5NS2.1

Chapter Resources

Multiplying Decimals by Whole Numbers

7.
$$6 \times 10^4$$

9.
$$1.45 \times 10^3$$

15.
$$\frac{3}{5} + 3\frac{3}{8}$$

16. 9 +
$$4\frac{1}{2}$$

17.
$$16 - 5\frac{3}{5}$$



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5NS2.1

Multiplying Decimals by Whole Numbers

- 1. Andrea earns \$32.00 a day. What will she earn if she works 10 days?
- 2. Constantino cooked 5.2 lbs of beef. Each pound is 16 oz. How many ounces of beef did he cook?
- 3. Kasi is traveling in the United States. If the exchange rate is 58 rupees for every American dollar, how many rupees does it take to purchase a meal that costs \$12.98?
- 4. A school receives \$14.00 for every 1,000 labels they collect from certain products. How much money will they make if students collect 3,000 labels?
- 5. Kevin is studying Spanish, and he learns about 5.3 new words each school day. Lisa is studying French, and she learns about 4.9 new words each school day. About how many more words will Kevin learn than Lisa in 4 weeks?
- 6. An amusement park charges \$35.50 for admission. On one day, 6,789 people visited the park. The park employed 779 people that day and paid each of them an average of \$86.00 for the day. The park also paid \$17,295.00 for electricity, maintenance of the rides, and supplies. How much money did the park make that day?

5NS2.1

16. If you pay 20 cents a pound for bananas, and you buy 6 pounds of bananas, what is the total amount?



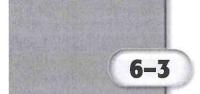
Multiply. (Lesson 6-1)

Name	Date

5NS2.1

Multiplying Decimals

- 1. Christopher walks 1.8 hours at a rate of 3.2 mi/hr. How many miles does he walk?
- 2. Kristin can ride her bike 6.2 mile in an hour. How far can she ride in 2.94 hours?
- 3. Anna works in a bakery and makes an average of 2.7 pies an hour. Her normal workday is 7.5 hours. How many pies does she make in an average day?
- **4.** Michael multiplies 1.7 × 28.2 and says that the answer is 4.794. The numbers are correct, but the decimal point is in the wrong place. Use estimation to find what the answer should actually be.
- 5. Jimmy works in a factory. He has to produce 23.9 car parts in an hour to make the number of parts required in a 7.5-hour workday. How many parts is he supposed to make in a day? One day he works faster than usual, producing 30.8 car parts per hour. How many parts does he make?
- 6. Heather can read an average of 62.7 pages in an hour. She finished her homework and has 2.87 hours to read before she has to go to sleep. Will she be able to read a 200-page book that evening? Explain your answer.



Name _____ Date _____

Homework Practice

5MR3.1, 5NS2.1

Problem-Solving Strategy

Check for Reasonableness Solve.

- **1.** Jamil volunteers once a week. He works for 3.5 hours at a time. How many hours does he work in 10 weeks?
- 2. Gamal collects cards. If he buys 4 cards a week, how many total cards will he have after 3 months?
- **3.** Kim invited 5 friends over to swim. They took turns on the 3 rafts. If they each lay on a raft for 30 minutes at a time, how long would it take for all 5 friends to have their turn?
- **4.** Ling ordered 3 hamburgers, 2 fries, and 3 drinks. If he paid with three 10-dollar bills, how much change will he get back?

Item	Cost	
Hamburger	\$3.50	
Fries	\$2.90	
Drink	\$3.95	

Spiral Review

Multiply. (Lesson 6–2)

5NS2.1, 5NS2.2

Dividing Decimals by Whole Numbers

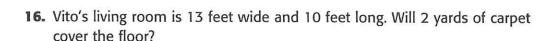
Divide. Round to the nearest tenth if necessary.

Find the mean for each set of data. Round to the nearest tenth.



Solve. Is each answer reasonable? Explain. (Lesson 6-3)

15. Laura thinks that a horse weighs 750 ounces. Is her estimate reasonable?



17. Esse has a recipe that calls for 2 quarts of tomato sauce. Will 8 cups be enough?





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5NS2.1, 5N2.2

Dividing Decimals by Whole Numbers

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1. Pablo paid \$14.75 for 5 identical items. 2. Marianne measured the rainfall in her How much did each item cost? area for a year. Her readings totaled 34.56 in. What is the average rainfall per month? **3.** Silvia is learning Spanish in school. At in. the end of the 9-month school year, Lon earned \$242.88 doing yard work. she had learned 422 new words. He owed his brother some money and To the nearest tenth, how many words was paying him back \$25 at a time. did she learn each month? To the nearest whole number, how many payments could he make from words the money he earned? _ payments

Solve. Round to the nearest tenth if necessary.

5. Harry's mother makes cakes for a local restaurant. She buys flour and sugar in large amounts. The last time she shopped, she bought 157.86 lb of flour and 82.69 lb of sugar.

If she uses 15 lb of flour and 8 lb of sugar in a day, how many days will the flour last?

days	
How many days will the sugar	last?

____ days

6. The Weston Laundry washes all the linens for local hotels. In 7 days, they washed 2,853.8 lb of towels and 3,534.7 lb of sheets.

How many pounds of laundry did they wash each day?

pounds
pourius

5NS2.1, 5NS2.2

Homework Practice

Dividing by Decimals

Divide. Round to the nearest tenth if necessary.

Evaluate each expression if a = 0.42, b = 0.73, and c = 3.48

10.
$$\frac{0.135 + 7.45}{b}$$
 _____ **11.** $c \div b \times a$ _____ **12.** $b \times c \div 1.9$ _____

11.
$$c \div b \times a$$

12.
$$b \times c \div 1.9$$

14. If you pay \$2.70 for corn, and you buy 5 pounds of corn, what is the cost per pound?

Divide. Round to nearest tenth if necessary. (Lesson 6-4)

21. If you buy dirt for your garden for \$104.40 and you buy 58 pounds of dirt, what is the cost per pound?

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1.4	a		C		

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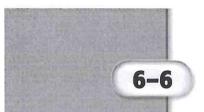
Problem-Solving Practice

5NS2.1, 5NS2.2

Dividing by Decimals

Divide. Round your answer to the nearest tenth if necessary.

1.	Zachary's pet snake eats 18 meals in 5.5 weeks. How many meals does the snake eat in 1 week?
2.	The Garcia family drove 234.8 miles for a family reunion and used 9.4 gallons of gas. How many miles did they get per gallon?
3.	Marco loves to jog. He jogs 3.2 miles every day. How many days would it take Marco to jog 96 miles?
4.	A can of tomatoes weighs 16.5 ounces. A grocery store receives a box of canned tomatoes that weighs 412.5 ounces. How many cans of tomatoes are in the box?
5.	At the school store, pencils are on sale for \$0.17 each. Mara spends \$1.36 on pencils. How many pencils did she buy?
6.	A cheetah can sprint at a speed of 70 miles per hour. A very fast human can sprint at a speed of 14.7 miles per hour. How many times faster is the cheetah than a human?
7.	Ming is making cereal bars for her school bake sale. She uses 0.3 box of cereal for each batch of bars. If Ming has 3.6 boxes, how many batches can she make?



Name _____ Date ____

Homework Practice

5MR1.1, 5NS2.1

Problem-Solving Investigation

Solve. Use any strategy to solve.

- 1. Hoshi attends her ballet class each week. At class, the students dance for 2.3 hours at a time. How many hours does she dance at class in 20 weeks?
- 2. Seki had her friends over to play. They played a board game for 45 minutes and then played cards for 30 minutes. They built a fort for 45 minutes and painted for another 30 minutes. How long was the play date?
- **3.** Jack ordered 3 drums, 2 blankets, and 3 pants. If he paid with eight 20-dollar bills, how much change will he get back?

Item	Cost
Blanket	\$15.95
Pants	\$12.99
Drum	\$24.95

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Spiral Review

Divide. (Lesson 6-5)

Grade 5

9. If you buy the same rocks and need 3.8 times that many, how much will you pay?



5MR2.5, 5NS2.5

Chapter Resource

Estimating Products of Fractions

Estimate each product.

1.
$$36 \times \frac{1}{5}$$

2.
$$\frac{5}{8} \times 100$$
 _____ **3.** $\frac{1}{3} \times 23$ _____

3.
$$\frac{1}{3} \times 23$$

4.
$$\frac{2}{3} \times 76$$

5.
$$\frac{5}{7} \times \frac{1}{8}$$

4.
$$\frac{2}{3} \times 76$$
 5. $\frac{5}{7} \times \frac{1}{8}$ **6.** $5\frac{4}{5} \times 8\frac{7}{8}$

- 7. The length is $4\frac{6}{8}$ ft and the width is $7\frac{2}{5}$ ft.
- **8.** The width is $24\frac{3}{5}$ ft and the length is $8\frac{2}{3}$ ft.
- **9.** A garden measures $5\frac{1}{3}$ ft by $10\frac{2}{3}$ ft.



Use any strategy shown below to solve. (Lesson 6-6)

- · Make an organized list.
- Determine reasonable answers.
- Use logical reasoning.
- 10. If you pay 25 cents a pound for apples, 11. You buy a shirt online that costs and you buy 12 pounds of apples, what is the total amount?
 - \$39.30. Shipping and handling was d dollars. Write an equation that represents the relationship between the delivery fee and the total cost.



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5MR2.5, 5NS2.5

Estimating Products of Fractions

Estimate each product.

- 1. The baseball team practices $1\frac{3}{4}$ hr after school. About how many hours do they practice each week?
- **2.** Tyra has 6 bricks. Each brick is $8\frac{1}{4}$ in. long. She lays them end-to-end to make a border in her garden. About how long is the border?
- **3.** A living room measures $23\frac{3}{4}$ ft wide by $23\frac{1}{4}$ ft long. Estimate the area of the room. [Hint: To find the area, multiply the width times the length.]
- **4.** Casey and his brother plan to baby-sit for $44\frac{1}{2}$ hr this month. His brother plans to do $\frac{1}{5}$ of the baby-sitting. About how much time will Casey's brother spend baby-sitting?
- 5. Neesa has 98 pictures from her trip to Mexico. She will take ³/₄ of the best shots and put them into a scrapbook. Each page can hold 4 or 5 pictures. About how many pages will she use if she puts 4 pictures on each page? If she puts 5 pictures on each page?
- 6. Chang has 288 baseball cards of players from his favorite teams. About one third of them are Boston players, about one sixth are Oakland players, and about one twelfth are Texas players. About how many cards do not represent players from these teams?

5NS2.5

Chapter Resource

Homework Practice

Multiplying Fractions

Multiply. Write in simplest form.

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

1.
$$\frac{1}{2} \times \frac{1}{4}$$
 2. $\frac{5}{6} \times \frac{2}{3}$ **3.** $\frac{3}{4} \times 3$ **...**

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

4.
$$\frac{4}{9} \times \frac{2}{8}$$

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

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

Evaluate each expression if $a = \frac{1}{2}$, $b = \frac{3}{8}$, and $c = \frac{4}{5}$.

9.
$$\frac{1}{3}c$$

10.
$$\frac{3}{4}a + \frac{2}{3}c$$
 _____ **11.** $ab + c$ _____ **12.** $\frac{4}{7}b$ _____

12.
$$\frac{4}{7}b$$

13. You pay $\frac{1}{6}$ the price for apples as compared to grapefruit. If the grapefruit is 2.99/lb, how much do you pay for apples per pound?

Spiral Review

Estimate each product. (Lesson 6-7)

14.
$$\frac{6}{7} \times \frac{1}{4}$$

14.
$$\frac{6}{7} \times \frac{1}{4}$$
 15. $\frac{1}{5} \times 31$ **16.** $\frac{2}{3} \times 61$ **17.**

16.
$$\frac{2}{3} \times 61$$

17.
$$11\frac{1}{4} \times 7\frac{1}{10}$$
 18. $\frac{1}{3} \times 28$ **19.** $2\frac{7}{9} \times 6\frac{1}{4}$

18.
$$\frac{1}{3} \times 28$$

19.
$$2\frac{7}{9} \times 6\frac{1}{4}$$

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Problem-Solving Practice

5NS2.5

Multiplying Fractions

- 1. Renee wants to make a ¹/₄ batch of muffins. If the full recipe calls for ¹/₂ cup of milk, how much milk must she use for this smaller batch?
- 2. Rob spends $\frac{1}{2}$ hour each day caring for his pets. He spends $\frac{1}{2}$ of the time taking care of his birds. How much time does Rob spend taking care of his birds?
- 3. It will take Jordan ¹/₂ a day to do the yard work around the house. He decides to spend ¹/₃ of that time mowing the lawn. How much time does Jordan spend doing other yard work?
- **4.** Anya needs to divide $\frac{2}{3}$ gallon of milk equally between her two friends. How much milk will each friend get?

- 5. Two-fifths of Troy's card collection are postcards. Of these cards, one third are from Boston and one-sixth are from New York. What fraction of Troy's cards are from Boston and New York?
- 6. If Troy decides to give one-fourth of his baseball cards to his brother and one-sixth of his baseball cards to his cousin, what fraction of his cards will he have left?

5NS2.5

Homework Practice

Multiplying Mixed Numbers

Multiply. Write in simplest form.

1.
$$\frac{1}{2} \times 5\frac{1}{4}$$
 2. $\frac{3}{5} \times 2\frac{2}{3}$ **3.** $4\frac{3}{4} \times 2$ ____

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

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

4.
$$\frac{4}{9} \times 3\frac{2}{8}$$

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

6.
$$1\frac{1}{3} \times \frac{5}{8} \times 9\frac{3}{4}$$

Chapter Resource

Evaluate each expression if $x = 3\frac{1}{3}$, $y = \frac{2}{3}$, and $z = 2\frac{3}{5}$.

9.
$$\frac{1}{3}z$$

10.
$$\frac{3}{4} \times 2\frac{2}{3} \times \frac{6}{7}$$

10.
$$\frac{3}{4} \times 2\frac{2}{3} \times \frac{6}{7}$$
 11. $\frac{1}{2} \times \frac{5}{6} \times 4\frac{6}{7}$

12. You pay $\frac{1}{6}$ the price for apples as compared to mangoes. If mangoes are \$4.99 per pound, how much do you pay for apples per pound?

Spiral Review

Multiply. Write in simplest form.

13.
$$\frac{1}{3} \times \frac{1}{2}$$

14.
$$\frac{1}{5} \times 50$$

13.
$$\frac{1}{3} \times \frac{1}{2}$$
 14. $\frac{1}{5} \times 50$ **15.** $\frac{2}{5} \times \frac{5}{13}$

16.
$$\frac{3}{4} \times \frac{2}{3}$$
 17. $\frac{1}{8} \times 56$ **18.** $\frac{7}{9} \times \frac{2}{3}$ **19.** $\frac{7}{9} \times \frac{2}{3}$

17.
$$\frac{1}{9} \times 56$$

18.
$$\frac{7}{9} \times \frac{2}{3}$$

5NS2.5

Multiplying Mixed Numbers

Multiply. Write in simplest form.

1. Erin usually walks 6 ³/₅ blocks for exercise. One day, she walks 1 ⁴/₁₁ times farther. How far did she walk?

_____ blocks

3. Aaron built a model of his favorite airplane. The length of the model is 1 ½ times its width. If its width is 7½ inches, how long is the model?

_____ inches

5. Chris collects rocks. She has 54 different types. Her friend Jenny has 1¹/₃ times as many rocks as Chris has, and their friend Julie has 1¹/₄ times as many as Jenny has. How many rocks does Julie have?

____rocks

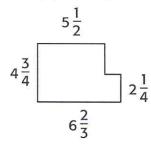
2. Felix collected $4\frac{3}{8}$ bags of trash along the highway. His friend Kenji picked up $2\frac{1}{5}$ times as much. How much trash did Kenji collect?

_____ bags

4. Mr. Craig moved to a new house. He drove $4\frac{1}{8}$ miles to his job from his old house. From his new house, he has to drive $1\frac{3}{5}$ times farther. How far does he have to drive to work now?

____ miles

6. David is planting an L-shaped vegetable garden. He measures the length and width of each section and draws the sketch below. Use his diagram to find the area of the garden. (Remember that area is found by multiplying length and width.)



_____ square feet

5NS2.5

Dividing Fractions

Find the reciprocal of each number.

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

2.
$$\frac{7}{8}$$

Divide. Write in simplest form.

3.
$$\frac{1}{2} \div \frac{3}{4}$$
 5. $\frac{3}{4} \div 2$ **5.** $\frac{3}{4} \div 2$

4.
$$\frac{3}{5} \div \frac{2}{3}$$

5.
$$\frac{3}{4} \div 2$$

6.
$$\frac{4}{9} \div \frac{2}{8}$$

7.
$$\frac{2}{3} \div \frac{2}{5}$$

6.
$$\frac{4}{9} \div \frac{2}{8}$$
 7. $\frac{2}{3} \div \frac{2}{5}$ **8.** $\frac{1}{3} \div \frac{5}{8}$

Evaluate each expression if $x = \frac{2}{3}$, $y = \frac{1}{4}$, and $z = \frac{3}{4}$.

11.
$$3x \div z$$

12. You pay $\frac{1}{3}$ the price for beans as compared to pineapple. If pineapple is \$5.99 per pound, how much do you pay for beans per pound?

Spiral Review

Multiply.

13.
$$1\frac{1}{2} \times 2\frac{3}{4}$$
 14. $\frac{1}{8} \times 2\frac{1}{2}$ **15.** $\frac{3}{4} \times 2\frac{5}{6}$

14.
$$\frac{1}{8} \times 2\frac{1}{2}$$

15.
$$\frac{3}{4} \times 2\frac{5}{6}$$

16.
$$6\frac{1}{5} \times 3\frac{3}{4}$$

17.
$$\frac{3}{5} \times 2\frac{2}{3}$$

16.
$$6\frac{1}{5} \times 3\frac{3}{4}$$
 17. $\frac{3}{5} \times 2\frac{2}{3}$ **18.** $3\frac{4}{5} \times 4\frac{1}{3}$

Evaluate each expression if $a = 1\frac{1}{4}$, $b = 3\frac{1}{3}$, and $c = 2\frac{1}{2}$.

19.
$$\frac{3}{4}b$$

20.
$$\frac{1}{2}a$$

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5NS2.5

Dividing Fractions

Divide. Write in simplest form.

1. Lynn made several pans of lasagna. Each piece is $\frac{1}{12}$ of a pan. How many pieces were in five pans of lasagna?

_____ pieces

2. Chi feeds his cat $\frac{3}{4}$ cup of food each day. How many days can he feed his cat with 6 cups of food?

_____ days

3. Zane made a recipe for a cake that requires 2 teaspoons of cinnamon. The only measuring spoon he had measures $\frac{1}{4}$ teaspoon. How many times must he use this measuring spoon to get the correct amount of cinnamon?

_____times

4. Leigh is planning a birthday party for her little sister. She bought 5 pounds of candy to fill a piñata. If each child at the party receives $\frac{1}{6}$ pound of candy, how many children will be at the party?

_____ children

5. Steve made a fruit salad for dinner. The recipe called for 4 cups of apples, $2\frac{1}{2}$ cups of nuts, 2 cups of celery, and $\frac{1}{2}$ cup of raisins. If each person eats $\frac{1}{2}$ cup of the salad, how many people will the salad serve?

_____ people

6. Anita is placing mulch around her trees and shrubs. She bought 20 pounds of mulch. If each tree or shrub requires $\frac{2}{3}$ pound of mulch, how many trees and shrubs can she mulch?

_____ shrubs and trees

5NS2.5

Homework Practice

Dividing Mixed Numbers

Divide. Write in simplest form.

1.
$$6\frac{2}{3} \div \frac{7}{8}$$
 2. $\frac{7}{8} \div \frac{1}{3}$ **3.** $8 \div \frac{3}{4}$ **4.** $5\frac{3}{5} \div \frac{2}{3}$

2.
$$\frac{7}{8} \div \frac{1}{3}$$

3.
$$8 \div \frac{3}{4}$$

4.
$$5\frac{3}{5} \div \frac{2}{3}$$

Chapter Resource

5.
$$12 \div \frac{3}{4}$$

6.
$$\frac{4}{9} \div \frac{1}{8}$$

5.
$$12 \div \frac{3}{4}$$
 6. $\frac{4}{9} \div \frac{1}{8}$ **7.** $3\frac{1}{2} \div 2\frac{2}{3}$ **8.** $3\frac{1}{3} \div 4\frac{5}{8}$

8.
$$3\frac{1}{3} \div 4\frac{5}{8}$$

Evaluate each expression if x = 6, $y = 3\frac{4}{5}$, and $z = 1\frac{1}{2}$.

10.
$$x \div z$$

11.
$$\frac{1}{3}z$$

12. How many full $\frac{7}{8}$ pound jars of jelly can Alexa make from $9\frac{12}{13}$ pounds of jelly?

Spiral Review

Divide. Write in simplest form. (Lesson 6-10)

13.
$$\frac{3}{4} \div \frac{1}{2}$$

13.
$$\frac{3}{4} \div \frac{1}{2}$$
 14. $\frac{3}{5} \div \frac{7}{8}$ **15.** $\frac{1}{8} \div \frac{4}{5}$

15.
$$\frac{1}{8} \div \frac{4}{5}$$

Find the value of each expression if $a = \frac{1}{4}$, $b = \frac{1}{2}$, and $c = \frac{2}{5}$.

17.
$$a \div b + c$$
 ______ **18.** $b \div c$ _____

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5NS2.5

Dividing Mixed Numbers

Divide.

- 1. You are making bags of oranges. You have 3 baskets of oranges and each basket holds $2\frac{1}{8}$ pounds of oranges. How many bags can you make that are $\frac{1}{2}$ pound?
- **2.** A farmer harvests $75\frac{5}{6}$ pounds of beans a day. The farmer works $8\frac{1}{3}$ hours each day. How many pounds of beans does he harvest each hour?
- **3.** If you are laying out a photo page and have each photo cut to $3\frac{2}{5}$ inches wide, how many can you fit in a row that is $27\frac{1}{5}$ inches long? There are no spaces between the photos.
- **4.** If you cut blankets from a piece of fleece that is $2\frac{1}{4}$ yard long, how many $\frac{3}{4}$ yard pieces will you cut?
- **5.** How many $8\frac{3}{4}$ ounce steaks can you make from $61\frac{1}{4}$ ounces of meat?
- **6.** If you drive $240\frac{1}{2}$ miles on your trip in $10\frac{3}{4}$ hours, how many miles per hour did you travel? Write in simplest form.