

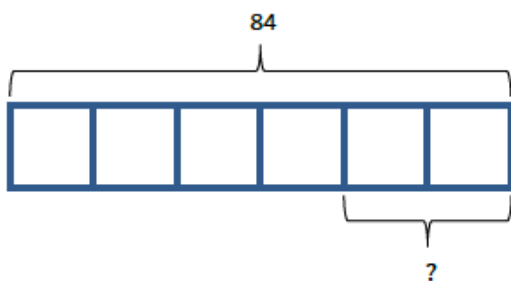
Name _____

Date _____

1. Kim and Courtney share a 16-ounce box of cereal. By the end of the week, Kim has eaten $\frac{3}{8}$ of the box, and Courtney has eaten $\frac{1}{4}$ of the box of cereal. What fraction of the box is left?

2. Mathilde has 20 pints of green paint. She uses $\frac{2}{5}$ of it to paint a landscape and $\frac{3}{10}$ of it while painting a clover. She decides that, for her next painting, she will need 14 pints of green paint. How much more paint will she need to buy?

3. Jack, Jill, and Bill each carried a 48-ounce bucket full of water down the hill. By the time they reached the bottom, Jack's bucket was only $\frac{3}{4}$ full, Jill's was $\frac{2}{3}$ full, and Bill's was $\frac{1}{6}$ full. How much water did they spill altogether on their way down the hill?
4. Mrs. Diaz makes 5 dozen cookies for her class. One-ninth of her 27 students are absent the day she brings the cookies. If she shares the cookies equally among the students who are present, how many cookies will each student get?
5. Create a story problem about a fish tank for the tape diagram below. Your story must include a fraction.



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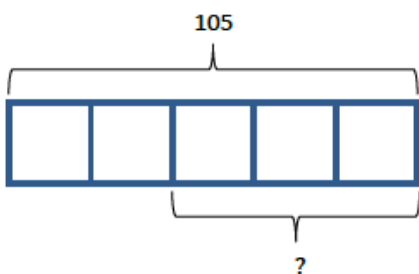
1. Jenny's mom says she has an hour before it's bedtime. Jenny spends $\frac{1}{3}$ of the hour texting a friend and $\frac{1}{4}$ of the time brushing her teeth and putting on her pajamas. She spends the rest of the time reading her book. How many minutes did Jenny read?

2. A-Plus Auto Body is painting designs on a customer's car. They had 18 pints of blue paint on hand. They used $\frac{1}{2}$ of it for the flames and $\frac{1}{3}$ of it for the sparks. They need $7\frac{3}{4}$ pints of blue paint to paint the next design. How many more pints of blue paint will they need to buy?

3. Giovanna, Frances, and their dad each carried a 10-pound bag of soil into the backyard. After putting soil in the first flower bed, Giovanna's bag was $\frac{5}{8}$ full, Frances's bag was $\frac{2}{5}$ full, and their dad's was $\frac{3}{4}$ full. How many pounds of soil did they put in the first flower bed altogether?

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.



Name _____

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Use a tape diagram to solve.

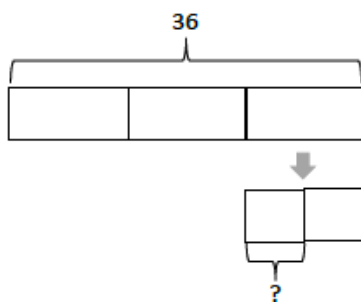
$$\frac{2}{3} \text{ of } 5$$

3. Lillian and Darlene plan to get their homework finished within one hour. Darlene completes her math homework in $\frac{3}{5}$ hour. Lillian completes her math homework with $\frac{5}{6}$ hour remaining. Who completes her homework faster, and by how many minutes?

Bonus: Give the answer as a fraction of an hour.

4. Create and solve a story problem about a baker and some flour whose solution is given by the expression $\frac{1}{4} \times (3 + 5)$.

5. Create and solve a story problem about a baker and 36 kilograms of an ingredient that is modeled by the following tape diagram. Include at least one fraction in your story.



6. Of the students in Mr. Smith's fifth-grade class, $\frac{1}{3}$ were absent on Monday. Of the students in Mrs. Jacobs' class, $\frac{2}{5}$ were absent on Monday. If there were 4 students absent in each class on Monday, how many students are in each class?

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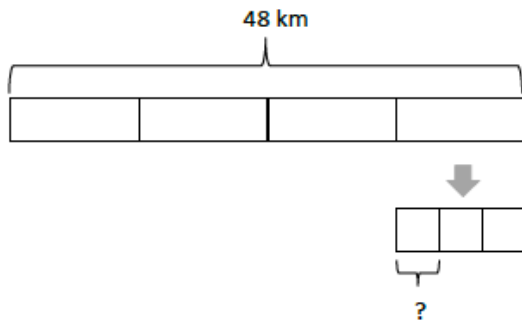
1. Terrence finished a word search in $\frac{3}{4}$ the time it took Frank. Charlotte finished the word search in $\frac{2}{3}$ the time it took Terrence. Frank finished the word search in 32 minutes. How long did it take Charlotte to finish the word search?

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?

3. In an auditorium, $\frac{1}{6}$ of the students are fifth graders, $\frac{1}{3}$ are fourth graders, and $\frac{1}{4}$ of the remaining students are second graders. If there are 96 students in the auditorium, how many second graders are there?
4. At a track meet, Jacob and Daniel compete in the 220 m hurdles. Daniel finishes in $\frac{3}{4}$ of a minute. Jacob finishes with $\frac{5}{12}$ of a minute remaining. Who ran the race in the faster time?

Bonus: Express the difference in their times as a fraction of a minute.

5. Create and solve a story problem about a runner who is training for a race. Include at least one fraction in your story.



6. Create and solve a story problem about two friends and their weekly allowance whose solution is given by the expression $\frac{1}{5} \times (12 + 8)$.

Name _____ Date _____

In a classroom, $\frac{1}{6}$ of the students are wearing blue shirts, and $\frac{2}{3}$ are wearing white shirts. There are 36 students in the class. How many students are wearing a shirt other than blue or white?

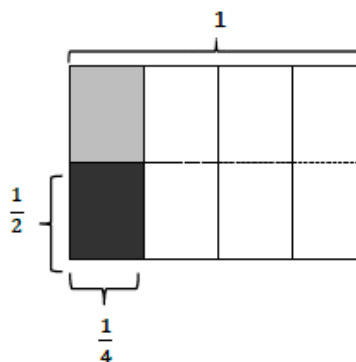
Name _____

Date _____

1. Solve. Draw a rectangular fraction model to show your thinking. Then, write a multiplication sentence. The first one has been done for you.

- a. Half of $\frac{1}{4}$ pan of brownies = $\frac{1}{8}$ pan of brownies.

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



- b. Half of $\frac{1}{3}$ pan of brownies = _____ pan of brownies.

- c. A fourth of $\frac{1}{3}$ pan of brownies = _____ pan of brownies.

d. $\frac{1}{4}$ of $\frac{1}{4}$

e. $\frac{1}{2}$ of $\frac{1}{6}$

2. Draw rectangular fraction models of $3 \times \frac{1}{4}$ and $\frac{1}{3} \times \frac{1}{4}$. Compare multiplying a number by 3 and by 1 third.
3. $\frac{1}{2}$ of Ila's workspace is covered in paper. $\frac{1}{3}$ of the paper is covered in yellow sticky notes. What fraction of Ila's workspace is covered in yellow sticky notes? Draw a picture to support your answer.
4. A marching band is rehearsing in rectangular formation. $\frac{1}{5}$ of the marching band members play percussion instruments. $\frac{1}{2}$ of the percussionists play the snare drum. What fraction of all the band members play the snare drum?
5. Marie is designing a bedspread for her grandson's new bedroom. $\frac{2}{3}$ of the bedspread is covered in race cars, and the rest is striped. $\frac{1}{4}$ of the stripes are red. What fraction of the bedspread is covered in red stripes?

Name _____

Date _____

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

2. Noah mows $\frac{1}{2}$ of his property and leaves the rest wild. He decides to use $\frac{1}{5}$ of the wild area for a vegetable garden. What fraction of the property is used for the garden? Draw a picture to support your answer.
3. Fawn plants $\frac{2}{3}$ of the garden with vegetables. Her son plants the remainder of the garden. He decides to use $\frac{1}{2}$ of his space to plant flowers, and in the rest, he plants herbs. What fraction of the entire garden is planted in flowers? Draw a picture to support your answer.
4. Diego eats $\frac{1}{5}$ of a loaf of bread each day. On Tuesday, Diego eats $\frac{1}{4}$ of the day's portion before lunch. What fraction of the whole loaf does Diego eat before lunch on Tuesday? Draw a rectangular fraction model to support your thinking.

Name _____

Date _____

1. Solve. Draw a rectangular fraction model, and write a number sentence to show your thinking.

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

2. Ms. Sheppard cuts $\frac{1}{2}$ of a piece of construction paper. She uses $\frac{1}{6}$ of the piece to make a flower. What fraction of the sheet of paper does she use to make the flower?

A

Number Correct: _____

Multiply a Fraction and a Whole Number

1.	$\frac{1}{5} \times 2 =$	
2.	$\frac{1}{5} \times 3 =$	
3.	$\frac{1}{5} \times 4 =$	
4.	$4 \times \frac{1}{5} =$	
5.	$\frac{1}{8} \times 3 =$	
6.	$\frac{1}{8} \times 5 =$	
7.	$\frac{1}{8} \times 7 =$	
8.	$7 \times \frac{1}{8} =$	
9.	$3 \times \frac{1}{10} =$	
10.	$7 \times \frac{1}{10} =$	
11.	$\frac{1}{10} \times 7 =$	
12.	$4 \div 2 =$	
13.	$4 \times \frac{1}{2} =$	
14.	$6 \div 3 =$	
15.	$\frac{1}{3} \times 6 =$	
16.	$10 \div 5 =$	
17.	$10 \times \frac{1}{5} =$	
18.	$\frac{1}{3} \times 9 =$	
19.	$\frac{2}{3} \times 9 =$	
20.	$\frac{1}{4} \times 8 =$	
21.	$\frac{3}{4} \times 8 =$	
22.	$\frac{1}{6} \times 12 =$	

23.	$\frac{5}{6} \times 12 =$	
24.	$\frac{1}{3} \times 15 =$	
25.	$\frac{2}{3} \times 15 =$	
26.	$15 \times \frac{2}{3} =$	
27.	$\frac{1}{5} \times 15 =$	
28.	$\frac{2}{5} \times 15 =$	
29.	$\frac{4}{5} \times 15 =$	
30.	$\frac{3}{5} \times 15 =$	
31.	$15 \times \frac{3}{5} =$	
32.	$18 \times \frac{1}{6} =$	
33.	$18 \times \frac{5}{6} =$	
34.	$\frac{5}{6} \times 18 =$	
35.	$24 \times \frac{1}{4} =$	
36.	$\frac{3}{4} \times 24 =$	
37.	$32 \times \frac{1}{8} =$	
38.	$32 \times \frac{3}{8} =$	
39.	$\frac{5}{8} \times 32 =$	
40.	$32 \times \frac{7}{8} =$	
41.	$\frac{5}{9} \times 54 =$	
42.	$63 \times \frac{7}{9} =$	
43.	$56 \times \frac{3}{7} =$	
44.	$\frac{6}{7} \times 49 =$	

B

Number Correct: _____

Improvement: _____

Multiply a Fraction and a Whole Number

1.	$\frac{1}{7} \times 2 =$	
2.	$\frac{1}{7} \times 3 =$	
3.	$\frac{1}{7} \times 4 =$	
4.	$4 \times \frac{1}{7} =$	
5.	$\frac{1}{10} \times 3 =$	
6.	$\frac{1}{10} \times 7 =$	
7.	$\frac{1}{10} \times 9 =$	
8.	$9 \times \frac{1}{10} =$	
9.	$3 \times \frac{1}{8} =$	
10.	$5 \times \frac{1}{8} =$	
11.	$\frac{1}{8} \times 5 =$	
12.	$10 \div 5 =$	
13.	$10 \times \frac{1}{5} =$	
14.	$9 \div 3 =$	
15.	$\frac{1}{3} \times 9 =$	
16.	$10 \div 2 =$	
17.	$10 \times \frac{1}{2} =$	
18.	$\frac{1}{3} \times 6 =$	
19.	$\frac{2}{3} \times 6 =$	
20.	$\frac{1}{6} \times 12 =$	
21.	$\frac{5}{6} \times 12 =$	
22.	$\frac{1}{4} \times 8 =$	

23.	$\frac{3}{4} \times 8 =$	
24.	$\frac{1}{5} \times 15 =$	
25.	$\frac{2}{5} \times 15 =$	
26.	$\frac{4}{5} \times 15 =$	
27.	$\frac{3}{5} \times 15 =$	
28.	$15 \times \frac{3}{5} =$	
29.	$\frac{1}{3} \times 15 =$	
30.	$\frac{2}{3} \times 15 =$	
31.	$15 \times \frac{2}{3} =$	
32.	$24 \times \frac{1}{6} =$	
33.	$24 \times \frac{5}{6} =$	
34.	$\frac{5}{6} \times 24 =$	
35.	$20 \times \frac{1}{4} =$	
36.	$\frac{3}{4} \times 20 =$	
37.	$24 \times \frac{1}{8} =$	
38.	$24 \times \frac{3}{8} =$	
39.	$\frac{5}{8} \times 24 =$	
40.	$24 \times \frac{7}{8} =$	
41.	$\frac{5}{9} \times 63 =$	
42.	$54 \times \frac{7}{9} =$	
43.	$49 \times \frac{3}{7} =$	
44.	$\frac{6}{7} \times 56 =$	

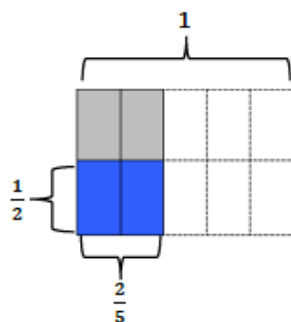
Name _____

Date _____

1. Solve. Draw a rectangular fraction model to explain your thinking. Then, write a number sentence. An example has been done for you.

Example:

$$\frac{1}{2} \text{ of } \frac{2}{5} = \frac{1}{2} \text{ of 2 fifths} = 1 \text{ fifth(s)}$$



$$\frac{1}{2} \times \frac{2}{5} = \frac{2}{10} = \frac{1}{5}$$

a. $\frac{1}{3}$ of $\frac{3}{4} = \frac{1}{3}$ of ____ fourth(s) = ____ fourth(s)

b. $\frac{1}{2}$ of $\frac{4}{5} = \frac{1}{2}$ of ____ fifth(s) = ____ fifth(s)

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

d. $\frac{2}{3}$ of $\frac{1}{2} =$

e. $\frac{1}{2} \times \frac{3}{5} =$

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

2. $\frac{5}{8}$ of the songs on Harrison's music player are hip-hop. $\frac{1}{3}$ of the remaining songs are rhythm and blues. What fraction of all the songs are rhythm and blues? Use a tape diagram to solve.
3. Three-fifths of the students in a room are girls. One-third of the girls have blond hair. One-half of the boys have brown hair.
- What fraction of all the students are girls with blond hair?
 - What fraction of all the students are boys without brown hair?
4. Cody and Sam mowed the yard on Saturday. Dad told Cody to mow $\frac{1}{4}$ of the yard. He told Sam to mow $\frac{1}{3}$ of the remainder of the yard. Dad paid each of the boys an equal amount. Sam said, "Dad, that's not fair! I had to mow one-third, and Cody only mowed one-fourth!" Explain to Sam the error in his thinking. Draw a picture to support your reasoning.

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.

Name _____

Date _____

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

$$\frac{1}{3} \text{ of } \frac{3}{7} =$$

2. In a cookie jar, $\frac{1}{4}$ of the cookies are chocolate chip, and $\frac{1}{2}$ of the rest are peanut butter. What fraction of all the cookies is peanut butter?

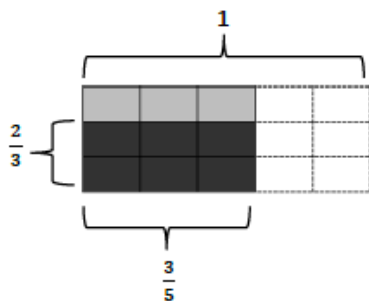
Name _____

Date _____

1. Solve. Draw a rectangular fraction model to explain your thinking. Then, write a multiplication sentence. The first one is done for you.

a. $\frac{2}{3}$ of $\frac{3}{5}$

$$\frac{2}{3} \times \frac{3}{5} = \frac{6}{15} = \frac{2}{5}$$



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

c. $\frac{2}{5}$ of $\frac{2}{3} =$

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

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

2. Multiply. Draw a rectangular fraction model if it helps you, or use the method in the example.

Example: $\frac{6}{7} \times \frac{5}{8} = \frac{\overset{3}{\cancel{6}} \times 5}{7 \times \underset{4}{\cancel{8}}} = \frac{15}{28}$

a. $\frac{3}{4} \times \frac{5}{6}$

b. $\frac{4}{5} \times \frac{5}{8}$

c. $\frac{2}{3} \times \frac{6}{7}$

d. $\frac{4}{9} \times \frac{3}{10}$

3. Phillip's family traveled $\frac{3}{10}$ of the distance to his grandmother's house on Saturday. They traveled $\frac{4}{7}$ of the remaining distance on Sunday. What fraction of the total distance to his grandmother's house was traveled on Sunday?
4. Santino bought a $\frac{3}{4}$ -pound bag of chocolate chips. He used $\frac{2}{3}$ of the bag while baking. How many pounds of chocolate chips did he use while baking?
5. Farmer Dave harvested his corn. He stored $\frac{5}{9}$ of his corn in one large silo and $\frac{3}{4}$ of the remaining corn in a small silo. The rest was taken to market to be sold.
- What fraction of the corn was stored in the small silo?
 - If he harvested 18 tons of corn, how many tons did he take to market?

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

3. Every morning, Halle goes to school with a 1-liter bottle of water. She drinks $\frac{1}{4}$ of the bottle before school starts and $\frac{2}{3}$ of the rest before lunch.
- What fraction of the bottle does Halle drink after school starts but before lunch?
 - How many milliliters are left in the bottle at lunch?
4. Moussa delivered $\frac{3}{8}$ of the newspapers on his route in the first hour and $\frac{4}{5}$ of the rest in the second hour. What fraction of the newspapers did Moussa deliver in the second hour?
5. Rose bought some spinach. She used $\frac{3}{5}$ of the spinach on a pan of spinach pie for a party and $\frac{3}{4}$ of the remaining spinach for a pan for her family. She used the rest of the spinach to make a salad.
- What fraction of the spinach did she use to make the salad?
 - If Rose used 3 pounds of spinach to make the pan of spinach pie for the party, how many pounds of spinach did Rose use to make the salad?

Name _____

Date _____

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

a. $\frac{2}{3}$ of $\frac{3}{5} =$

b. $\frac{4}{9} \times \frac{3}{8} =$

2. A newspaper's cover page is $\frac{3}{8}$ text, and photographs fill the rest. If $\frac{2}{5}$ of the text is an article about endangered species, what fraction of the cover page is the article about endangered species?

4. DeSean is sorting his rock collection. $\frac{2}{3}$ of the rocks are metamorphic, and $\frac{3}{4}$ of the remainder are igneous rocks. If the 3 rocks left over are sedimentary, how many rocks does DeSean have?
5. Milan puts $\frac{1}{4}$ of her lawn-mowing money in savings and uses $\frac{1}{2}$ of the remaining money to pay back her sister. If she has \$15 left, how much did she have at first?
6. Parks is wearing several rubber bracelets. $\frac{1}{3}$ of the bracelets are tie-dye, $\frac{1}{6}$ are blue, and $\frac{1}{3}$ of the remainder are camouflage. If Parks wears 2 camouflage bracelets, how many bracelets does he have on?
7. Ahmed spent $\frac{1}{3}$ of his money on a burrito and a water bottle. The burrito cost 2 times as much as the water. The burrito cost \$4. How much money does Ahmed have left?

- c. If every student got one vote, but there were 25 students absent on the day of the vote, how many students are there at Riverside Elementary School?
- d. Seven-tenths of the votes for blue were made by girls. Did girls who voted for blue make up more than or less than half of all votes? Support your reasoning with a picture.
- e. How many girls voted for blue?

Name _____

Date _____

Solve and show your thinking with a tape diagram.

Three-quarters of the boats in the marina are white, $\frac{4}{7}$ of the remaining boats are blue, and the rest are red. If there are 9 red boats, how many boats are in the marina?

Name _____

Date _____

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

a. $\frac{1}{10} \times \frac{1}{10}$
 $= \frac{1 \times 1}{10 \times 10}$
 $= \frac{1}{100}$

$\frac{1}{10}$ $\frac{1}{10}$
 $0.1 \times 0.1 = 0.01$

b. $\frac{4}{10} \times \frac{3}{10}$

c. $\frac{1}{10} \times 1.4$

d. $\frac{6}{10} \times 1.7$

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

$$\begin{aligned} \text{a. } 5 \times 0.7 &= \underline{\hspace{2cm}} \\ &= 5 \times \frac{7}{10} \\ &= \frac{5 \times 7}{10} \\ &= \frac{35}{10} \\ &= 3.5 \end{aligned}$$

$$\begin{aligned} \text{b. } 0.5 \times 0.7 &= \underline{\hspace{2cm}} \\ &= \frac{5}{10} \times \frac{7}{10} \\ &= \frac{5 \times 7}{10 \times 10} \\ &= \end{aligned}$$

$$\begin{aligned} \text{c. } 0.05 \times 0.7 &= \underline{\hspace{2cm}} \\ &= \frac{5}{100} \times \frac{7}{10} \\ &= \frac{\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}}{100 \times 10} \\ &= \end{aligned}$$

$$\text{d. } 6 \times 0.3 = \underline{\hspace{2cm}}$$

$$\text{e. } 0.6 \times 0.3 = \underline{\hspace{2cm}}$$

$$\text{f. } 0.06 \times 0.3 = \underline{\hspace{2cm}}$$

$$\text{g. } 1.2 \times 4 = \underline{\hspace{2cm}}$$

$$\text{h. } 1.2 \times 0.4 = \underline{\hspace{2cm}}$$

$$\text{i. } 0.12 \times 0.4 = \underline{\hspace{2cm}}$$

3. A Boy Scout has a length of rope measuring 0.7 meter. He uses 2 tenths of the rope to tie a knot at one end. How many meters of rope are in the knot?
4. After just 4 tenths of a 2.5-mile race was completed, Lenox took the lead and remained there until the end of the race.
- How many miles did Lenox lead the race?
 - Reid, the second-place finisher, developed a cramp with 3 tenths of the race remaining. How many miles did Reid run without a cramp?

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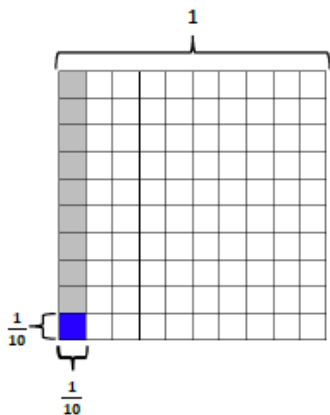
1. Multiply and model. Rewrite each expression as a number sentence with decimal factors. The first one is done for you.

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

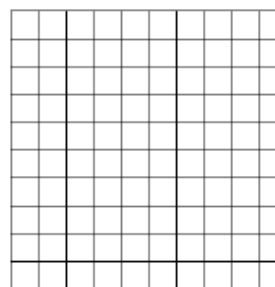
$= \frac{1 \times 1}{10 \times 10}$

$= \frac{1}{100}$

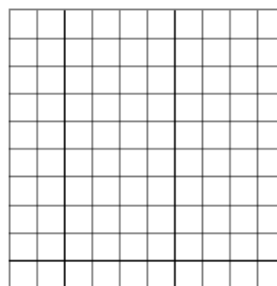
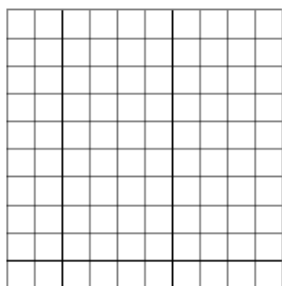
$0.1 \times 0.1 = 0.01$



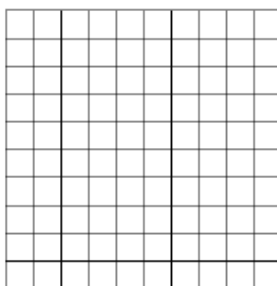
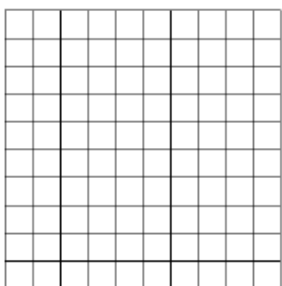
b. $\frac{6}{10} \times \frac{2}{10}$



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



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



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

a. $4 \times 0.6 = \underline{\hspace{2cm}}$

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

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

$$= \frac{24}{10}$$

$$= 2.4$$

b. $0.4 \times 0.6 = \underline{\hspace{2cm}}$

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

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

$$=$$

c. $0.04 \times 0.6 = \underline{\hspace{2cm}}$

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

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

$$=$$

d. $7 \times 0.3 = \underline{\hspace{2cm}}$

e. $0.7 \times 0.3 = \underline{\hspace{2cm}}$

f. $0.07 \times 0.3 = \underline{\hspace{2cm}}$

g. $1.3 \times 5 = \underline{\hspace{2cm}}$

h. $1.3 \times 0.5 = \underline{\hspace{2cm}}$

i. $0.13 \times 0.5 = \underline{\hspace{2cm}}$

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?

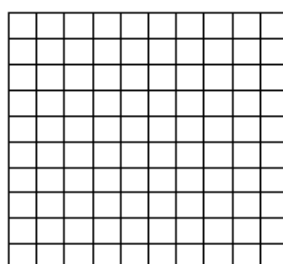
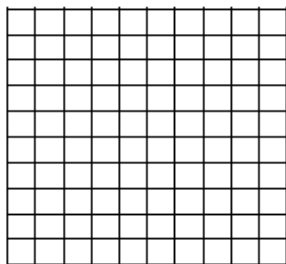
b. Cameron was 1.3 miles ahead of Cassius. How many miles did Cameron hike already?

Name _____

Date _____

1. Multiply and model. Rewrite the expression as a number sentence with decimal factors.

$$\frac{1}{10} \times 1.2$$



2. Multiply.

a. $1.5 \times 3 =$ _____

b. $1.5 \times 0.3 =$ _____

c. $0.15 \times 0.3 =$ _____

A

Number Correct: _____

Multiply Fractions

1.	$\frac{1}{2} \times \frac{1}{2} =$	
2.	$\frac{1}{2} \times \frac{1}{3} =$	
3.	$\frac{1}{2} \times \frac{1}{4} =$	
4.	$\frac{1}{2} \times \frac{1}{7} =$	
5.	$\frac{1}{7} \times \frac{1}{2} =$	
6.	$\frac{1}{3} \times \frac{1}{2} =$	
7.	$\frac{1}{3} \times \frac{1}{3} =$	
8.	$\frac{1}{3} \times \frac{1}{6} =$	
9.	$\frac{1}{3} \times \frac{1}{5} =$	
10.	$\frac{1}{5} \times \frac{1}{3} =$	
11.	$\frac{1}{5} \times \frac{2}{3} =$	
12.	$\frac{2}{5} \times \frac{2}{3} =$	
13.	$\frac{1}{4} \times \frac{1}{3} =$	
14.	$\frac{1}{4} \times \frac{2}{3} =$	
15.	$\frac{3}{4} \times \frac{2}{3} =$	
16.	$\frac{1}{6} \times \frac{1}{3} =$	
17.	$\frac{5}{6} \times \frac{1}{3} =$	
18.	$\frac{5}{6} \times \frac{2}{3} =$	
19.	$\frac{5}{4} \times \frac{2}{3} =$	
20.	$\frac{1}{5} \times \frac{1}{5} =$	
21.	$\frac{2}{5} \times \frac{2}{5} =$	
22.	$\frac{2}{5} \times \frac{3}{5} =$	

23.	$\frac{2}{5} \times \frac{5}{3} =$	
24.	$\frac{3}{5} \times \frac{5}{2} =$	
25.	$\frac{1}{3} \times \frac{1}{3} =$	
26.	$\frac{1}{3} \times \frac{2}{3} =$	
27.	$\frac{2}{3} \times \frac{2}{3} =$	
28.	$\frac{2}{3} \times \frac{3}{2} =$	
29.	$\frac{2}{3} \times \frac{4}{3} =$	
30.	$\frac{2}{3} \times \frac{5}{3} =$	
31.	$\frac{3}{2} \times \frac{3}{5} =$	
32.	$\frac{3}{4} \times \frac{1}{5} =$	
33.	$\frac{3}{4} \times \frac{4}{5} =$	
34.	$\frac{3}{4} \times \frac{5}{5} =$	
35.	$\frac{3}{4} \times \frac{6}{5} =$	
36.	$\frac{1}{4} \times \frac{6}{5} =$	
37.	$\frac{1}{7} \times \frac{1}{7} =$	
38.	$\frac{1}{8} \times \frac{3}{5} =$	
39.	$\frac{5}{6} \times \frac{1}{4} =$	
40.	$\frac{3}{4} \times \frac{3}{4} =$	
41.	$\frac{2}{3} \times \frac{6}{6} =$	
42.	$\frac{3}{4} \times \frac{6}{2} =$	
43.	$\frac{7}{8} \times \frac{7}{9} =$	
44.	$\frac{7}{12} \times \frac{9}{8} =$	

B

Number Correct: _____

Improvement: _____

Multiply Fractions

1.	$\frac{1}{2} \times \frac{1}{3} =$	
2.	$\frac{1}{2} \times \frac{1}{4} =$	
3.	$\frac{1}{2} \times \frac{1}{5} =$	
4.	$\frac{1}{2} \times \frac{1}{9} =$	
5.	$\frac{1}{9} \times \frac{1}{2} =$	
6.	$\frac{1}{5} \times \frac{1}{2} =$	
7.	$\frac{1}{5} \times \frac{1}{3} =$	
8.	$\frac{1}{5} \times \frac{1}{7} =$	
9.	$\frac{1}{5} \times \frac{1}{3} =$	
10.	$\frac{1}{3} \times \frac{1}{5} =$	
11.	$\frac{1}{3} \times \frac{2}{5} =$	
12.	$\frac{2}{3} \times \frac{2}{5} =$	
13.	$\frac{1}{3} \times \frac{1}{4} =$	
14.	$\frac{1}{3} \times \frac{3}{4} =$	
15.	$\frac{2}{3} \times \frac{3}{4} =$	
16.	$\frac{1}{3} \times \frac{1}{6} =$	
17.	$\frac{2}{3} \times \frac{1}{6} =$	
18.	$\frac{2}{3} \times \frac{5}{6} =$	
19.	$\frac{3}{2} \times \frac{3}{4} =$	
20.	$\frac{1}{5} \times \frac{1}{5} =$	
21.	$\frac{3}{5} \times \frac{3}{5} =$	
22.	$\frac{3}{5} \times \frac{4}{5} =$	

23.	$\frac{3}{5} \times \frac{5}{4} =$	
24.	$\frac{4}{5} \times \frac{5}{3} =$	
25.	$\frac{1}{4} \times \frac{1}{4} =$	
26.	$\frac{1}{4} \times \frac{3}{4} =$	
27.	$\frac{3}{4} \times \frac{3}{4} =$	
28.	$\frac{3}{4} \times \frac{4}{3} =$	
29.	$\frac{3}{4} \times \frac{5}{4} =$	
30.	$\frac{3}{4} \times \frac{6}{4} =$	
31.	$\frac{4}{3} \times \frac{4}{6} =$	
32.	$\frac{2}{3} \times \frac{1}{5} =$	
33.	$\frac{2}{3} \times \frac{4}{5} =$	
34.	$\frac{2}{3} \times \frac{5}{5} =$	
35.	$\frac{2}{3} \times \frac{6}{5} =$	
36.	$\frac{1}{3} \times \frac{6}{5} =$	
37.	$\frac{1}{9} \times \frac{1}{9} =$	
38.	$\frac{1}{5} \times \frac{3}{8} =$	
39.	$\frac{3}{4} \times \frac{1}{6} =$	
40.	$\frac{2}{3} \times \frac{2}{3} =$	
41.	$\frac{3}{4} \times \frac{8}{8} =$	
42.	$\frac{2}{3} \times \frac{6}{3} =$	
43.	$\frac{6}{7} \times \frac{8}{9} =$	
44.	$\frac{7}{12} \times \frac{8}{7} =$	

Name _____

Date _____

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

$$\begin{aligned} \text{a. } 2.3 \times 1.8 &= \frac{23}{10} \times \frac{18}{10} \\ &= \frac{23 \times 18}{100} \\ &= \frac{414}{100} \\ &= 4.14 \end{aligned}$$

$$\begin{array}{r} 23 \text{ tenths} \\ \times 18 \text{ tenths} \\ \hline 184 \\ + 230 \\ \hline 414 \text{ hundredths} \end{array}$$

$$\text{b. } 2.3 \times 0.9 = \quad \begin{array}{r} 23 \text{ tenths} \\ \times 9 \text{ tenths} \end{array}$$

$$\text{c. } 6.6 \times 2.8 =$$

$$\text{d. } 3.3 \times 1.4 =$$

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

$$\begin{aligned} \text{a. } 2.38 \times 1.8 &= \frac{238}{100} \times \frac{18}{10} \\ &= \frac{238 \times 18}{1,000} \\ &= \frac{4,284}{1,000} \\ &= 4.284 \end{aligned}$$

$$\begin{array}{r} 238 \text{ hundredths} \\ \times 18 \text{ tenths} \\ \hline 1904 \\ + 2380 \\ \hline 4,284 \text{ thousandths} \end{array}$$

$$\text{b. } 2.37 \times 0.9 = \quad \begin{array}{r} 237 \text{ hundredths} \\ \times 9 \text{ tenths} \end{array}$$

$$\text{c. } 6.06 \times 2.8 =$$

$$\text{d. } 3.3 \times 0.14 =$$

3. Solve using the standard algorithm. Show your thinking about the units of your product. The first one is done for you.

a. $3.2 \times 0.6 = 1.92$

$$\begin{array}{r} 3 \text{ 2 tenths} \\ \times \quad 6 \text{ tenths} \\ \hline 192 \text{ hundredths} \end{array}$$

$$\frac{32}{10} \times \frac{6}{10} = \frac{32 \times 6}{100}$$

b. $3.2 \times 1.2 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 3 \text{ 2 tenths} \\ \times \quad 1 \text{ 2 tenths} \\ \hline \end{array}$$

c. $8.31 \times 2.4 = \underline{\hspace{2cm}}$

d. $7.50 \times 3.5 = \underline{\hspace{2cm}}$

4. Carolyn buys 1.2 pounds of chicken breast. If each pound of chicken breast costs \$3.70, how much will she pay for the chicken breast?
5. A kitchen measures 3.75 meters by 4.2 meters.
- Find the area of the kitchen.
 - The area of the living room is one and a half times that of the kitchen. Find the total area of the living room and the kitchen.

Name _____

Date _____

1. Multiply using fraction form and unit form. Check your answer by counting the decimal places.

The first one is done for you.

$$\begin{aligned} \text{a. } 3.3 \times 1.6 &= \frac{33}{10} \times \frac{16}{10} \\ &= \frac{33 \times 16}{100} \\ &= \frac{528}{100} \\ &= 5.28 \end{aligned}$$

$$\begin{array}{r} 33 \text{ tenths} \\ \times 16 \text{ tenths} \\ \hline 198 \\ + 330 \\ \hline 528 \text{ hundredths} \end{array}$$

$$\text{b. } 3.3 \times 0.8 = \begin{array}{r} 33 \text{ tenths} \\ \times 8 \text{ tenths} \end{array}$$

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.

$$\begin{aligned} \text{a. } 3.36 \times 1.4 &= \frac{336}{100} \times \frac{14}{10} \\ &= \frac{336 \times 14}{1,000} \\ &= \frac{4,704}{1,000} \\ &= 4.704 \end{aligned}$$

$$\begin{array}{r} 336 \text{ hundredths} \\ \times 14 \text{ tenths} \end{array}$$

$$\text{b. } 3.35 \times 0.7 = \begin{array}{r} 335 \text{ hundredths} \\ \times 7 \text{ tenths} \end{array}$$

c. $4.04 \times 3.2 =$

d. $4.4 \times 0.16 =$

3. Solve using the standard algorithm. Show your thinking about the units of your product. The first one is done for you.

a. $3.2 \times 0.6 = 1.92$

$$\begin{array}{r} 3 \text{ 2 tenths} \\ \times \quad 6 \text{ tenths} \\ \hline 1 \text{ 9 2 hundredths} \end{array}$$

$$\frac{32}{10} \times \frac{6}{10} = \frac{32 \times 6}{100}$$

b. $2.3 \times 2.1 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 2 \text{ 3 tenths} \\ \times \quad 2 \text{ 1 tenths} \\ \hline \end{array}$$

c. $7.41 \times 3.4 = \underline{\hspace{2cm}}$

d. $6.50 \times 4.5 = \underline{\hspace{2cm}}$

4. Erik buys 2.5 pounds of cashews. If each pound of cashews costs \$7.70, how much will he pay for the cashews?
5. A swimming pool at a park measures 9.75 meters by 7.2 meters.
- Find the area of the swimming pool.
 - The area of the playground is one and a half times that of the swimming pool. Find the total area of the swimming pool and the playground.

Name _____ Date _____

Multiply. Do at least one problem using unit form and at least one problem using fraction form.

a. $3.2 \times 1.4 =$

b. $1.6 \times 0.7 =$

c. $2.02 \times 4.2 =$

d. $2.2 \times 0.42 =$

Name _____ Date _____

1. Convert. Express your answer as a mixed number, if possible. The first one is done for you.

<p>a. $2 \text{ ft} = \frac{2}{3} \text{ yd}$</p> <p>$2 \text{ ft} = 2 \times 1 \text{ ft}$</p> <p>$= 2 \times \frac{1}{3} \text{ yd}$</p> <p>$= \frac{2}{3} \text{ yd}$</p>	<p>b. $4 \text{ ft} = \underline{\hspace{2cm}} \text{ yd}$</p> <p>$4 \text{ ft} = 4 \times 1 \text{ ft}$</p> <p>$= 4 \times \underline{\hspace{2cm}} \text{ yd}$</p> <p>$= \underline{\hspace{2cm}} \text{ yd}$</p> <p>$=$</p>
<p>c. $7 \text{ in} = \underline{\hspace{2cm}} \text{ ft}$</p>	<p>d. $13 \text{ in} = \underline{\hspace{2cm}} \text{ ft}$</p>
<p>e. $5 \text{ oz} = \underline{\hspace{2cm}} \text{ lb}$</p>	<p>f. $18 \text{ oz} = \underline{\hspace{2cm}} \text{ lb}$</p>

2. Regina buys 24 inches of trim for a craft project.
 - a. What fraction of a yard does Regina buy?

 - b. If a whole yard of trim costs \$6, how much did Regina pay?

3. At Yo-Yo Yogurt, the scale says that Sara has 8 ounces of vanilla yogurt in her cup. Her father's yogurt weighs 11 ounces. How many pounds of frozen yogurt did they buy altogether? Express your answer as a mixed number.

4. Pheng-Xu drinks 1 cup of milk every day for lunch. How many gallons of milk does he drink in 2 weeks?

Name _____

Date _____

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

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

2. Marty buys 12 ounces of granola.
 - a. What fraction of a pound of granola did Marty buy?

 - b. If a whole pound of granola costs \$4, how much did Marty pay?

3. Sara and her dad visit Yo-Yo Yogurt again. This time, the scale says that Sara has 14 ounces of vanilla yogurt in her cup. Her father's yogurt weighs half as much. How many pounds of frozen yogurt did they buy altogether on this visit? Express your answer as a mixed number.

4. An art teacher uses 1 quart of blue paint each month. In one year, how many gallons of paint will she use?

Name _____

Date _____

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

a. 5 in = _____ ft

b. 13 in = _____ ft

c. 9 oz = _____ lb

d. 18 oz = _____ lb

Name _____ Date _____

1. Convert. Show your work. Express your answer as a mixed number. (Draw a tape diagram if it helps you.) The first one is done for you.

<p>a. $2\frac{2}{3}$ yd = <u>8</u> ft</p> $2\frac{2}{3} \text{ yd} = 2\frac{2}{3} \times 1 \text{ yd}$ $= 2\frac{2}{3} \times 3 \text{ ft}$ $= \frac{8}{3} \times 3 \text{ ft}$ $= \frac{24}{3} \text{ ft}$ $= 8 \text{ ft}$	<p>b. $1\frac{1}{2}$ qt = _____ gal</p> $1\frac{1}{2} \text{ qt} = 1\frac{1}{2} \times 1 \text{ qt}$ $= 1\frac{1}{2} \times \frac{1}{4} \text{ gal}$ $= \frac{3}{2} \times \frac{1}{4} \text{ gal}$ $=$
<p>c. $4\frac{2}{3}$ ft = _____ in</p>	<p>d. $9\frac{1}{2}$ pt = _____ qt</p>
<p>e. $3\frac{3}{5}$ hr = _____ min</p>	<p>f. $3\frac{2}{3}$ ft = _____ yd</p>

2. Three dump trucks are carrying topsoil to a construction site. Truck A carries 3,545 lb, Truck B carries 1,758 lb, and Truck C carries 3,697 lb. How many tons of topsoil are the 3 trucks carrying altogether?
3. Melissa buys $3\frac{3}{4}$ gallons of iced tea. Denita buys 7 quarts more than Melissa. How much tea do they buy altogether? Express your answer in quarts.
4. Marvin buys a hose that is $27\frac{3}{4}$ feet long. He already owns a hose at home that is $\frac{2}{3}$ the length of the new hose. How many total yards of hose does Marvin have now?

Name _____ Date _____

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

<p>a. $2\frac{2}{3}$ yd = <u>8</u> ft</p> $2\frac{2}{3} \text{ yd} = 2\frac{2}{3} \times 1 \text{ yd}$ $= 2\frac{2}{3} \times 3 \text{ ft}$ $= \frac{8}{3} \times 3 \text{ ft}$ $= \frac{24}{3} \text{ ft}$ $= 8 \text{ ft}$	<p>b. $1\frac{1}{4}$ ft = _____ yd</p> $1\frac{1}{4} \text{ ft} = 1\frac{1}{4} \times 1 \text{ ft}$ $= 1\frac{1}{4} \times \frac{1}{3} \text{ yd}$ $= \frac{5}{4} \times \frac{1}{3} \text{ yd}$ $=$
<p>c. $3\frac{5}{6}$ ft = _____ in</p>	<p>d. $7\frac{1}{2}$ pt = _____ qt</p>
<p>e. $4\frac{3}{10}$ hr = _____ min</p>	<p>f. 33 months = _____ years</p>

2. Four members of a track team run a relay race in 165 seconds. How many minutes did it take them to run the race?
3. Horace buys $2\frac{3}{4}$ pounds of blueberries for a pie. He needs 48 ounces of blueberries for the pie. How many more pounds of blueberries does he need to buy?
4. Tiffany is sending a package that may not exceed 16 pounds. The package contains books that weigh a total of $9\frac{3}{8}$ pounds. The other items to be sent weigh $\frac{3}{5}$ the weight of the books. Will Tiffany be able to send the package?

Name _____

Date _____

Convert. Express your answer as a mixed number.

a. $2\frac{1}{6}$ ft = _____ in

b. $3\frac{3}{4}$ ft = _____ yd

c. $2\frac{1}{2}$ c = _____ pt

d. $3\frac{2}{3}$ years = _____ months