

LESSON 20: Multiply Fractions

Warm-Up

Directions: Work with your partner to find legal trades for the fraction strips below. Use your fraction kits and draw the legal trades.

LEGAL TRADE



What do the following multiplication facts mean?
An example is: $2 \cdot 3$ means two groups of 3 items.

3. $3 \cdot 9$

4. $4 \cdot 6$

5. $7 \cdot 5$

6. $8 \cdot 2$

LESSON 20: Multiply Fractions

Directions: Complete the following SOLVE problem with your teacher. You will only complete the S step.

Danielle is working on a design for her art project. The design is made up of rectangles and triangles. There are a total of 24 rectangles in the design, and each rectangle has a width of $\frac{1}{2}$ -inch and a length of $\frac{3}{4}$ -inch. What is the area of each of the rectangles?

- S** Underline the question.
 This problem is asking me to find

Directions: Complete this page with your teacher and partner.

Problem	Meaning	Model
1. $3 \cdot \frac{1}{6} =$		
2. $\frac{3}{5} \cdot 2 =$		
3. $4 \cdot \frac{1}{3} =$		
4. $\frac{1}{4} \cdot 2 =$		
5. $2 \cdot \frac{2}{5} =$		
6. $\frac{2}{6} \cdot 3 =$		

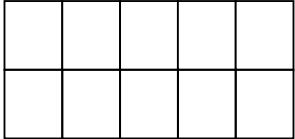
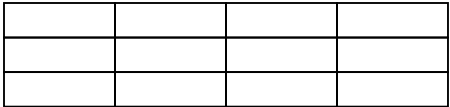
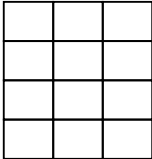
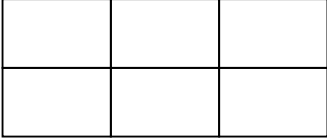
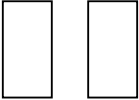
LESSON 20: Multiply Fractions

Directions: Complete this page with your teacher and partner. Simplify all answers.

Problem	Meaning	Model
1. $\frac{1}{3} \cdot \frac{3}{4} =$		
2. $\frac{1}{4} \cdot \frac{2}{3} =$		
3. $\frac{2}{6} \cdot \frac{1}{2} =$		
4. $\frac{4}{5} \cdot \frac{1}{2} =$		
5. $\frac{1}{2} \cdot \frac{2}{4} =$		

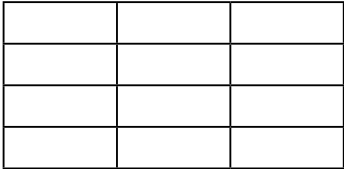
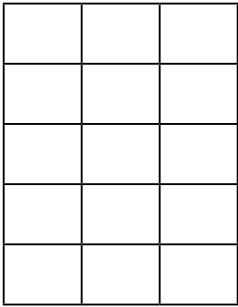
LESSON 20: Multiply Fractions

Directions: Complete this page with your teacher and partner.

Problem	Meaning	Model
<p>1. $\frac{1}{2} \cdot \frac{3}{5} =$</p>		
<p>2. $\frac{1}{3} \cdot \frac{2}{4} =$</p>		
<p>3. $\frac{3}{4} \cdot \frac{1}{3} =$</p>		
<p>4. $\frac{1}{2} \cdot \frac{2}{3} =$</p>		
<p>5. $2 \cdot \frac{1}{8} =$</p>		

LESSON 20: Multiply Fractions

Directions: Complete this page with your partner.

Area Model	Multiplication Problem
<p>6.</p> 	$\frac{1}{4} \cdot \frac{2}{3} =$
<p>7.</p> 	$\frac{4}{5} \cdot \frac{1}{3} =$

Look at Problem 6: $\frac{1}{4} \cdot \frac{2}{3}$. Work with a partner to figure out how you can solve this problem numerically without the pictures. Write your solution.

Will this solution work for Problem 7? _____

How would Problem 5 be solved numerically? _____

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Directions: Complete this page with your partner.

1. $\frac{3}{4} \cdot \frac{1}{6} =$

2. $\frac{2}{8} \cdot \frac{1}{5} =$

3. $\frac{3}{5} \cdot \frac{2}{8} =$

4. $\frac{4}{10} \cdot \frac{7}{12} =$

5. $2 \cdot \frac{2}{5} =$

6. $\frac{1}{3} \cdot 7 =$

7. $\frac{5}{6} \cdot 3 =$

8. $6 \cdot \frac{2}{3} =$

LESSON 20: Multiply Fractions

Directions: Complete the following SOLVE problem with your teacher.

Danielle is working on a design for her art project. The design is made up of rectangles and triangles. There are a total of 24 rectangles in the design, and each rectangle has a width of $\frac{1}{2}$ -inch and a length of $\frac{3}{4}$ -inch. What is the area of each of the rectangles?

S Underline the question.

This problem is asking me to find

O Identify the facts.

Eliminate the unnecessary facts.

List the necessary facts.

L Choose an operation or operations.

Write in words what your plan of action will be.

V Estimate your answer.

Carry out your plan.

E Does your answer make sense? (Compare your answer to the question.)

Is your answer reasonable? (Compare your answer to the estimate.)

Is your answer accurate? (Check your work.)

Write your answer in a complete sentence.

LESSON 20: Multiply Fractions

Directions: Complete the following problems. Simplify all answers.

1. $\frac{6}{6} \cdot \frac{3}{9} =$

2. $\frac{7}{12} \cdot \frac{3}{6} =$

3. $\frac{3}{5} \cdot \frac{4}{6} =$

4. $6 \cdot \frac{3}{9} =$

5. $\frac{3}{4} \cdot \frac{9}{10} =$

6. $\frac{4}{8} \cdot \frac{3}{12} =$

7. $\frac{3}{5} \cdot \frac{1}{6} =$

8. $\frac{4}{5} \cdot 9 =$

LESSON 20: Multiply Fractions

Homework

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Name _____ **Date** _____**Directions:** Solve the following fraction multiplication problems. Simplify all answers.

1. $\frac{4}{12} \cdot \frac{9}{10} =$

2. $\frac{1}{12} \cdot \frac{3}{5} =$

3. $\frac{3}{10} \cdot \frac{7}{12} =$

4. $3 \cdot \frac{4}{5} =$

5. $\frac{6}{8} \cdot \frac{2}{4} =$

6. $\frac{1}{4} \cdot \frac{3}{8} =$

7. $\frac{2}{3} \cdot \frac{4}{12} =$

8. $\frac{2}{3} \cdot 8 =$