

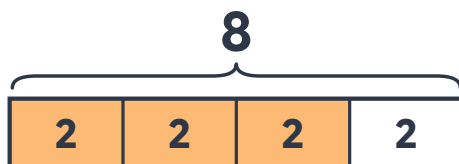
Multiplying Fractions

Find a fraction of a whole number. Write a mixed number if needed.

Use the tape. Find one part. Then find the parts you take.

Example

$$\frac{3}{4} \times 8$$



1 part: $8 \div 4 = 2$

3 parts: $3 \times 2 = 6$

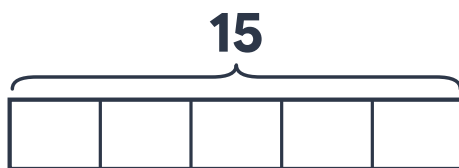
1. $\frac{2}{3} \times 12$



1 part: $\square \div \square = \square$

2 parts: $\square \times \square = \square$

2. $\frac{3}{5} \times 15$



1 part: $\square \div \square = \square$

3 parts: $\square \times \square = \square$

3. $\frac{5}{6} \times 18$



1 part: $\square \div \square = \square$

5 parts: $\square \times \square = \square$

Multiply by the numerator. Then divide by the denominator.

Example

$$\frac{2}{3} \times 6 = 12 \div 3 = 4 \quad (2 \times 6) \div 3$$

4. $\frac{3}{4} \times 10 = \square \div 4 = \square$

5. $6 \times \frac{2}{5} = \square \div 5 = \square$

6. $\frac{5}{8} \times 4 = \square \div 8 = \square$

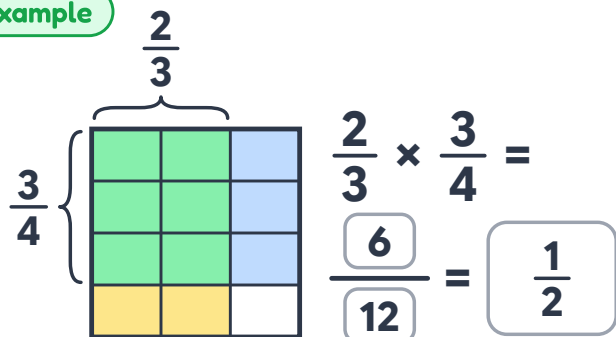
7. $9 \times \frac{2}{3} = \square \div 3 = \square$

Multiplying Fractions

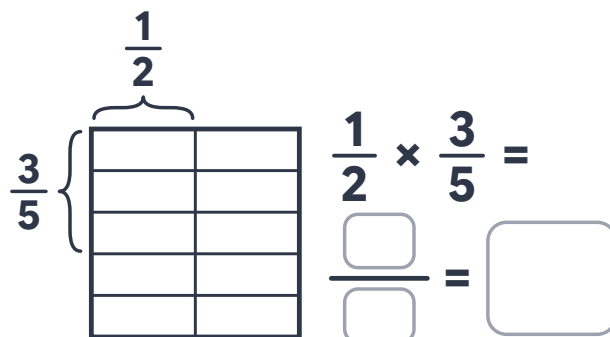
Use area models. Simplify. Write a product over 1 as a mixed number.

Shade both fractions. The parts shaded twice show the product.

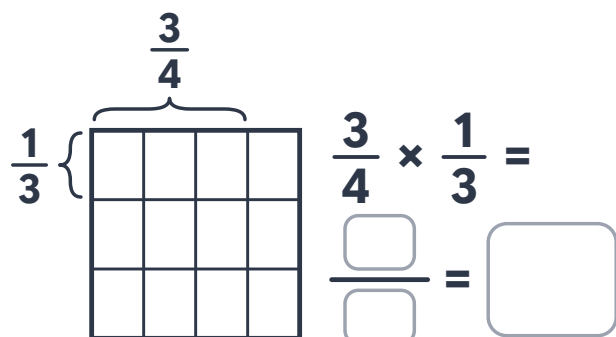
Example



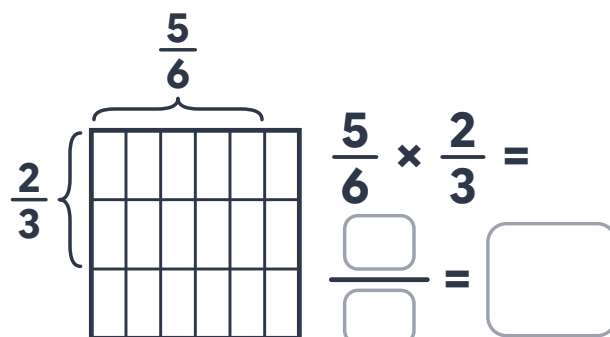
1.



2.

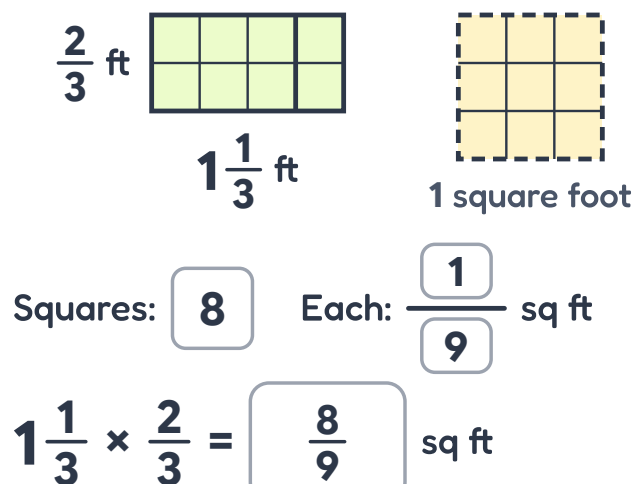


3.

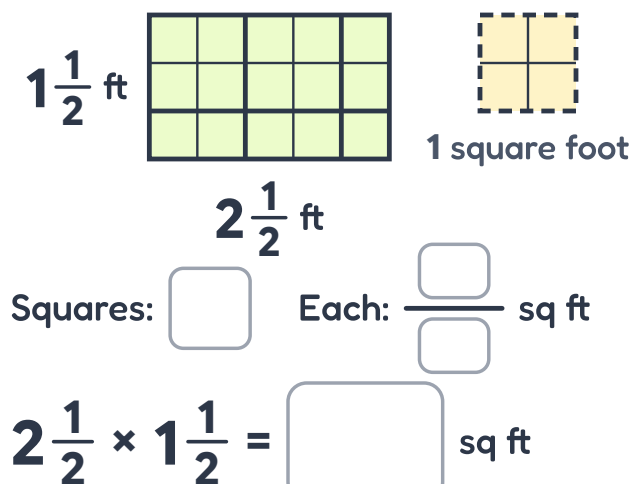


Count the squares. Find each area two ways.

Example



4.



Multiplying Fractions

Write each product in simplest form, as a mixed number if more than 1.

Multiply the numerators. Multiply the denominators. Simplify.

Example

$$\frac{2}{3} \times \frac{3}{5} = \frac{\boxed{6}}{\boxed{15}} = \frac{\boxed{2}}{\boxed{5}} \quad \begin{array}{l} 2 \times 3 = 6 \\ 3 \times 5 = 15 \end{array}$$

1. $\frac{1}{2} \times \frac{3}{4} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

2. $\frac{3}{4} \times \frac{2}{5} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

3. $\frac{5}{6} \times \frac{3}{10} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

4. $\frac{4}{5} \times \frac{5}{8} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

5. $\frac{2}{3} \times \frac{4}{5} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

6. $\frac{3}{2} \times \frac{4}{5} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

Write each mixed number or whole number as a fraction first.

Example

$$2\frac{1}{2} \times 1\frac{1}{3} = \frac{\boxed{5}}{\boxed{2}} \times \frac{\boxed{4}}{\boxed{3}} = \frac{\boxed{20}}{\boxed{6}} = \boxed{3\frac{1}{3}}$$

7. $1\frac{1}{2} \times \frac{2}{3} = \frac{\boxed{}}{\boxed{}} \times \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

8. $3 \times 2\frac{1}{4} = \frac{\boxed{}}{\boxed{}} \times \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

9. $1\frac{3}{4} \times 1\frac{1}{5} = \frac{\boxed{}}{\boxed{}} \times \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

Multiplying Fractions

Is the product more or less? Decide without multiplying.

Circle what is true. The first factor is the number to compare.

Example

$$6 \times \frac{3}{4}$$

The product is more than 6 less than 6 equal to 6
because $\frac{3}{4}$ is more than 1 less than 1 equal to 1

1.

$$6 \times \frac{5}{4}$$

The product is more than 6 less than 6 equal to 6
because $\frac{5}{4}$ is more than 1 less than 1 equal to 1

2.

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

The product is more than $\frac{2}{3}$ less than $\frac{2}{3}$ equal to $\frac{2}{3}$
because $\frac{5}{5}$ is more than 1 less than 1 equal to 1

3.

$$1\frac{1}{2} \times \frac{4}{5}$$

The product is more than $1\frac{1}{2}$ less than $1\frac{1}{2}$ equal to $1\frac{1}{2}$
because $\frac{4}{5}$ is more than 1 less than 1 equal to 1

4.

$$\frac{3}{4} \times 2\frac{1}{3}$$

The product is more than $\frac{3}{4}$ less than $\frac{3}{4}$ equal to $\frac{3}{4}$
because $2\frac{1}{3}$ is more than 1 less than 1 equal to 1

Write >, <, or = in each circle. Do not multiply.

Example

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

5.

$$\frac{7}{4} \times 8 \bigcirc 8$$

6.

$$\frac{3}{5} \bigcirc \frac{4}{4} \times \frac{3}{5}$$

7.

$$2\frac{1}{2} \times \frac{9}{10} \bigcirc 2\frac{1}{2}$$

8.

$$12 \bigcirc 12 \times \frac{11}{10}$$

9.

$$\frac{1}{2} \times \frac{6}{5} \bigcirc \frac{1}{2}$$

Multiplying Fractions

Show your work. Write answers more than 1 as mixed numbers.

Multiply. Write each answer in simplest form.

Example

A recipe uses $\frac{3}{4}$ cup of milk. Ben makes $\frac{1}{2}$ of the recipe. How much milk does he use?

$$\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$$

$\frac{3}{8}$ cup

1. Mia runs $\frac{2}{3}$ mile each day. How far does she run in 6 days?

_____ miles

2. A garden is $3\frac{1}{2}$ meters long and $2\frac{1}{4}$ meters wide. What is its area?

_____ sq m

3. In a class of 24 students, $\frac{3}{8}$ of the students ride the bus. How many students ride the bus?

_____ students

4. A pan is $\frac{3}{4}$ full of brownies. Kai eats $\frac{1}{3}$ of the brownies in the pan. What part of a whole pan does he eat?

_____ pan

5. A trail is $4\frac{1}{2}$ miles long. Zoe hikes $\frac{2}{3}$ of the trail. How far does she hike?

_____ miles

6. A muffin recipe needs $1\frac{1}{3}$ cups of flour. Pat makes $2\frac{1}{2}$ batches. How much flour does Pat need?

_____ cups

7. A rug is $1\frac{1}{2}$ yards long and $\frac{3}{4}$ yard wide. What is its area?

_____ sq yd

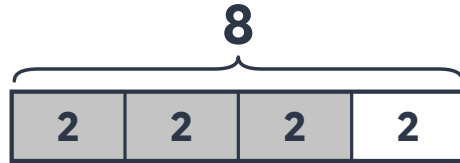
Multiplying Fractions

Find a fraction of a whole number. Write a mixed number if needed.

Use the tape. Find one part. Then find the parts you take.

Example

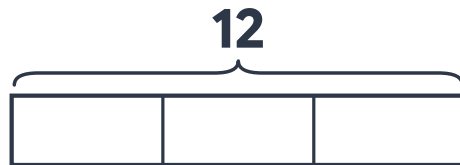
$$\frac{3}{4} \times 8$$



1 part: $\boxed{8} \div \boxed{4} = \boxed{2}$

3 parts: $\boxed{3} \times \boxed{2} = \boxed{6}$

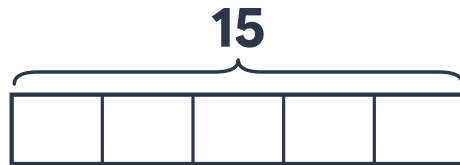
1. $\frac{2}{3} \times 12$



1 part: $\boxed{} \div \boxed{} = \boxed{}$

2 parts: $\boxed{} \times \boxed{} = \boxed{}$

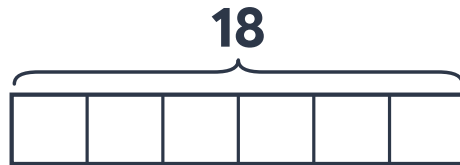
2. $\frac{3}{5} \times 15$



1 part: $\boxed{} \div \boxed{} = \boxed{}$

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3. $\frac{5}{6} \times 18$



1 part: $\boxed{} \div \boxed{} = \boxed{}$

5 parts: $\boxed{} \times \boxed{} = \boxed{}$

Multiply by the numerator. Then divide by the denominator.

Example

$$\frac{2}{3} \times 6 = \boxed{12} \div 3 = \boxed{4} \quad (2 \times 6) \div 3$$

4. $\frac{3}{4} \times 10 = \boxed{} \div 4 = \boxed{}$

5. $6 \times \frac{2}{5} = \boxed{} \div 5 = \boxed{}$

6. $\frac{5}{8} \times 4 = \boxed{} \div 8 = \boxed{}$

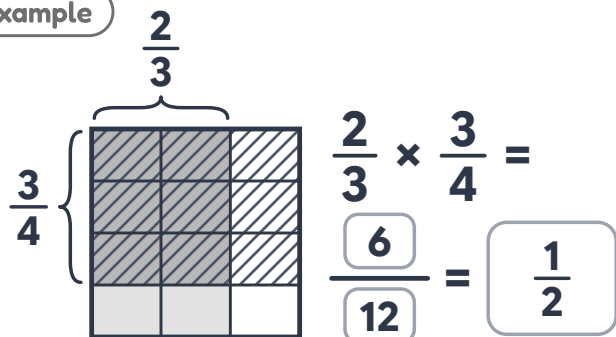
7. $9 \times \frac{2}{3} = \boxed{} \div 3 = \boxed{}$

Multiplying Fractions

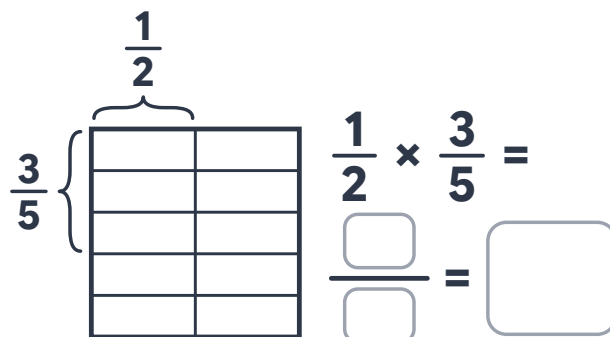
Use area models. Simplify. Write a product over 1 as a mixed number.

Shade both fractions. The parts shaded twice show the product.

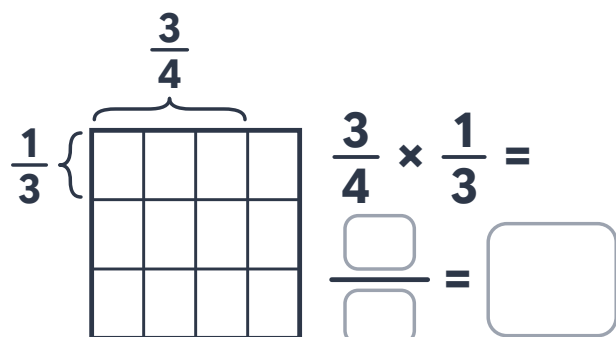
Example



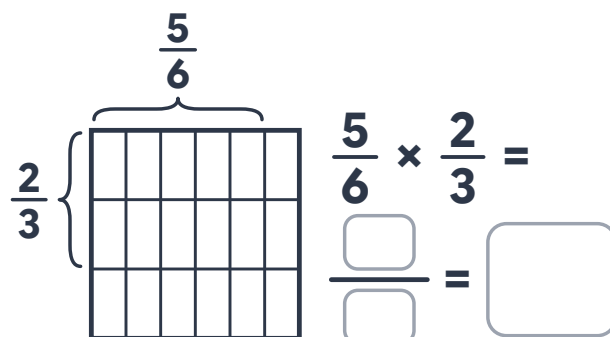
1.



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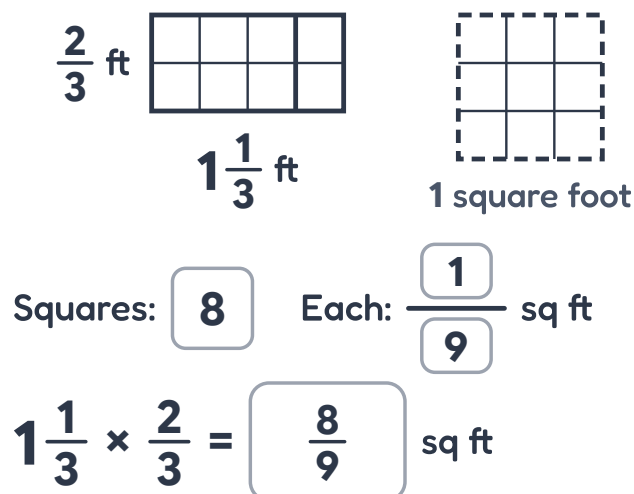


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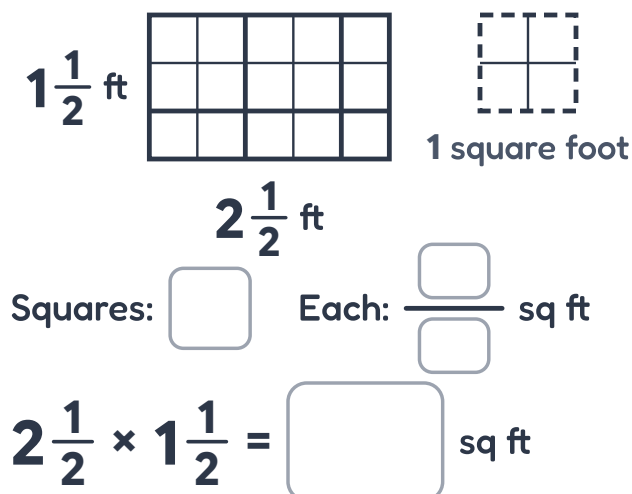


Count the squares. Find each area two ways.

Example



4.



Multiplying Fractions

Write each product in simplest form, as a mixed number if more than 1.

Multiply the numerators. Multiply the denominators. Simplify.

Example

$$\frac{2}{3} \times \frac{3}{5} = \frac{\boxed{6}}{\boxed{15}} = \frac{\boxed{2}}{\boxed{5}} \quad \begin{array}{l} 2 \times 3 = 6 \\ 3 \times 5 = 15 \end{array}$$

1. $\frac{1}{2} \times \frac{3}{4} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

2. $\frac{3}{4} \times \frac{2}{5} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

3. $\frac{5}{6} \times \frac{3}{10} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

4. $\frac{4}{5} \times \frac{5}{8} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

5. $\frac{2}{3} \times \frac{4}{5} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

6. $\frac{3}{2} \times \frac{4}{5} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

Write each mixed number or whole number as a fraction first.

Example

$$2\frac{1}{2} \times 1\frac{1}{3} = \frac{\boxed{5}}{\boxed{2}} \times \frac{\boxed{4}}{\boxed{3}} = \frac{\boxed{20}}{\boxed{6}} = \boxed{3\frac{1}{3}}$$

7. $1\frac{1}{2} \times \frac{2}{3} = \frac{\boxed{}}{\boxed{}} \times \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}} = \boxed{}$

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Multiplying Fractions

Is the product more or less? Decide without multiplying.

Circle what is true. The first factor is the number to compare.

Example

$$6 \times \frac{3}{4}$$

The product is more than 6 less than 6 equal to 6
because $\frac{3}{4}$ is more than 1 less than 1 equal to 1

1.

$$6 \times \frac{5}{4}$$

The product is more than 6 less than 6 equal to 6
because $\frac{5}{4}$ is more than 1 less than 1 equal to 1

2.

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

The product is more than $\frac{2}{3}$ less than $\frac{2}{3}$ equal to $\frac{2}{3}$
because $\frac{5}{5}$ is more than 1 less than 1 equal to 1

3.

$$1\frac{1}{2} \times \frac{4}{5}$$

The product is more than $1\frac{1}{2}$ less than $1\frac{1}{2}$ equal to $1\frac{1}{2}$
because $\frac{4}{5}$ is more than 1 less than 1 equal to 1

4.

$$\frac{3}{4} \times 2\frac{1}{3}$$

The product is more than $\frac{3}{4}$ less than $\frac{3}{4}$ equal to $\frac{3}{4}$
because $2\frac{1}{3}$ is more than 1 less than 1 equal to 1

Write >, <, or = in each circle. Do not multiply.

Example

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

5.

$$\frac{7}{4} \times 8 \bigcirc 8$$

6.

$$\frac{3}{5} \bigcirc \frac{4}{4} \times \frac{3}{5}$$

7.

$$2\frac{1}{2} \times \frac{9}{10} \bigcirc 2\frac{1}{2}$$

8.

$$12 \bigcirc 12 \times \frac{11}{10}$$

9.

$$\frac{1}{2} \times \frac{6}{5} \bigcirc \frac{1}{2}$$

Multiplying Fractions

Show your work. Write answers more than 1 as mixed numbers.

Multiply. Write each answer in simplest form.

Example

A recipe uses $\frac{3}{4}$ cup of milk. Ben makes $\frac{1}{2}$ of the recipe. How much milk does he use?

$$\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$$

$\frac{3}{8}$ cup

1. Mia runs $\frac{2}{3}$ mile each day. How far does she run in 6 days?

_____ miles

2. A garden is $3\frac{1}{2}$ meters long and $2\frac{1}{4}$ meters wide. What is its area?

_____ sq m

3. In a class of 24 students, $\frac{3}{8}$ of the students ride the bus. How many students ride the bus?

_____ students

4. A pan is $\frac{3}{4}$ full of brownies. Kai eats $\frac{1}{3}$ of the brownies in the pan. What part of a whole pan does he eat?

_____ pan

5. A trail is $4\frac{1}{2}$ miles long. Zoe hikes $\frac{2}{3}$ of the trail. How far does she hike?

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6. A muffin recipe needs $1\frac{1}{3}$ cups of flour. Pat makes $2\frac{1}{2}$ batches. How much flour does Pat need?

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7. A rug is $1\frac{1}{2}$ yards long and $\frac{3}{4}$ yard wide. What is its area?

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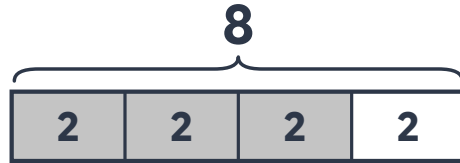
Multiplying Fractions

Find a fraction of a whole number. Write a mixed number if needed.

Use the tape. Find one part. Then find the parts you take.

Example

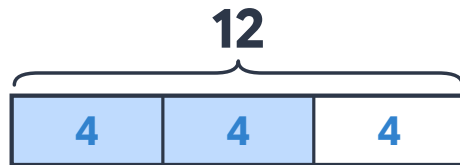
$$\frac{3}{4} \times 8$$



$$1 \text{ part: } 8 \div 4 = 2$$

$$3 \text{ parts: } 3 \times 2 = 6$$

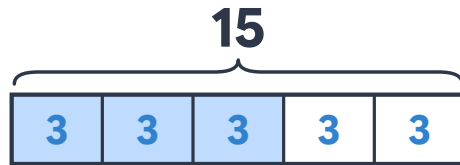
$$1. \quad \frac{2}{3} \times 12$$



$$1 \text{ part: } 12 \div 3 = 4$$

$$2 \text{ parts: } 2 \times 4 = 8$$

$$2. \quad \frac{3}{5} \times 15$$



$$1 \text{ part: } 15 \div 5 = 3$$

$$3 \text{ parts: } 3 \times 3 = 9$$

$$3. \quad \frac{5}{6} \times 18$$



$$1 \text{ part: } 18 \div 6 = 3$$

$$5 \text{ parts: } 5 \times 3 = 15$$

Multiply by the numerator. Then divide by the denominator.

Example

$$\frac{2}{3} \times 6 = 12 \div 3 = 4 \quad (2 \times 6) \div 3$$

$$4. \quad \frac{3}{4} \times 10 = 30 \div 4 = 7\frac{1}{2}$$

$$5. \quad 6 \times \frac{2}{5} = 12 \div 5 = 2\frac{2}{5}$$

$$6. \quad \frac{5}{8} \times 4 = 20 \div 8 = 2\frac{1}{2}$$

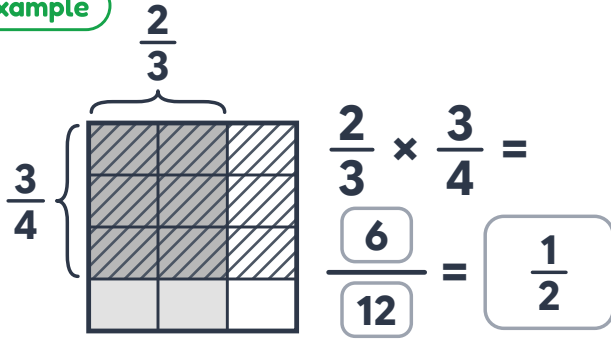
$$7. \quad 9 \times \frac{2}{3} = 18 \div 3 = 6$$

Multiplying Fractions

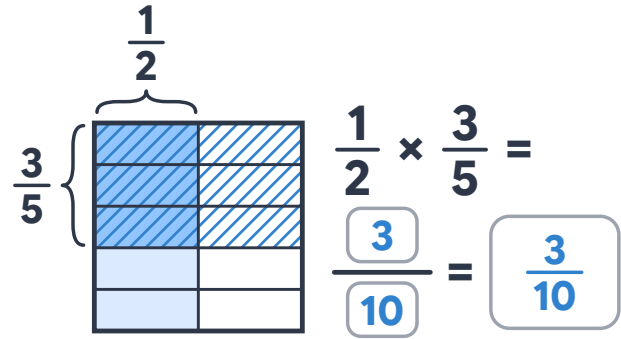
Use area models. Simplify. Write a product over 1 as a mixed number.

Shade both fractions. The parts shaded twice show the product.

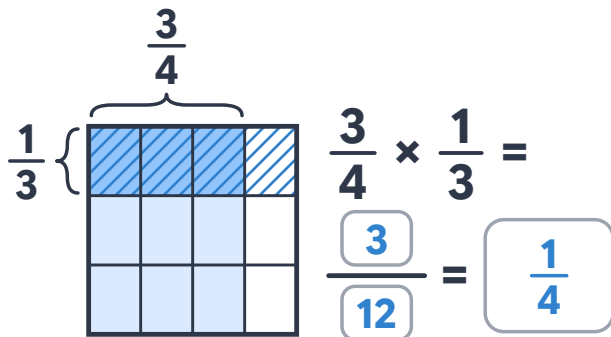
Example



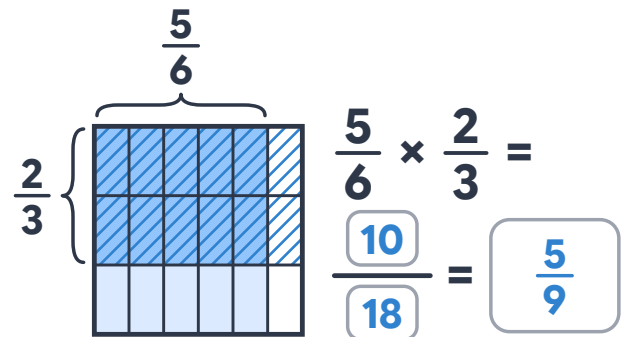
1.



2.

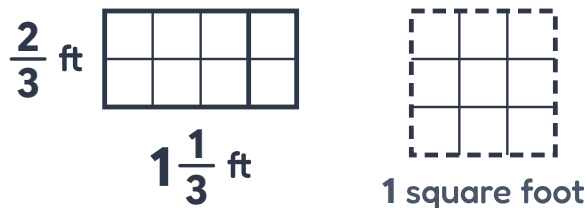


3.



Count the squares. Find each area two ways.

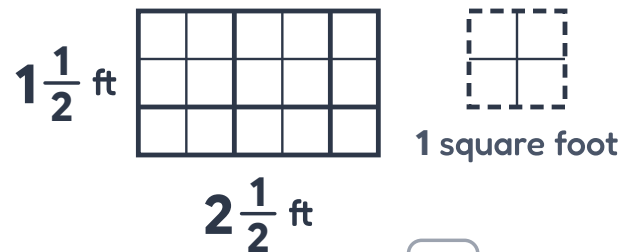
Example



Squares: **8** Each: $\frac{1}{9}$ sq ft

$$1\frac{1}{3} \times \frac{2}{3} = \frac{8}{9} \text{ sq ft}$$

4.



Squares: **15** Each: $\frac{1}{4}$ sq ft

$$2\frac{1}{2} \times 1\frac{1}{2} = 3\frac{3}{4} \text{ sq ft}$$

Multiplying Fractions

Write each product in simplest form, as a mixed number if more than 1.

Multiply the numerators. Multiply the denominators. Simplify.

Example

$$\frac{2}{3} \times \frac{3}{5} = \frac{\boxed{6}}{\boxed{15}} = \frac{\boxed{2}}{\boxed{5}} \quad \begin{array}{l} 2 \times 3 = 6 \\ 3 \times 5 = 15 \end{array}$$

$$1. \quad \frac{1}{2} \times \frac{3}{4} = \frac{\boxed{3}}{\boxed{8}} = \frac{\boxed{3}}{\boxed{8}}$$

$$2. \quad \frac{3}{4} \times \frac{2}{5} = \frac{\boxed{6}}{\boxed{20}} = \frac{\boxed{3}}{\boxed{10}}$$

$$3. \quad \frac{5}{6} \times \frac{3}{10} = \frac{\boxed{15}}{\boxed{60}} = \frac{\boxed{1}}{\boxed{4}}$$

$$4. \quad \frac{4}{5} \times \frac{5}{8} = \frac{\boxed{20}}{\boxed{40}} = \frac{\boxed{1}}{\boxed{2}}$$

$$5. \quad \frac{2}{3} \times \frac{4}{5} = \frac{\boxed{8}}{\boxed{15}} = \frac{\boxed{8}}{\boxed{15}}$$

$$6. \quad \frac{3}{2} \times \frac{4}{5} = \frac{\boxed{12}}{\boxed{10}} = \boxed{1\frac{1}{5}}$$

Write each mixed number or whole number as a fraction first.

Example

$$2\frac{1}{2} \times 1\frac{1}{3} = \frac{\boxed{5}}{\boxed{2}} \times \frac{\boxed{4}}{\boxed{3}} = \frac{\boxed{20}}{\boxed{6}} = \boxed{3\frac{1}{3}}$$

$$7. \quad 1\frac{1}{2} \times \frac{2}{3} = \frac{\boxed{3}}{\boxed{2}} \times \frac{\boxed{2}}{\boxed{3}} = \frac{\boxed{6}}{\boxed{6}} = \boxed{1}$$

$$8. \quad 3 \times 2\frac{1}{4} = \frac{\boxed{3}}{\boxed{1}} \times \frac{\boxed{9}}{\boxed{4}} = \frac{\boxed{27}}{\boxed{4}} = \boxed{6\frac{3}{4}}$$

$$9. \quad 1\frac{3}{4} \times 1\frac{1}{5} = \frac{\boxed{7}}{\boxed{4}} \times \frac{\boxed{6}}{\boxed{5}} = \frac{\boxed{42}}{\boxed{20}} = \boxed{2\frac{1}{10}}$$

Multiplying Fractions

Is the product more or less? Decide without multiplying.

Circle what is true. The first factor is the number to compare.

Example

$$6 \times \frac{3}{4}$$

The product is more than 6 less than 6 equal to 6
because $\frac{3}{4}$ is more than 1 less than 1 equal to 1

1.

$$6 \times \frac{5}{4}$$

The product is more than 6 less than 6 equal to 6
because $\frac{5}{4}$ is more than 1 less than 1 equal to 1

2.

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

The product is more than $\frac{2}{3}$ less than $\frac{2}{3}$ equal to $\frac{2}{3}$
because $\frac{5}{5}$ is more than 1 less than 1 equal to 1

3.

$$1\frac{1}{2} \times \frac{4}{5}$$

The product is more than $1\frac{1}{2}$ less than $1\frac{1}{2}$ equal to $1\frac{1}{2}$
because $\frac{4}{5}$ is more than 1 less than 1 equal to 1

4.

$$\frac{3}{4} \times 2\frac{1}{3}$$

The product is more than $\frac{3}{4}$ less than $\frac{3}{4}$ equal to $\frac{3}{4}$
because $2\frac{1}{3}$ is more than 1 less than 1 equal to 1

Write >, <, or = in each circle. Do not multiply.

Example

$$5 \times \frac{2}{3} \text{ } \textcircled{<} \text{ } 5$$

5.

$$\frac{7}{4} \times 8 \text{ } \textcircled{>} \text{ } 8$$

6.

$$\frac{3}{5} \text{ } \textcircled{=} \text{ } \frac{4}{4} \times \frac{3}{5}$$

7.

$$2\frac{1}{2} \times \frac{9}{10} \text{ } \textcircled{<} \text{ } 2\frac{1}{2}$$

8.

$$12 \text{ } \textcircled{<} \text{ } 12 \times \frac{11}{10}$$

9.

$$\frac{1}{2} \times \frac{6}{5} \text{ } \textcircled{>} \text{ } \frac{1}{2}$$

Multiplying Fractions

Show your work. Write answers more than 1 as mixed numbers.

Multiply. Write each answer in simplest form.

Example

A recipe uses $\frac{3}{4}$ cup of milk. Ben makes $\frac{1}{2}$ of the recipe. How much milk does he use?

$$\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$$

 $\frac{3}{8}$

cup

1. Mia runs $\frac{2}{3}$ mile each day. How far does she run in 6 days?

4

miles

2. A garden is $3\frac{1}{2}$ meters long and $2\frac{1}{4}$ meters wide. What is its area?

$7\frac{7}{8}$

sq m

3. In a class of 24 students, $\frac{3}{8}$ of the students ride the bus. How many students ride the bus?

9

students

4. A pan is $\frac{3}{4}$ full of brownies. Kai eats $\frac{1}{3}$ of the brownies in the pan. What part of a whole pan does he eat?

$\frac{1}{4}$

pan

5. A trail is $4\frac{1}{2}$ miles long. Zoe hikes $\frac{2}{3}$ of the trail. How far does she hike?

3

miles

6. A muffin recipe needs $1\frac{1}{3}$ cups of flour. Pat makes $2\frac{1}{2}$ batches. How much flour does Pat need?

$3\frac{1}{3}$

cups

7. A rug is $1\frac{1}{2}$ yards long and $\frac{3}{4}$ yard wide. What is its area?

$1\frac{1}{8}$

sq yd