

## Review Examples and Exercises

### 3.1 Decimals and Estimation (pp. 106–111)

Estimate by rounding to the nearest whole number.

a.  $9.6 \times 16.2$

$$9.6 \times 16.2 \approx 10 \times 16 = 160$$

9.6 rounds up to 10.

16.2 rounds down to 16.

So,  $9.6 \times 16.2$  is about 160.

b.  $55.7 \div 8.43$

$$55.7 \div 8.43 \approx 56 \div 8 = 7$$

55.7 rounds up to 56.

8.43 rounds down to 8.

So,  $55.7 \div 8.43$  is about 7.

Use compatible numbers to estimate the product or quotient.

a.  $32.21 \times 4.87$

$$32.21 \times 4.87 \approx 30 \times 5$$

30 and 5 are compatible numbers.

$$= 150$$

Multiply.

So,  $32.21 \times 4.87$  is about 150.

b.  $73.63 \div 24.88$

$$73.63 \div 24.88 \approx 75 \div 25$$

75 and 25 are compatible numbers.

$$= 3$$

Divide.

So,  $73.63 \div 24.88$  is about 3.

### Exercises

Estimate by rounding each factor to the nearest whole number.

1.  $15.8 \times 2.1$

2.  $24.45 \times 5.27$

3.  $31.98 \div 4.21$

Use compatible numbers to estimate the product or quotient.

4.  $22.9 \times 3.02$

5.  $47.89 \div 6.99$

6.  $87.57 \div 10.97$

### 3.2 Multiplying Decimals and Whole Numbers (pp. 112–117)

Find  $3.6 \times 4$ .

$$\begin{array}{r} 3.6 \\ \times 4 \\ \hline 14.4 \end{array}$$

One decimal place

Count one decimal place from right to left

#### Exercises

Multiply. Use estimation to check your answer.

7.  $5.3 \times 8$                       8.  $6.1 \times 7$                       9.  $4.68 \times 3$   
10.  $8.194 \times 9$                       11.  $0.052 \times 4$                       12.  $0.302 \times 5$
13. **BIKING** Your friend lives 1.3 miles from you. One week, you rode your bike to your friend's house and back home three times. How many miles did you ride?

### 3.3 Multiplying Decimals (pp. 118–123)

Find  $7.5 \times 5.3$ .

$$\begin{array}{r} 7.5 \\ \times 5.3 \\ \hline 225 \\ + 375 \\ \hline 39.75 \end{array}$$

1 decimal place

+ 1 decimal place

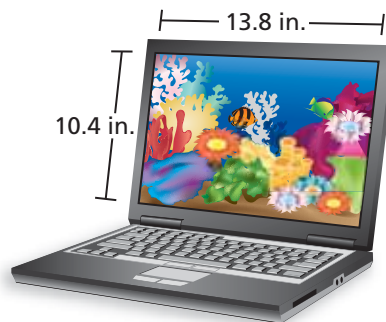
2 decimal places

So,  $7.5 \times 5.3 = 39.75$ .

#### Exercises

Multiply. Use estimation to check your answer.

14.  $4.8 \times 1.9$                       15.  $6.2 \times 5.18$                       16.  $5.45 \times 3.57$   
17.  $9.475 \times 8.03$                       18.  $0.27 \times 4.42$                       19.  $0.051 \times 0.244$
20. **AREA** Find the area of the computer screen.



### 3.4 Dividing Decimals by Whole Numbers (pp. 126–131)

Find  $0.64 \div 5$ .

$$\begin{array}{r}
 0.128 \\
 5 \overline{)0.640} \\
 \underline{-5} \phantom{0} \\
 14 \phantom{0} \\
 \underline{-10} \phantom{0} \\
 40 \\
 \underline{-40} \\
 0
 \end{array}$$

Place the decimal point in the quotient above the decimal point in the dividend.

Insert a zero and continue to divide.

So,  $0.64 \div 5 = 0.128$ .

#### Exercises

Evaluate the expression.

21.  $6.8 \div 4$

22.  $13.2 \div 6 + 4$

23.  $49.7 \div 7$

24.  $3.68 \div 8$

25.  $3.15 \div 9$

26.  $46.25 \div 5 - 2$

27. **SOCCER LEAGUE** It costs \$542.24 for a team to play in an indoor soccer league. There are 18 players on the team and they split the cost evenly. How much does each player pay?

### 3.5 Dividing Decimals (pp. 132–137)

Find  $22.8 \div 1.2$ .

$$\begin{array}{r}
 19. \\
 12 \overline{)228.} \\
 \underline{-12} \phantom{0} \\
 108 \\
 \underline{-108} \\
 0
 \end{array}$$

Multiply 1.2 by 10.

Multiply 22.8 by 10.

Place the decimal point above the decimal point in the dividend 228.

So,  $22.8 \div 1.2 = 19$ .

#### Exercises

Divide.

28.  $1.2 \div 0.4$

29.  $0.195 \div 1.5$

30.  $34.992 \div 5.4$

31.  $0.12 \overline{)3.6}$

32.  $2.5 \overline{)0.125}$

33.  $3.9 \overline{)22.23}$