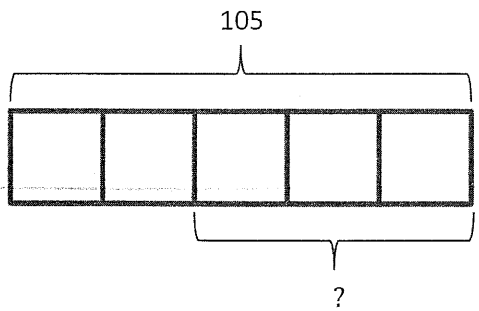
Student Edition

Eureka Math Grade 5 Module 4

Special thanks go to the Gordon A. Cain Center and to the Department of Mathematics at Louisiana State University for their support in the development of *Eureka Math*.

4. Mr. Chan made 252 cookies for the Annual Fifth Grade Class Bake Sale. They sold $\frac{3}{4}$ of them, and $\frac{3}{9}$ of the remaining cookies were given to PTA. members. Mr. Chan allowed the 12 student helpers to divide the cookies that were left equally. How many cookies will each student get?

5. Using the tape diagram below, create a story problem about a farm. Your story must include a fraction.



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Name _____ Date _____

1. Terrence finished a word search in $\frac{3}{4}$ the time it took Frank. Charlotte finished the word search in $\frac{2}{3}$ the time it took Terrence. Frank finished the word search in 32 minutes. How long did it take Charlotte to finish the word search?

2. Ms. Phillips ordered 56 pizzas for a school fundraiser. Of the pizzas ordered, $\frac{2}{7}$ of them were pepperoni, 19 were cheese, and the rest were veggie pizzas. What fraction of the pizzas was veggie?

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1. Solve. Draw a rectangular fraction model to show your thinking.

a. Half of $\frac{1}{2}$ cake = _____ cake.

b. One-third of $\frac{1}{2}$ cake = _____ cake.

c. $\frac{1}{4}$ of $\frac{1}{2}$

d. $\frac{1}{2} \times \frac{1}{5}$

e. $\frac{1}{3} \times \frac{1}{3}$

f. $\frac{1}{4} \times \frac{1}{3}$

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Name _____ Date _____

1. Solve. Draw a rectangular fraction model to explain your thinking.

a. $\frac{1}{2}$ of $\frac{2}{3} = \frac{1}{2}$ of ____ third(s) = ____ third(s)

b. $\frac{1}{2}$ of $\frac{4}{3} = \frac{1}{2}$ of ____ third(s) = ____ third(s)

c. $\frac{1}{3}$ of $\frac{3}{5} =$

d. $\frac{1}{2}$ of $\frac{6}{8} =$

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

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

2. Sarah has a photography blog. $\frac{3}{7}$ of her photos are of nature. $\frac{1}{4}$ of the rest are of her friends. What fraction of all of Sarah's photos is of her friends? Support your answer with a model.

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Name _____ Date _____

1. Solve. Draw a rectangular fraction model to explain your thinking. Then, write a multiplication sentence.

a. $\frac{2}{3}$ of $\frac{3}{4}$ =

b. $\frac{2}{5}$ of $\frac{3}{4}$ =

c. $\frac{2}{5}$ of $\frac{4}{5}$ =

d. $\frac{4}{5}$ of $\frac{3}{4}$ =

2. Multiply. Draw a rectangular fraction model if it helps you.

a. $\frac{5}{6} \times \frac{3}{10}$

b. $\frac{3}{4} \times \frac{4}{5}$

c. $\frac{5}{6} \times \frac{5}{8}$

d. $\frac{3}{4} \times \frac{5}{12}$

e. $\frac{8}{9} \times \frac{2}{3}$

f. $\frac{3}{7} \times \frac{2}{9}$

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Name _____ Date _____

Solve and show your thinking with a tape diagram.

1. Anthony bought an 8-foot board. He cut off $\frac{3}{4}$ of the board to build a shelf and gave $\frac{1}{3}$ of the rest to his brother for an art project. How many inches long was the piece Anthony gave to his brother?

2. Riverside Elementary School is holding a school-wide election to choose a school color. Five-eighths of the votes were for blue, $\frac{5}{9}$ of the remaining votes were for green, and the remaining 48 votes were for red.

   a. How many votes were for blue?

   b. How many votes were for green?

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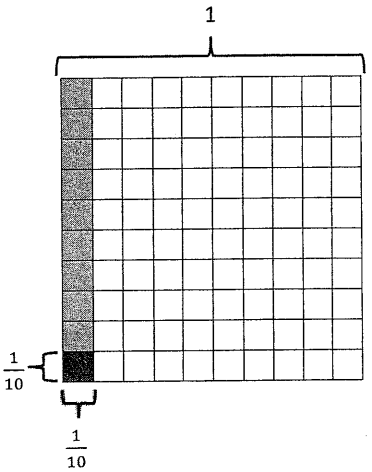
1. Multiply and model. Rewrite each expression as a number sentence with decimal factors. The first one is done for you.

a. $\frac{1}{10} \times \frac{1}{10}$

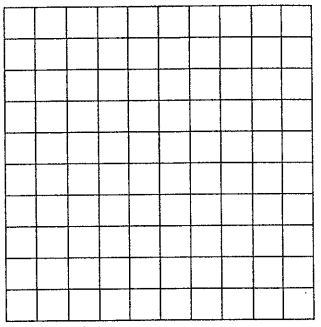
$= \frac{1 \times 1}{10 \times 10}$

$= \frac{1}{100}$

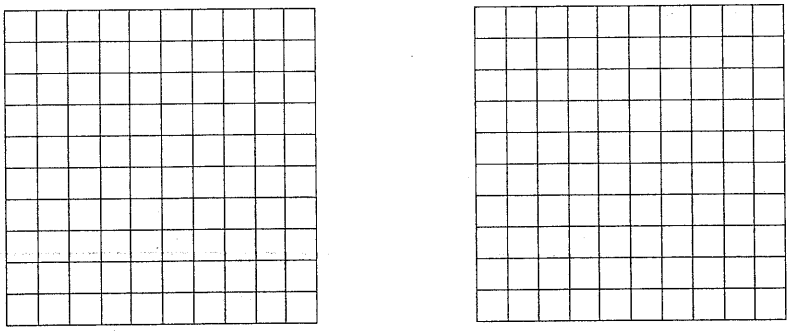
$0.1 \times 0.1 = 0.01$



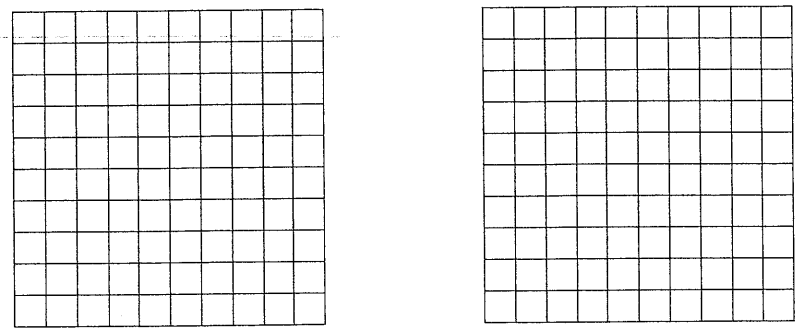
b. $\frac{6}{10} \times \frac{2}{10}$



c. $\frac{1}{10} \times 1.6$



d. $\frac{6}{10} \times 1.9$



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2. Multiply. The first few are started for you.

a. $4 \times 0.6 =$ _____

$= 4 \times \frac{6}{10}$

$= \frac{4 \times 6}{10}$

$= \frac{24}{10}$

$= 2.4$

b. $0.4 \times 0.6 =$ _____

$= \frac{4}{10} \times \frac{6}{10}$

$= \frac{4 \times 6}{10 \times 10}$

$=$

c. $0.04 \times 0.6 =$ _____

$= \frac{4}{100} \times \frac{6}{10}$

$= \frac{\_\_ \times \_\_}{100 \times 10}$

$=$

d. $7 \times 0.3 =$ _____

e. $0.7 \times 0.3 =$ _____

f. $0.07 \times 0.3 =$ _____

g. $1.3 \times 5 =$ _____

h. $1.3 \times 0.5 =$ _____

i. $0.13 \times 0.5 =$ _____

3. Jennifer makes 1.7 liters of lemonade. If she pours 3 tenths of the lemonade in the glass, how many liters of lemonade are in the glass?

4. Cassius walked 6 tenths of a 3.6-mile trail.

a. How many miles did Cassius have left to hike?

b. Cameron was 1.3 miles ahead of Cassius. How many miles did Cameron hike already?

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1. Multiply using fraction form and unit form. Check your answer by counting the decimal places. The first one is done for you.

a. $3.3 \times 1.6 = \frac{33}{10} \times \frac{16}{10}$

$= \frac{33 \times 16}{100}$

$= \frac{528}{100}$

$= 5.28$

3 3 tenths
× 1 6 tenths
1 9 8
+ 3 3 0
5 2 8 hundredths

b. $3.3 \times 0.8 =$

3 3 tenths
× 8 tenths

c. $4.4 \times 3.2 =$

d. $2.2 \times 1.6 =$

2. Multiply using fraction form and unit form. The first one is partially done for you.

a. $3.36 \times 1.4 = \frac{336}{100} \times \frac{14}{10}$

$= \frac{336 \times 14}{1{,}000}$

$= \frac{4{,}704}{1{,}000}$

$= 4.704$

3 3 6 hundredths
× 1 4 tenths

b. $3.35 \times 0.7 =$

3 3 5 hundredths
× 7 tenths

c. $4.04 \times 3.2 =$

d. $4.4 \times 0.16 =$

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1. Convert. Express your answer as a mixed number, if possible.

a. 2 ft = $\frac{2}{3}$ yd 2 ft = 2 × 1 ft = 2 × $\frac{1}{3}$ yd = $\frac{2}{3}$ yd	b. 6 ft = _____ yd 6 ft = 6 × 1 ft = 6 × _____ yd = _____ yd
c. 5 in = _____ ft	d. 14 in = _____ ft
e. 7 oz = _____ lb	f. 20 oz = _____ lb
g. 1 pt = _____ qt	h. 4 pt = _____ qt

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1. Convert. Show your work. Express your answer as a mixed number. The first one is done for you.

a. $2\frac{2}{3}$ yd = 8 ft

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

$= 2\frac{2}{3} \times 3$ ft

$= \frac{8}{3} \times 3$ ft

$= \frac{24}{3}$ ft

$= 8$ ft

b. $1\frac{1}{4}$ ft = _____ yd

$1\frac{1}{4}$ ft $= 1\frac{1}{4} \times 1$ ft

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

$= \frac{5}{4} \times \frac{1}{3}$ yd

=

c. $3\frac{5}{6}$ ft = _____ in

d. $7\frac{1}{2}$ pt = _____ qt

e. $4\frac{3}{10}$ hr = _____ min

f. 33 months = _____ years

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