}{3} \times \frac{4}{5}$ . Explain or show your reasoning. Use the diagram if it is helpful.



### Student Responses

$\frac{1}{3} \times \frac{4}{5} = \frac{4}{15}$ . Sample response: There are 4 shaded pieces and each is  $\frac{1}{15}$  of the whole.

