

# Multiplying Decimals by 10, 100, or 1,000

Use mental math to find each product.

1.  $53.7 \times 10$  \_\_\_\_\_
2.  $74.3 \times 100$  \_\_\_\_\_
3.  $66.37 \times 1,000$  \_\_\_\_\_
4.  $1.03 \times 10$  \_\_\_\_\_
5.  $92.5 \times 10$  \_\_\_\_\_
6.  $0.8352 \times 100$  \_\_\_\_\_
7.  $0.567 \times 100$  \_\_\_\_\_
8.  $572.6 \times 1,000$  \_\_\_\_\_
9.  $5.8 \times 100$  \_\_\_\_\_
10.  $0.21 \times 1,000$  \_\_\_\_\_
11.  $6.2 \times 1,000$  \_\_\_\_\_
12.  $1.02 \times 10$  \_\_\_\_\_
13.  $0.003 \times 1,000$  \_\_\_\_\_
14.  $0.002 \times 10$  \_\_\_\_\_
15.  $7.03 \times 10$  \_\_\_\_\_
16.  $4.06 \times 100$  \_\_\_\_\_

17. **Algebra** Kendra bought 10 gallons of gasoline at \$3.26 per gallon. How much did she pay for the gasoline?

A \$326.00    B \$32.60    C \$1.26    D \$0.26

18. **Strategy Practice** Freddy is helping buy ingredients for salads for the school spaghetti dinner. He bought 10 pounds of onions at \$0.69 per pound, 100 pounds of tomatoes at \$0.99 per pound, 1,000 pounds of bread crumbs at \$0.09 per pound, and 100 pounds of lettuce at \$0.69 per pound. Which of the items he bought cost the most?

A tomatoes    B lettuce    C bread crumbs    D onions

19. **Explain It** Marco and Suzi each multiplied  $0.721 \times 100$ . Marco got 7.21 for his product. Suzi got 72.1 for her product. Which student multiplied correctly? How do you know?

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Name \_\_\_\_\_

# Multiplying Two Decimals

Find each product.

1. 
$$\begin{array}{r} 3.7 \\ \times 0.3 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 4.4 \\ \times 0.2 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 0.61 \\ \times 6.8 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 1.9 \\ \times 0.005 \\ \hline \end{array}$$

5.  $0.79 \times 4.3 =$  \_\_\_\_\_

6.  $0.79 \times 0.005 =$  \_\_\_\_\_

7. **Number Sense** The product of 4.7 and 6.5 equals 30.55. What is the product of 4.7 and 0.65? 4.7 and 65?

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8. What would be the gravity in relation to Earth of a planet with 3.4 times the gravity of Mercury?

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9. The gravity of Venus is 0.35 times that of Jupiter. What is the gravity of Venus in relation to Earth's gravity?

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**Relative (to Earth)  
Surface Gravity**

Planet	Gravity
Mercury	0.39
Neptune	1.22
Jupiter	2.6

10. How many decimal places are in the product of a number with decimal places to the thousandths multiplied by a number with decimal places to the hundredths?

**A** 2

**B** 3

**C** 4

**D** 5

11. **Explain It** Explain how you know the number of decimal places that should be in the product when you multiply two decimal numbers together.

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# Dividing Decimals by 10, 100, or 1,000

Find each quotient. Use mental math.

1.  $86.6 \div 10 =$  \_\_\_\_\_

2.  $192.5 \div 100 =$  \_\_\_\_\_

3.  $1.99 \div 100 =$  \_\_\_\_\_

4.  $0.87 \div 10 =$  \_\_\_\_\_

5.  $228.55 \div 1,000 =$  \_\_\_\_\_

6.  $0.834 \div 100 =$  \_\_\_\_\_

7.  $943.35 \div 1,000 =$  \_\_\_\_\_

8.  $1.25 \div 10 =$  \_\_\_\_\_

**Algebra** Write 10, 100, or 1,000 for each  $n$ .

9.  $78.34 \div n = 0.7834$     10.  $0.32 \div n = 0.032$     11.  $(75.34 - 25.34) \div n = 5$

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12. There are 145 children taking swimming lessons at the pool. If 10 children will be assigned to each instructor, how many instructors need to be hired?

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13. Ronald ran 534.3 mi in 100 days. If he ran an equal distance each day, how many miles did he run per day?

A 5

B 5.13

C 5.343

D 6.201

14. **Explain It** Carlos says that  $17.43 \div 100$  is the same as  $174.3 \times 0.01$ . Is he correct? Explain.

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Name \_\_\_\_\_

# Dividing a Decimal by a Whole Number

Find each quotient.

1.  $13 \overline{)68.9}$

2.  $35 \overline{)412.3}$

3.  $90 \overline{)14.4}$

4.  $60 \overline{)53.4}$

5.  $123.08 \div 34 =$  \_\_\_\_\_

6.  $0.57 \div 30 =$  \_\_\_\_\_

7.  $562.86 \div 59 =$  \_\_\_\_\_

8.  $24.4 \div 80 =$  \_\_\_\_\_

9. John paid \$7.99 for 3 boxes of cereal. The tax was \$1.69. Excluding tax, how much did John pay for each box of cereal if they all were the same price? \_\_\_\_\_

10. If a package of granola bars with 12 bars costs \$3.48, how much does each granola bar cost?

A 29¢

B 31¢

C 44¢

D \$1.00

11. **Estimation**  $64.82 \div 11$  is

A a little more than 6.

C a little less than 6.

B a little more than 60.

D a little less than 60.

12. **Explain It** Explain how to divide 0.12 by 8.

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# Estimation: Decimals Divided by Whole Numbers

Estimate each quotient.

1.  $73.5 \div 10$  \_\_\_\_\_

2.  $246.78 \div 83$  \_\_\_\_\_

3.  $185.7 \div 3$  \_\_\_\_\_

4.  $535.6 \div 35$  \_\_\_\_\_

5.  $553.9 \div 90$  \_\_\_\_\_

6.  $366.6 \div 12$  \_\_\_\_\_

7.  $35.6 \div 7$  \_\_\_\_\_

8.  $86.4 \div 4$  \_\_\_\_\_

9.  $270.53 \div 3$  \_\_\_\_\_

10.  $839.7 \div 90$  \_\_\_\_\_

11.  $93.26 \div 3$  \_\_\_\_\_

12.  $77.3 \div 11$  \_\_\_\_\_

13. Joseph is saving \$23 a week to buy a graphing calculator that costs \$275.53. About how many weeks will it take before he can buy the calculator?

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14. Juan works at a health food store two hours a day, three days a week. His weekly pay is \$73.50. About how much does Juan make per hour?

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15. **Reasonableness** Which of the following is a reasonable estimate for the operation  $566.3 \div 63$ ?

A about 16

B about 9

C about 4

D about 6

16. **Explain It** When would you estimate a quotient instead of finding the exact quotient?

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# Dividing a Decimal by a Decimal

Find each quotient.

1.  $0.8 \overline{)1.84}$

2.  $0.9 \overline{)2.7}$

3.  $2.5 \overline{)4.75}$

4.  $1.1 \overline{)1.21}$

5.  $7.1 \overline{)6.39}$

6.  $0.8 \overline{)0.648}$

7.  $1.3 \overline{)10.725}$

8.  $0.2 \overline{)0.51}$

9.  $0.07 \overline{)0.77}$

10.  $4.8 \overline{)4.32}$

11.  $0.7 \overline{)8.4}$

12.  $2.3 \overline{)6.9}$

13. Chan paid \$4.75 for trail mix that costs \$2.50 a pound. How many pounds of trail mix did he buy?

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14. Max's family car has a gas tank that holds 12.5 gallons of gas. It cost \$40.62 to completely fill the tank yesterday. What was the price of gas per gallon?

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15. **Strategy Practice** Strawberries cost \$5.99 per pound, and bananas cost \$0.59 per pound. How many pounds of bananas could you buy for the cost of one pound of strawberries?

**A** 101.5 pounds   **B** 10.15 pounds   **C** 5.99 pounds   **D** .59 pounds

16. **Explain It** When dividing a decimal by a decimal, why is it sometimes necessary to add a zero to the right of the decimal point in the quotient?

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# Problem Solving: Multiple-Step Problems

Write and answer the hidden question or questions in each problem and then solve the problem.

Write your answer in a complete sentence.

Storewide Sale	
Jeans	\$29.95 for 1 pair OR 2 pairs for \$55.00
T-shirts	\$9.95 for 1 OR 3 T-shirts for \$25.00

1. Sue bought 2 pairs of jeans and a belt that cost \$6.95. The tax on the items was \$5.85. Sue paid the cashier \$70.00. How much money did Sue receive in change?

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2. A recreation department purchased 12 T-shirts for day camp. The department does not have to pay sales tax. It paid with a \$100.00 bill. How much change did it receive?

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3. When Mrs. Johnson saw the sale, she decided to get clothes for each child in her family. She bought each of her 6 children a pair of jeans and a T-shirt. She paid \$14.35 in sales tax. How much was Mrs. Johnson's total bill?

**A** \$94.35      **B** \$119.70      **C** \$229.35      **D** \$253.35

4. **Write a Problem** Write a two-step problem that contains a hidden question about buying something at the mall. Tell what the hidden question is and solve your problem. Use \$8.95 somewhere in your equation. Write your answer in a complete sentence.

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5. **Explain It** What are hidden questions and why are they important when solving multiple-step problems?

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