

2.1

Multiplying Fractions

Simplifying Fractions

Put the fractions in simplest terms.

$$1) \quad \frac{12}{15}$$

$$3) \quad \frac{36}{72}$$

$$2) \quad \frac{18}{60}$$

Different ways to Multiply

$$5 \times 4$$

$$5 \bullet 4$$

$$5(4)$$

$$(5)(4)$$

Times You Would Multiply a Fraction Times a Fraction

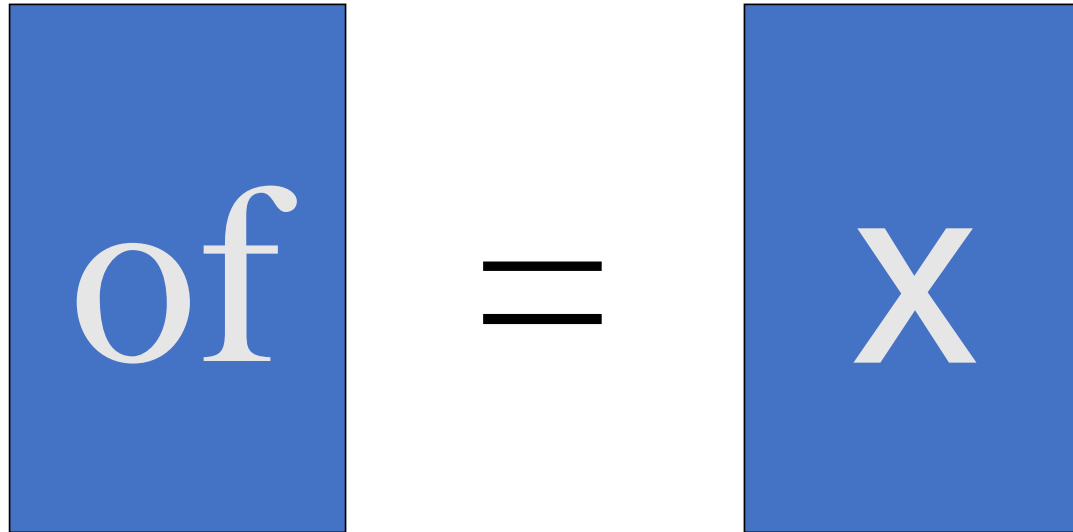
- ◎ Your family eats $\frac{1}{4}$ of $\frac{1}{2}$ of what's left of a birthday cake.

$$\frac{1}{4} \text{ of } \frac{1}{2} \quad \text{or} \quad \frac{1}{4} \times \frac{1}{2}$$



How to Find a Fraction of a Fraction

The first thing to remember is “of” means multiply in mathematics.



A diagram illustrating the mathematical meaning of the word "of". It consists of two blue rectangular boxes. The left box contains the word "of" in a white serif font. To the right of this box is an equals sign (=). To the right of the equals sign is another blue rectangular box containing the letter "X" in a white sans-serif font. This visualizes the concept that "of" is equivalent to multiplication.

Practice

$$1) \quad \frac{1}{3} \times \frac{5}{6} =$$

$$3) \quad \frac{5}{7} \times \frac{2}{3} =$$

$$2) \quad \frac{1}{4} \times \frac{7}{9} =$$

$$4) \quad \frac{3}{7} \times \frac{2}{3} =$$

Multiply and then simplify

$$a) \quad \frac{2}{3} \bullet \frac{3}{4} =$$

Multiply and then simplify

$$b) \quad \frac{15}{20} \times \frac{4}{10} =$$

Cross-simplify and then multiply

$$c) \quad \frac{2}{3} \bullet \frac{3}{4} =$$

Multiply and then simplify

$$d) \quad \frac{15}{20} \times \frac{4}{10} =$$

Practice

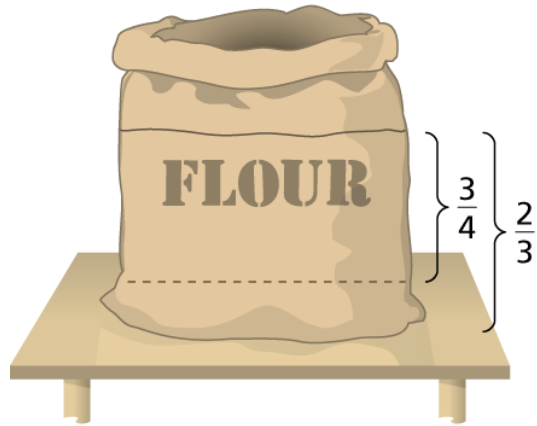
$$1) \quad \frac{7}{16} \times \frac{6}{7} =$$

$$3) \quad \frac{8}{11} \times \frac{11}{20} =$$

$$2) \quad \frac{15}{16} \times \frac{8}{20} =$$

$$4) \quad \frac{4}{9} \times \frac{15}{22} =$$

Real-life Application



You have $\frac{2}{3}$ of a bag of flour. You use $\frac{3}{4}$ of the flour to make empanada dough. How much of the entire bag do you use to make the dough?

Real-life Application

You have $\frac{5}{8}$ of a large bottle of shampoo.

You pour $\frac{3}{10}$ of the shampoo into a smaller bottle. How much of the entire larger bottle did you pour into the smaller bottle?

Extension

$$e) \quad \frac{2}{3} \times \frac{3}{40} \times \frac{5}{6} =$$

Application

You reserve $\frac{2}{5}$ of the seats on a tour bus. You are able to fill $\frac{5}{8}$ of the seats you reserve. What fraction of the seats on the bus are you able to fill?

Multiplying Mixed Numbers

$$1) \quad 1\frac{1}{3} \bullet 3\frac{3}{4} =$$



Multiplying Mixed Numbers

$$2) \quad 3\frac{1}{3} \bullet 4\frac{2}{5} =$$



Multiplying Mixed Numbers

$$3) \quad \frac{3}{5} \bullet 45 =$$

Practice

$$4) \quad 6\frac{1}{3} \times \frac{3}{4} =$$

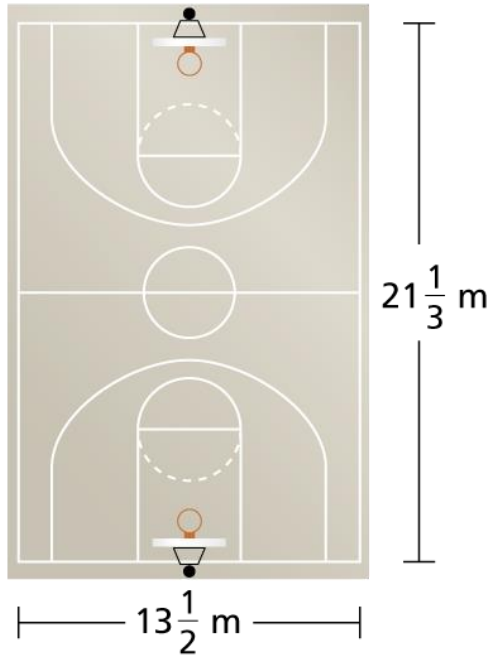
Practice

$$5) \quad \frac{1}{2} \times 2\frac{3}{4} =$$

Practice

$$6) \quad 1\frac{7}{8} \times 2\frac{2}{5} =$$

Real-life Application



A city is resurfacing a basketball court. Find the area of the court.