

Name: _____

Date: _____

Answers

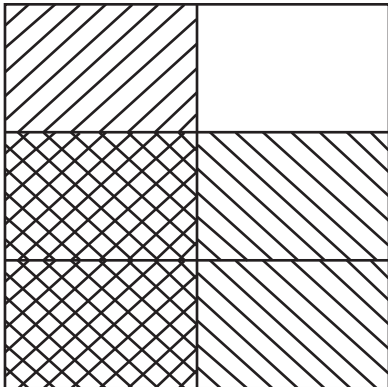
Shade It In!

Multiply Fractions with Area Models

Steps:

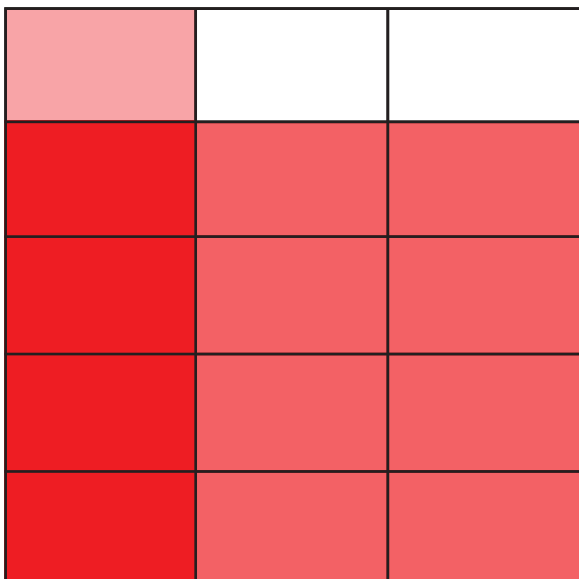
1. Draw a square model that represents one whole.
2. Divide the model with vertical lines to show one of the fractions you are multiplying (in this example, it is divided into halves).
3. Shade in the fraction.
4. Divide the same model with horizontal lines to show the other fraction you are multiplying (in this example, it is divided into thirds).
5. Shade in the fraction.
6. Count the total parts in the model. This is the denominator in the answer. In this example, there are six total parts.
7. Count the parts where the shaded portions overlap. This is the numerator in the answer. In this example, two parts have overlapping shading.
8. Simplify the answer. In this example, $\frac{2}{6}$ can be simplified to $\frac{1}{3}$.

$$\frac{2}{3} \times \frac{1}{2} = \frac{2}{6}$$

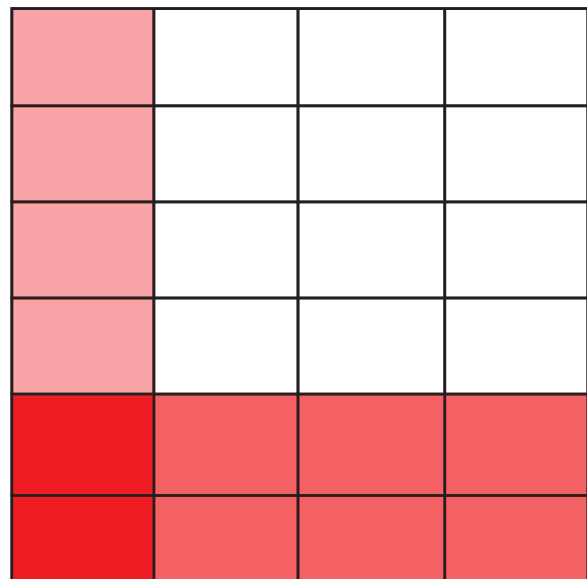


Shade in the models to solve each problem below.

1. $\frac{4}{5} \times \frac{1}{3} = \underline{\frac{4}{15}}$



2. $\frac{1}{4} \times \frac{2}{6} = \underline{\frac{2}{24} = \frac{1}{12}}$



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Shade It In!

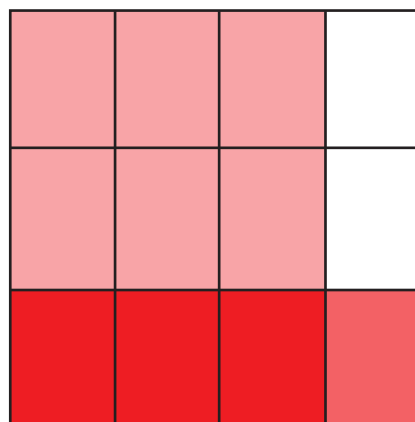
Multiply Fractions with Area Models

Draw an area model to solve each problem below.

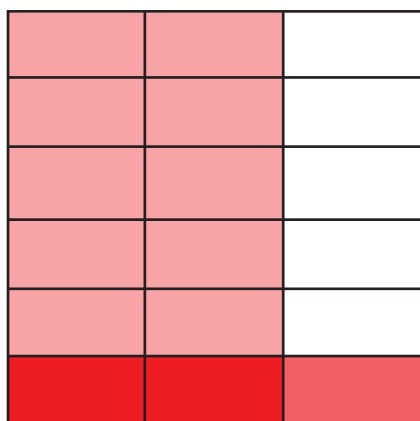
3. $\frac{1}{2} \times \frac{2}{5} = \frac{2}{10} = \frac{1}{5}$



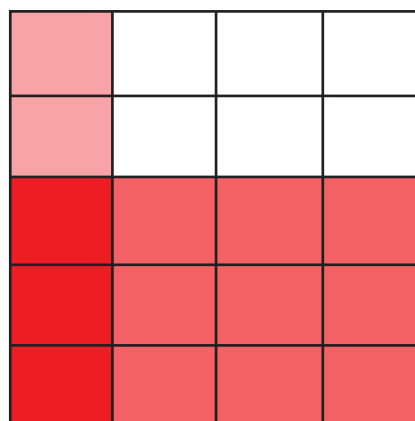
4. $\frac{3}{4} \times \frac{1}{3} = \frac{3}{12} = \frac{1}{4}$



5. $\frac{1}{6} \times \frac{2}{3} = \frac{2}{18} = \frac{1}{9}$



6. $\frac{1}{4} \times \frac{3}{5} = \frac{3}{20}$



Possible Answers

7. As you followed the steps to multiply fractions with area models, what patterns or shortcuts did you find?

• To find the total number of parts in the model, you can multiply the length times the width.

• You can multiply the fractions straight across to get the answer.
