

# SOLUTIONS MANUAL



## INTRODUCTORY AND INTERMEDIATE ALGEBRA

through Applications

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## Chapter R PREALGEBRA REVIEW

### Objective 1 To review exponents and order of operations.

1.  $11^4 \cdot 7^3$       2. 200      3. 0      4. 42  
5. 2

### Objective 2 To review factors, primes, and least common multiples.

6. composite      7.  $2^2 \cdot 3^2$       8.  $2^2 \cdot 3 \cdot 5$       9. 70  
10. 120

### Objective 3 To review fractions.

11.  $\frac{35}{8}$       12.  $2\frac{4}{7}$       13.  $\frac{45}{28}$       14.  $2\frac{4}{5}$   
15. 26

### Objective 4 To review decimals.

16. Thirteen and five hundred six thousandths  
17. 4.6      18. 17.32      19. 4.439      20. 25.8

### Objective 5 To review percents.

21.  $\frac{24}{100} = \frac{6}{25}$       22. 0.72      23. 2.25%      24. 62.5%  
25. 52%

### Objective 6 To review applications of basic mathematics.

26. 75°F      27.  $1\frac{1}{4}$  mi      28. \$24      29. \$0.80  
30.  $\frac{8}{100} = \frac{2}{25}$

## Chapter 1 REAL NUMBERS AND ALGEBRAIC EXPRESSIONS

### 1.1 Real Numbers and the Real-Number Line

#### Key Terms

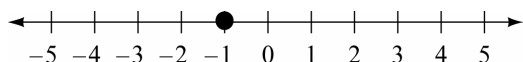
1. integers
2. origin
3. negative numbers
4. neither terminate nor
5. irrational numbers

#### Objective 1

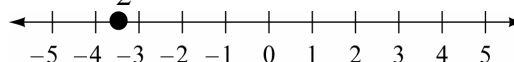
1. rational, real
2. rational, real
3. whole, integer, rational, real
4. rational, real
5. integer, rational, real
6. natural, whole, integer, rational, real

#### Objective 2

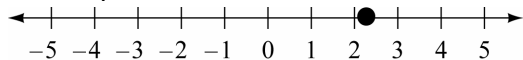
7.  $-1$



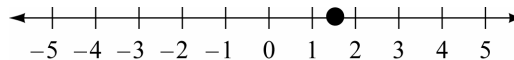
8.  $-3\frac{1}{2}$



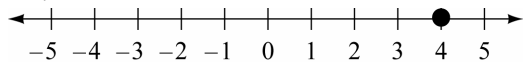
9.  $2\frac{1}{4}$



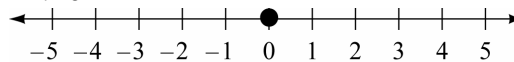
10.  $1.5$



11.  $4$



12.  $0$



#### Objective 3

13. 4.6
14.  $-18$
15. 0
16. 12
17.  $-3.7$
18. 9

#### Objective 4

19. False
20. False
21.  $-3 > -3.5$
22.  $-6 < 0$
23.  $-5.3 < |-2.9|$
24.  $|9| = |-9|$