

# Reteaching 1-3

## Multiplying Decimals

Multiply  $5.43 \times 1.8$ .

- ① Multiply as if the numbers were whole numbers.

$$\begin{array}{r} 5.43 \\ \times 1.8 \\ \hline 4344 \end{array} \left. \vphantom{\begin{array}{r} 5.43 \\ \times 1.8 \\ \hline 4344 \end{array}} \right\} 3 \text{ decimal places}$$

- ② Count the total number of decimal places in the factors.

$$\begin{array}{r} + 543 \\ \hline 9.774 \end{array} \leftarrow 3 \text{ decimal places}$$

- ③ Place the decimal point in the product.

Find each product.

1.  $\begin{array}{r} 1.42 \\ \times 7.2 \\ \hline \end{array}$

2.  $\begin{array}{r} 2.2 \\ \times 4.1 \\ \hline \end{array}$

3.  $\begin{array}{r} 5.11 \\ \times 0.3 \\ \hline \end{array}$

4.  $\begin{array}{r} 3.68 \\ \times 5.8 \\ \hline \end{array}$

5.  $2.8 \times 0.05$

\_\_\_\_\_

6.  $1.45 \cdot 0.7$

\_\_\_\_\_

7.  $(2.07)(4.9)$

\_\_\_\_\_

8.  $9.3(0.56)$

\_\_\_\_\_

9.  $0.006(3.75)$

\_\_\_\_\_

10.  $3.8 \times 912$

\_\_\_\_\_

Rewrite each equation with the decimal point in the correct place in the product.

11.  $19.2 \times 12.3 = 23616$

\_\_\_\_\_

12.  $4.35(2.44) = 106140$

\_\_\_\_\_

13.  $14 \times 8.66 = 12124$

\_\_\_\_\_

14.  $10.821 \times 62.4 = 6752304$

\_\_\_\_\_

15.  $1.321 \times 2.23 = 294583$

\_\_\_\_\_

16.  $0.233 \times 19.22 = 447826$

\_\_\_\_\_

# Reteaching 1-4

## Dividing Decimals

Divide  $38.25 \div 1.5$ .

- ① Rewrite the problem with a whole number divisor.

$$1.5 \overline{)38.25}$$

↓

- ② Place the decimal point in the quotient.

$$1.5 \overline{)38.25}$$

↑    ↑

Move 1 place each.

- ③ Divide. Then check.

$$\begin{array}{r} 25.5 \\ 15 \overline{)382.5} \\ \underline{-30} \phantom{.5} \\ 82 \phantom{.5} \\ \underline{-75} \phantom{.5} \\ 75 \phantom{.5} \\ \underline{-75} \\ 0 \end{array}$$

$$25.5 \times 15 = 382.5 \checkmark$$

Multiply to check.

Rewrite each problem so the divisor is a whole number.

- |                                   |                                 |                                   |
|-----------------------------------|---------------------------------|-----------------------------------|
| 1. $5.1 \overline{)351.9}$ _____  | 2. $1.8 \overline{)14.9}$ _____ | 3. $0.32 \overline{)3968}$ _____  |
| 4. $0.06 \overline{)0.948}$ _____ | 5. $0.8 \overline{)2112}$ _____ | 6. $0.49 \overline{)9.457}$ _____ |

Find each quotient.

- |                             |                             |                             |
|-----------------------------|-----------------------------|-----------------------------|
| 7. $2 \overline{)15.8}$     | 8. $0.4 \overline{)22}$     | 9. $0.09 \overline{)99}$    |
| 10. $2.7 \overline{)12.15}$ | 11. $0.14 \overline{)2814}$ | 12. $0.08 \overline{)0.64}$ |

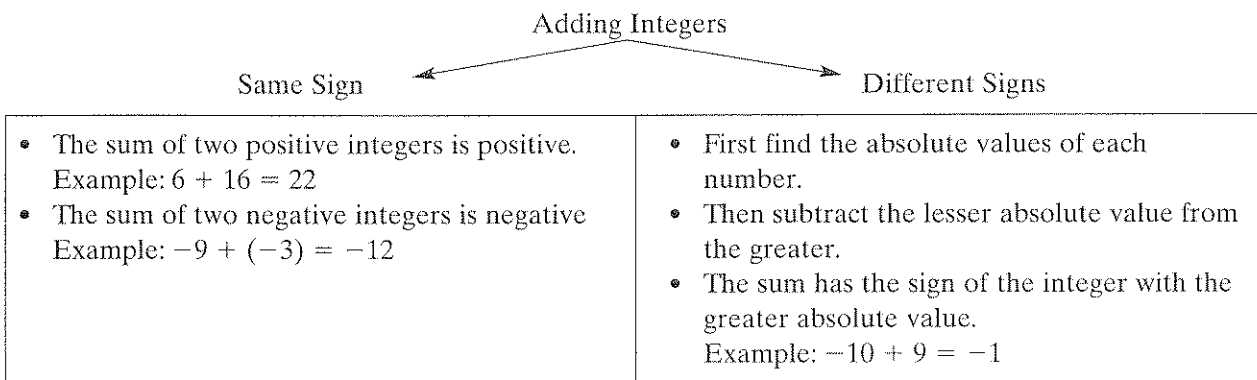
Rewrite each equation with the decimal point in the correct place in the quotient.

- |                                    |  |   |
|------------------------------------|--|---|
| 13. $18.6 \div 2.4 = 775$<br>_____ | 14. $44.66 \div 11.2 = 39875$<br>_____   | 15. $48.15 \div 16.05 = 30$<br>_____      |
| 16. $10.8 \div 0.9 = 120$<br>_____ | 17. $111.6018 \div 16.2 = 6889$<br>_____ | 18. $41.35456 \div 3.2 = 129233$<br>_____ |

# Reteaching 1-7

## Adding and Subtracting Integers

Use these rules to add and subtract integers.



Subtracting Integers

- To subtract integers, add the opposite.
  - Then following the rules for adding integers.  
Example:  $6 - (-3) = 6 + 3 = 9$

**Find each sum.**

- |                       |                      |                      |
|-----------------------|----------------------|----------------------|
| 1. $8 + (-2)$ _____   | 2. $-9 + 4$ _____    | 3. $3 + (-2)$ _____  |
| 4. $-1 + 11$ _____    | 5. $12 + 13$ _____   | 6. $-9 + 5$ _____    |
| 7. $7 + 2$ _____      | 8. $-1 + (-7)$ _____ | 9. $-3 + 0$ _____    |
| 10. $-1 + (-1)$ _____ | 11. $6 + 5$ _____    | 12. $3 - (-2)$ _____ |

**Complete.**

- |                  |  |
|------------------|--|
| 13. $-3 - 4$     | Change to addition: $-3 +$ _____ $=$ _____ |
| 14. $5 - 2$      | Change to addition: $5 +$ _____ $=$ _____  |
| 15. $-6 - (-10)$ | Change to addition: $-6 +$ _____ $=$ _____ |

**Find each difference.**

- |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|
| 16. $4 - 5$ _____     | 17. $-5 - 4$ _____    | 18. $-8 - (-7)$ _____ |
| 19. $19 - (-6)$ _____ | 20. $-10 - 12$ _____  | 21. $-12 - 10$ _____  |
| 22. $-4 - (-5)$ _____ | 23. $-2 - (-3)$ _____ | 24. $9 - (-7)$ _____  |
| 25. $0 - 3$ _____     | 26. $6 - 8$ _____     | 27. $0 - (-10)$ _____ |

# Reteaching 1-8

## Multiplying and Dividing Integers

### To multiply integers:

- If the signs are alike, the product is positive.

$$2 \cdot 3 = 6$$

$$-2 \cdot -3 = 6$$

- If the signs are different, the product is negative.

$$2 \cdot -3 = -6$$

$$-2 \cdot 3 = -6$$

### To divide integers:

- If the signs are alike, the quotient is positive.

$$6 \div 3 = 2$$

$$-6 \div -3 = 2$$

- If the signs are different, the quotient is negative.

$$6 \div -3 = -2$$

$$-6 \div 3 = -2$$

Study these four examples. Write positive or negative to complete each statement.

$$7 \cdot 3 = 21$$

$$-7 \cdot -3 = 21$$

$$7 \cdot -3 = -21$$

$$-7 \cdot 3 = -21$$

1. When both integers are positive, the product is \_\_\_\_\_.
2. When one integer is positive and one is negative, the product is \_\_\_\_\_.
3. When both integers are negative, the product is \_\_\_\_\_.

$$21 \div 3 = 7$$

$$21 \div -3 = -7$$

$$-21 \div -3 = 7$$

$$-21 \div 3 = -7$$

4. When both integers are positive, the quotient is \_\_\_\_\_.
5. When both integers are negative, the quotient is \_\_\_\_\_.
6. When one integer is positive and one is negative, the quotient is \_\_\_\_\_.

Tell whether each product or quotient will be *positive* or *negative*.

- |                            |                           |                            |                            |
|----------------------------|---------------------------|----------------------------|----------------------------|
| 7. $4 \cdot 7$<br>_____    | 8. $-4 \cdot 7$<br>_____  | 9. $-4 \cdot -7$<br>_____  | 10. $4 \cdot -7$<br>_____  |
| 11. $10 \cdot -4$<br>_____ | 12. $-25 \div 5$<br>_____ | 13. $-2 \cdot -2$<br>_____ | 14. $100 \div 10$<br>_____ |

# Reteaching 2-1

## Exponents and Order of Operations

You can use a shortcut to indicate repeated multiplication. The **exponent** tells how many times the **base** is used as a factor.

$$5 \times 5 \times 5 \times 5 = 5^4 = 625$$

↙ exponent  
↑ base

$5^4$  is called an **exponential expression** and 625 is the **value of the expression**.

You can use this sentence  $\longrightarrow$  **Please Excuse My Dear Aunt Sally**, to remember the order of operations for expressions with exponents.

$$\begin{aligned}
 2^2 + 4(7 - 3) + 6 &= 2^2 + 4(4) + 6 \\
 &= 4 + 4(4) + 6 \\
 &= 4 + 16 + 6 \\
 &= 26
 \end{aligned}$$

- P** Do all operations within **P**arentheses first.
- E** Evaluate any terms with **E**xponents.
- M-D** **M**ultiply and **D**ivide in order from left to right.
- A-S** **A**dd and **S**ubtract in order from left to right.

Write each expression using exponents.

1.  $6 \times 6 \times 6 \times 6 \times 6$  \_\_\_\_\_

2.  $0.2 \times 0.2 \times 0.2$  \_\_\_\_\_

Write each expression as a product of its factors. Then evaluate each expression.

3.  $12^2$

\_\_\_\_\_

4.  $8^3$

\_\_\_\_\_

5.  $(0.4)^3$

\_\_\_\_\_

6.  $1.4^2$

\_\_\_\_\_

Simplify each expression.

7.  $7^2 + 3^3$

\_\_\_\_\_

8.  $5(0.2 + 0.8)^{10}$

\_\_\_\_\_

9.  $(9 - 7)^2$

\_\_\_\_\_

10.  $(8^2 + 16) \div 2$

\_\_\_\_\_

11.  $(4 + 7)^2 - 8$

\_\_\_\_\_

12.  $(9 - 3)^2 + 6 \times 2$

\_\_\_\_\_

All rights reserved.

© Pearson Education, Inc., publishing as Pearson Prentice Hall.

## Reteaching 2-7

Rational Numbers

A **rational number** is a number that can be written as a quotient of two integers, where the divisor is not zero.

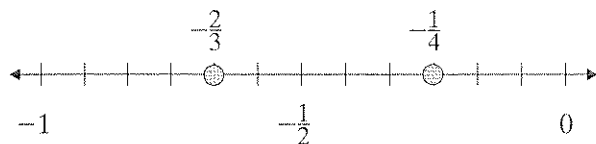
A negative rational number can be written in three different ways.

$$-\frac{2}{3} = \frac{-2}{3} = \frac{2}{-3}$$

### Comparing Negative Rational Numbers

Compare  $-\frac{2}{3}$  and  $-\frac{1}{4}$ .

**Method 1** Use a number line. Graph both points on a number line and see which is farther to the left.



Since  $-\frac{2}{3}$  is farther to the left,  $-\frac{2}{3} < -\frac{1}{4}$ .

**Method 2** Use the lowest common denominator.

$$-\frac{2}{3} = \frac{-2}{3} = \frac{-2 \times 4}{3 \times 4} = \frac{-8}{12} \qquad -\frac{1}{4} = \frac{-1}{4} = \frac{-1 \times 3}{4 \times 3} = \frac{-3}{12}$$

Since  $\frac{-8}{12} < \frac{-3}{12}$ , then  $-\frac{2}{3} < -\frac{1}{4}$ .

**Compare. Use  $<$ ,  $>$ , or  $=$ .**

1.  $-\frac{4}{9} \square -\frac{2}{3}$

2.  $-1 \square -\frac{4}{5}$

3.  $-\frac{7}{8} \square -\frac{1}{8}$

4.  $-\frac{1}{3} \square -\frac{5}{6}$

5.  $-\frac{2}{5} \square -\frac{1}{10}$

6.  $-\frac{2}{8} \square -\frac{1}{4}$

**Order from least to greatest.**

7.  $-\frac{1}{3}, 0.3, -0.35, -\frac{3}{10}$

8.  $\frac{1}{5}, -0.25, 0.21, \frac{3}{10}$

\_\_\_\_\_

9. You and your brother invested an equal amount of money in a college savings plan. In the last quarter your investment was worth  $1\frac{5}{6}$  of its original value. Your brother's investment was worth 1.85 of its original value. Whose investment is worth more?

\_\_\_\_\_

All rights reserved.

© Pearson Education, Inc., publishing as Pearson Prentice Hall.

# Reteaching 3-3

## Adding and Subtracting Mixed Numbers

Follow these steps to add or subtract mixed numbers with different denominators.

- |   |   |  |
|---|---|--|
|   | Add: $2\frac{2}{5} + 1\frac{3}{4}$                | Subtract: $4\frac{1}{3} - 2\frac{5}{6}$          |
| ① Write the equivalent fractions with the LCD.                      | $2\frac{8}{20} + 1\frac{15}{20}$                  | $4\frac{2}{6} - 2\frac{5}{6}$                    |
| ② Rename, if necessary.   |   | $4\frac{2}{6} = 3 + 1\frac{2}{6} = 3\frac{8}{6}$ |
| ③ Add or subtract the whole numbers. Add or subtract the fractions. | $2\frac{8}{20} + 1\frac{15}{20} = 3\frac{23}{20}$ | $3\frac{8}{6} - 2\frac{5}{6} = 1\frac{3}{6}$     |
| ④ Simplify.   | $3\frac{23}{20} = 4\frac{3}{20}$                  | $1\frac{3}{6} = 1\frac{1}{2}$                    |

Complete to find each sum or difference.

1.  $4\frac{3}{4} - 2\frac{3}{8}$   
 $4\frac{\square}{8} - 2\frac{\square}{8} = \square\frac{\square}{\square}$

2.  $4\frac{7}{12} + 2\frac{5}{6}$   
 $4\frac{\square}{12} + 2\frac{\square}{\square} = \square\frac{\square}{\square}$   
 $= \square\frac{\square}{\square}$

3.  $4\frac{1}{3} - 1\frac{3}{5}$   
 $4\frac{\square}{15} - 1\frac{\square}{15}$   
 $= \square\frac{\square}{\square} - \square\frac{\square}{\square}$   
 $= \square\frac{\square}{\square}$

Find each sum or difference. Write it in simplest form.

- |   |  |  |
|---|--|--|
| 4. $2\frac{3}{5} + 1\frac{1}{10}$ _____   | 5. $2\frac{5}{6} + 3\frac{4}{9}$ _____   | 6. $5 - 3\frac{7}{10}$ _____             |
| 7. $3\frac{1}{6} - 2\frac{1}{3}$ _____    | 8. $4\frac{3}{4} - 1\frac{2}{3}$ _____   | 9. $3\frac{1}{2} + 4\frac{1}{3}$ _____   |
| 10. $3\frac{3}{10} + 1\frac{3}{5}$ _____  | 11. $6\frac{1}{3} + 7\frac{1}{4}$ _____  | 12. $4\frac{3}{5} + 6\frac{7}{10}$ _____ |
| 13. $7\frac{15}{16} - 2\frac{3}{8}$ _____ | 14. $4 - 2\frac{3}{10}$ _____            | 15. $2\frac{1}{2} + 5\frac{3}{5}$ _____  |
| 16. $7\frac{1}{4} - 3\frac{3}{5}$ _____   | 17. $9\frac{3}{5} + 1\frac{7}{10}$ _____ | 18. $6 - 5\frac{5}{6}$ _____             |

19. Shea cut  $2\frac{1}{8}$  in. material off of the bottom of a  $21\frac{1}{4}$  in. skirt. How long is the skirt now?

\_\_\_\_\_

© Pearson Education, Inc., publishing as Pearson Prentice Hall. All rights reserved.

# Reteaching 3-4

## Multiplying Fractions and Mixed Numbers

Follow these steps to multiply fractions and mixed numbers.

- |   |  |   |
|---|--|---|
|   | Multiply: $\frac{3}{4} \cdot \frac{2}{5}$    | Multiply: $2\frac{2}{3} \cdot 1\frac{5}{8}$     |
| ① Write the mixed numbers as improper fractions if necessary. |  | $\frac{8}{3} \cdot \frac{13}{8}$                |
| ② Multiply numerators.<br>Multiply denominators.              | $\frac{3 \cdot 2}{4 \cdot 5} = \frac{6}{20}$ | $\frac{8 \cdot 13}{3 \cdot 8} = \frac{104}{24}$ |
| ③ Simplify, if necessary.                                     | $\frac{6}{20} = \frac{3}{10}$                | $\frac{104}{24} = 4\frac{1}{3}$                 |

Complete to find each product.

1.  $\frac{1}{5} \cdot \frac{2}{3}$

$$\frac{1 \cdot 2}{5 \cdot 3} = \frac{\square}{\square}$$

Product \_\_\_\_\_

2.  $\frac{1}{4} \cdot 4\frac{1}{8}$

$$\frac{1}{4} \cdot \frac{\square}{8} = \frac{\square}{32}$$

Product \_\_\_\_\_

3.  $2\frac{3}{4} \cdot 1\frac{2}{3}$

$$\frac{\square}{4} \cdot \frac{\square}{3} = \frac{\square}{12}$$

Product \_\_\_\_\_

Find each product. Write the product in simplest form.

4.  $\frac{5}{8} \cdot \frac{2}{5}$  \_\_\_\_\_

5.  $\frac{5}{12} \cdot \frac{3}{10}$  \_\_\_\_\_

6.  $\frac{1}{2} \cdot 5\frac{1}{6}$  \_\_\_\_\_

7.  $1\frac{2}{3} \cdot 5$  \_\_\_\_\_

8.  $2\frac{3}{5} \cdot \frac{1}{4}$  \_\_\_\_\_

9.  $2\frac{3}{5} \cdot \frac{7}{8}$  \_\_\_\_\_

10.  $4\frac{1}{5} \cdot \frac{5}{7}$  \_\_\_\_\_

11.  $\frac{1}{2} \cdot 2\frac{1}{8}$  \_\_\_\_\_

12.  $3\frac{5}{6} \cdot 2\frac{1}{4}$  \_\_\_\_\_

13.  $2\frac{5}{7} \cdot 1\frac{1}{3}$  \_\_\_\_\_

14.  $7\frac{2}{3} \cdot 2\frac{1}{7}$  \_\_\_\_\_

15.  $5\frac{1}{2} \cdot 2\frac{2}{3}$  \_\_\_\_\_

16.  $\frac{5}{6} \cdot 3\frac{3}{5}$  \_\_\_\_\_

17.  $7\frac{3}{4} \cdot 2$  \_\_\_\_\_

All rights reserved.

© Pearson Education, Inc., publishing as Pearson Prentice Hall.

# Reteaching 3-5

## Dividing Fractions and Mixed Numbers

To find the **reciprocal** of a fraction, interchange the numerator and the denominator.

Examples: The reciprocal of  $\frac{1}{4}$  is  $\frac{4}{1}$ . The reciprocal of  $\frac{7}{5}$  is  $\frac{5}{7}$ .

Follow these steps to divide fractions and mixed numbers.

- |  |   |  |
|--|---|--|
|  | Divide: $\frac{2}{3} \div \frac{1}{4}$      | Divide: $3\frac{3}{4} \div 1\frac{2}{5}$       |
| ① Rewrite mixed numbers as improper fractions as needed. | $\frac{2}{3} \cdot \frac{4}{1}$             | $\frac{15}{4} \div \frac{7}{5}$                |
| ② Multiply by the reciprocal of the divisor.             | $\frac{2 \cdot 4}{3 \cdot 1} = \frac{8}{3}$ | $\frac{15 \cdot 5}{4 \cdot 7} = \frac{75}{28}$ |
| ③ Multiply numerators.<br>Multiply denominators.         | $\frac{8}{3} = 2\frac{2}{3}$                | $\frac{75}{28} = 2\frac{19}{28}$               |
| ④ Simplify.  |   |  |

Find the reciprocal of each number.

1.  $\frac{7}{8}$  \_\_\_\_\_      2.  $\frac{8}{3}$  \_\_\_\_\_      3.  $\frac{9}{10}$  \_\_\_\_\_

Write each mixed number as an improper fraction. Then find the reciprocal.

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

Complete to find each quotient. Write the quotient in simplest form.

- |   |   |   |
|---|---|---|
| <p>7. <math>\frac{2}{3} \div \frac{3}{8}</math></p> $\frac{2}{3} \cdot \frac{\square}{\square} = \frac{\square}{9}$ <p>Quotient _____</p> | <p>8. <math>10 \div \frac{7}{8}</math></p> $\frac{\square}{1} \div \frac{7}{8} = \frac{\square}{1} \cdot \frac{\square}{\square}$ $= \frac{\square}{7}$ <p>Quotient _____</p> | <p>9. <math>3\frac{3}{5} \div 1\frac{1}{5}</math></p> $\frac{\square}{5} \div \frac{\square}{5} = \frac{\square}{5} \cdot \frac{\square}{\square}$ $= \frac{\square}{30}$ <p>Quotient _____</p> |
| <p>10. <math>\frac{1}{5} \div \frac{1}{2}</math> _____</p>  | <p>11. <math>\frac{3}{8} \div \frac{2}{5}</math> _____</p>  | <p>12. <math>8 \div \frac{4}{5}</math> _____</p>  |
| <p>13. <math>6 \div \frac{3}{4}</math> _____</p>  | <p>14. <math>1\frac{1}{8} \div 2\frac{2}{5}</math> _____</p>  | <p>15. <math>3\frac{1}{5} \div 2\frac{2}{3}</math> _____</p>  |

All rights reserved.

© Pearson Education, Inc., publishing as Pearson Prentice Hall.