

# Lesson 8: Apply Fraction Multiplication

- Let's solve problems about flags.

## Warm-up: Number Talk: Fraction Multiplication

Find the value of each expression mentally.

- $\frac{1}{3} \times \frac{3}{5}$

- $\frac{2}{3} \times \frac{3}{5}$

- $\frac{5}{3} \times \frac{3}{5}$

- $\frac{2}{3} \times \frac{13}{5}$

# 8.1: Flags



United Nations

## SELECTION OF WORLD FLAGS, 1968

\* Also known as Surinam



## 8.2: More Flags

Han has a replica of the flag of Colombia.



It is  $3\frac{1}{2}$  inches wide and  $5\frac{1}{4}$  inches long. The yellow stripe is  $\frac{1}{2}$  of the width of the flag and the blue and red stripes are each  $\frac{1}{4}$  of the width.

1.  $\frac{1}{4} \times 3\frac{1}{2} = \frac{7}{8}$ . The answer is  $\frac{7}{8}$  inch. What is the question?

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2.  $\frac{1}{2} \times 3\frac{1}{2} = \frac{7}{4}$  and  $\frac{7}{4} \times \frac{21}{4} = \frac{147}{16}$ . The answer is  $\frac{147}{16}$  square inches. What is the question?

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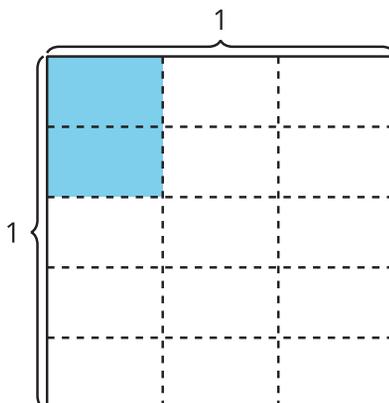
## Section Summary

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In this unit, we learned to multiply fractions. First we learned to multiply unit fractions.

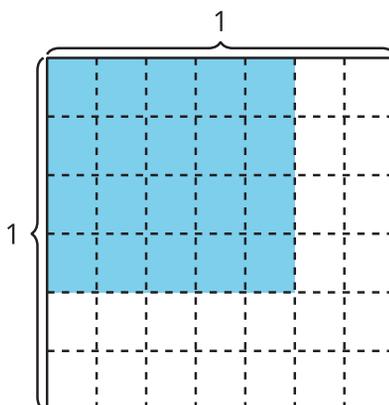
For example, we learned that  $\frac{2}{5} \times \frac{1}{3} = \frac{2}{15}$ .

**A**



In diagram A, we can see that  $\frac{2}{5}$  of  $\frac{1}{3}$  of a square is the same size as  $\frac{2}{15}$  of the whole square. Next, we learned how to multiply any fraction by a fraction.

**B**



In diagram B, we can see that  $\frac{4}{6} \times \frac{5}{7} = \frac{20}{42}$ . We can multiply the numerators,  $4 \times 5$  to find the numerator in the product. We can multiply the denominators,  $6 \times 7$ , to find the denominator in the product. We can represent this relationship with the equation:  $\frac{(4 \times 5)}{(6 \times 7)} = \frac{20}{42}$ . Diagram B shows  $4 \times 5$  or 20 pieces with  $6 \times 7$  or 42 pieces in the whole square.