

**Chapter R PREALGEBRA REVIEW****R.1 Fractions****Key Terms**

1. equivalent fractions
2. improper fraction
3. numerator
4. proper fraction
5. denominator
6. composite number
7. prime factorization
8. prime number
9. lowest terms

**Objective 1**

1. prime
3. neither

**Objective 2**

5.  $2 \cdot 7 \cdot 7$
7.  $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$

**Objective 3**

9.  $\frac{7}{25}$
11.  $3\frac{1}{2}$

**Objective 4**

13.  $4\frac{7}{9}$
15.  $\frac{122}{9}$

**Objective 5**

17.  $\frac{15}{2}$  or  $7\frac{1}{2}$
19.  $\frac{45}{4}$  or  $11\frac{1}{4}$

**Objective 6**

21.  $\frac{256}{225}$  or  $1\frac{31}{225}$
23.  $\frac{125}{12}$  or  $10\frac{5}{12}$

**Objective 7**

25. \$220.50
27.  $3\frac{1}{4}$  yards
29.  $7\frac{5}{16}$  in.<sup>2</sup>

## R.2 Decimals and Percents

### Key Terms

1. decimals                      2. place value                      3. percent

### Objective 1

1.  $\frac{42}{100}$                       3.  $2\frac{54}{10,000}$                       5.  $30\frac{5}{10,000}$

### Objective 2

7. 15.05                      9. 609.168

### Objective 3

11. 2.3424                      13. 40.32                      15. .4292

### Objective 4

17. .5625                      19. .755

### Objective 5

21. .275                      23. .004                      25. .84%

### Objective 6

27.  $23.\bar{3}\%$                       29. \$36

**Chapter 1 THE REAL NUMBER SYSTEM****1.1 Exponents, Order of Operations, and Inequality****Key Terms**

1. exponential expression
2. base
3. exponent

**Objective 1**

1. 27
3.  $\frac{16}{81}$
5. 13.824

**Objective 2**

7. 45
9.  $\frac{29}{16}$

**Objective 3**

11. -8
13. 48
15. 96

**Objective 4**

17. false
19. false

**Objective 5**

21.  $7 = 13 - 6$
23.  $30 - 7 > 20$
25.  $20 \geq 2 \cdot 7$

**Objective 6**

27.  $\frac{2}{3} < \frac{3}{4}$
29.  $.0002 < .002$

## 1.2 Variables, Expressions, and Equations

### Key Terms

1. equation
2. variable
3. algebraic expression
4. solution

### Objective 1

1. 8
3.  $-\frac{9}{2}$
5.  $\frac{28}{13}$

### Objective 2

7.  $1 + 3x$
9.  $10x + 21$
11.  $8x - 11$

### Objective 3

13. no
15. no
17. yes

### Objective 4

19.  $5x + 2 = 23$
21.  $6(5 + x) = 19$
23.  $61 - 7x = 13 + x$

### Objective 5

25. expression
27. equation
29. expression

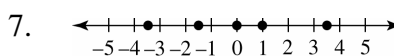
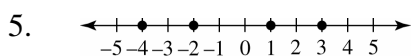
### 1.3 Real Numbers and the Number Line

#### Key Terms

- |                      |                   |                          |
|----------------------|-------------------|--------------------------|
| 1. whole numbers     | 2. opposite       | 3. integers              |
| 4. natural numbers   | 5. absolute value | 6. number line           |
| 7. irrational number | 8. coordinate     | 9. negative number       |
| 10. positive number  | 11. real numbers  | 12. set-builder notation |
| 13. rational number  |                   |                          |

#### Objective 1

1. -75 pounds                      3. -396 meters



#### Objective 2

9. -6.01                      11. -4                      13. true                      15. false

#### Objective 3

17. 25                      19. -22                      21. 0                      23.  $\frac{5}{7}$

#### Objective 4

25. -10                      27.  $\frac{5}{6}$                       29. 2

## 1.4 Adding Real Numbers

### Key Terms

1. sum                                  2. addends

### Objective 1

1.  $-40$                                   3.  $-18$                                   5.  $\frac{7}{5}$

### Objective 2

7.  $-5$                                   9.  $0$                                   11.  $\frac{1}{35}$

### Objective 3

13. true                                  15. false                                  17. false

### Objective 4

19.  $-16$                                   21.  $-6$                                   23.  $-\frac{7}{8}$

### Objective 5

25.  $-8 + (-4) + (-11); -23$                                   27.  $-10 + [20 + (-4)]; 6$   
29. \$495

**1.5 Subtracting Real Numbers****Key Terms**

1. minuend                      2. subtrahend                      3. difference

**Objective 1**

1. 3                                  3. 0                                  5. -7

**Objective 2**

7. 7                                  9. 0                                  11. 4.4

13.  $-\frac{1}{30}$

**Objective 3**

15. 18                                  17. 18                                  19. -2

21.  $-\frac{23}{18}$  or  $-1\frac{5}{8}$

**Objective 4**

23.  $-4 - 4; -8$                       25.  $(-4 + 12) - 9; -1$                       27.  $-51.2^\circ\text{C}$

29.  $37^\circ\text{F}$

## 1.6 Multiplying and Dividing Real Numbers

### Key Terms

1. quotient                      2. reciprocals                      3. product

### Objective 1

1.  $-28$                       3.  $-\frac{7}{12}$

### Objective 2

5.  $40$                       7.  $2.73$

### Objective 3

9.  $-\frac{1}{6}$                       11.  $0$                       13.  $-2.5$

### Objective 4

15.  $70$                       17.  $\frac{16}{21}$

### Objective 5

19.  $7$                       21.  $17$

### Objective 6

23.  $(-7)(3) + (-7); -28$                       25.  $-12 + \frac{49}{-7}; -19$

### Objective 7

27.  $\frac{2}{3}x = -7$                       29.  $\frac{x}{-4} = 1$



**1.7 Properties of Real Numbers****Key Terms**

1. identity element for addition
2. identity element for multiplication

**Objective 1**

1. 4
3.  $[10 + (-9)]$
5.  $\left(\frac{1}{4} \cdot 2\right)$

**Objective 2**

7. (4)
9.  $4a$
11.  $[(-r)(-p)]$

**Objective 3**

13. 4
15. 12
17.  $\frac{30}{30}$  or 1

**Objective 4**

19. 4; inverse
21. 0; identity
23.  $-\frac{6}{17}$ ; inverse

**Objective 5**

25.  $4b + 8$
27.  $-10y + 18z$
29.  $-14(x + y)$

## 1.8 Simplifying Expressions

### Key Terms

1. numerical coefficient
2. term
3. like terms

### Objective 1

1.  $8x + 27$
3.  $5 + s$
5.  $35n - 9$

### Objective 2

7.  $-2$
9.  $1$
11.  $\frac{7}{9}$

### Objective 3

13. like
15. unlike
17. unlike

### Objective 4

19.  $5r - 4$
21.  $1.7y^2 - .5xy$
23.  $-1.5y + 16$

### Objective 5

25.  $6x + 12 + 4x = 10x + 12$
27.  $3(9 + 2x) + 4x = 10x + 27$
29.  $4(2x - 6x) + 6(x + 9) = -10x + 54$