MATH

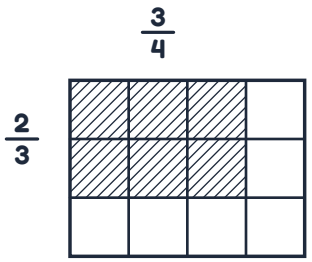
Multiplying fractions

Name _____ Date _____

I can multiply fractions.

1 How it works

To multiply fractions, multiply the tops, then multiply the bottoms. 3/4 × 2/3 = 6/12, which simplifies to 1/2. The picture shows why: 3/4 of the columns and 2/3 of the rows overlap in 6 of the 12 parts. You do not need a common denominator.



2 Multiply the tops. Multiply the bottoms.

1. $\frac{1}{2} \times \frac{7}{8} = \frac{\square}{\square}$
2. $\frac{2}{3} \times \frac{1}{4} = \frac{\square}{\square}$
3. $\frac{3}{4} \times \frac{1}{4} = \frac{\square}{\square}$
4. $\frac{5}{8} \times \frac{2}{5} = \frac{\square}{\square}$
5. $\frac{1}{2} \times \frac{1}{8} = \frac{\square}{\square}$
6. $\frac{1}{8} \times \frac{5}{6} = \frac{\square}{\square}$
7. $\frac{2}{3} \times \frac{1}{5} = \frac{\square}{\square}$
8. $\frac{4}{5} \times \frac{3}{4} = \frac{\square}{\square}$
9. $\frac{3}{5} \times \frac{1}{3} = \frac{\square}{\square}$

How did I do? ☆ ☆ ☆

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Whole numbers and simplest form

Name _____ Date _____

I can multiply fractions and whole numbers and simplify the answer.

1 Multiply a whole number by a fraction

Think of 4 as 4/1.

1. $6 \times \frac{1}{6} =$ ☐
2. $8 \times \frac{2}{5} =$ ☐
3. $4 \times \frac{1}{8} =$ ☐
4. $6 \times \frac{7}{8} =$ ☐
5. $2 \times \frac{1}{8} =$ ☐
6. $6 \times \frac{1}{3} =$ ☐

2 Multiply. Write the answer in simplest form.

1. $\frac{3}{5} \times \frac{4}{5} =$ ☐
2. $\frac{1}{4} \times \frac{4}{5} =$ ☐
3. $\frac{5}{8} \times \frac{1}{5} =$ ☐
4. $\frac{2}{3} \times \frac{1}{8} =$ ☐
5. $\frac{3}{5} \times \frac{5}{8} =$ ☐
6. $\frac{7}{8} \times \frac{2}{5} =$ ☐

3 Find the fraction of the number

"of" means multiply.

1. $\frac{3}{5}$ of 35 = ☐
2. $\frac{3}{8}$ of 40 = ☐
3. $\frac{4}{5}$ of 25 = ☐
4. $\frac{5}{6}$ of 24 = ☐
5. $\frac{7}{8}$ of 56 = ☐
6. $\frac{3}{8}$ of 48 = ☐

How did I do? ☆ ☆ ☆

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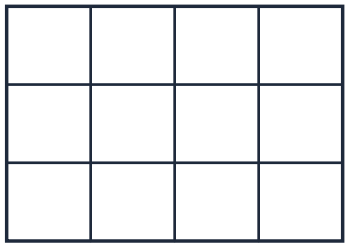
Area models and mixed numbers

Name _____ Date _____

I can show fraction multiplication with a picture.

1 Shade to multiply

Columns for the first fraction, rows for the second.

1. 

$\frac{3}{4} \times \frac{1}{3} = \frac{\square}{\square}$

2. 

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

2 Multiply with mixed numbers

Change it to an improper fraction first.

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

2. $1\frac{1}{4} \times \frac{4}{5} = \square$

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

4. $3\frac{3}{4} \times 2 = \square$

3 Think about it

1. Is 1/2 × 8 more or less than 8? Why?
2. What is 3/4 × 4/3?
3. What is 1/2 of 1/2?
4. Give an example where multiplying makes a number smaller.

How did I do? ☆ ☆ ☆

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Word problems

Name _____ Date _____

I can use fractions to solve problems.

1 Read, think, answer

Show your thinking in the box.

1 A recipe needs 3/4 cup of sugar. Noor makes half of the recipe. How much sugar does Noor need?

Answer:

2 There are 24 students in a class. 2/3 of them play a sport. How many students play a sport?

Answer:

3 Ben walks 3/5 mile every day. How far does Ben walk in 5 days?

Answer:

4 A flower bed is 3/4 yard long and 2/3 yard wide. What is its area?

Answer:

How did I do? ☆ ☆ ☆

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FOR TEACHERS AND PARENTS

Answer key: multiplying fractions

1 Page 1

Products: 1) 7/16; 2) 2/12 = 1/6; 3) 3/16; 4) 10/40 = 1/4; 5) 1/16; 6) 5/48; 7) 2/15; 8) 12/20 = 3/5; 9) 3/15 = 1/5.

2 Page 2

Whole numbers: 1) 1; 2) 3 1/5 (16/5); 3) 1/2; 4) 5 1/4 (21/4); 5) 1/4; 6) 2.
Simplest form: 1) 12/25; 2) 1/5; 3) 1/8; 4) 1/12; 5) 3/8; 6) 7/20.
Fraction of a number: 1) 21; 2) 15; 3) 20; 4) 20; 5) 49; 6) 18.

3 Page 3

Area models: 1) 3/4 × 1/3 = 3/12 = 1/4; 2) 2/3 × 1/2 = 2/6 = 1/3.
Mixed numbers: 1) 1 7/8 (15/8); 2) 1; 3) 9; 4) 7 1/2 (15/2).
Think: 1) Less. Half of 8 is 4; 2) 1; 3) 1/4; 4) Any number times a fraction less than 1, such as 6 × 1/2 = 3.

4 Page 4: word problems

1) 1/2 × 3/4 = 3/8 cup
2) 2/3 of 24 = 16 students
3) 5 × 3/5 = 15/5 = 3 miles
4) 3/4 × 2/3 = 6/12 = 1/2 square yard

5 Teaching tip

Read × as "of". 1/2 × 3/4 is half of three fourths. This explains why multiplying by a fraction less than 1 makes a number smaller, which surprises many children.

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