

ANSWERS FOR 1.2

For use with pages 12-13

1.2 Practice and Problem Solving

10. 18 12. 4
14. 18 16. 10
18. 6 20. \$12
22. 1 24. 2
26. 30 28. 1.2
30. $5 \cdot (2 + 3) - 8 = 17$
32. $5(36) + 4(48)$
34. $372 \div 3 = 124$ packages
36. $2(14) - 10 = 18$ yr

1.2 Mixed Review

38. soccer 40. 32

1.2 Test-Taking Practice

42. A

ANSWERS FOR 1.6

For use with pages 35-37

1.6 Practice and Problem Solving

8. $P = 34$ m, $A = 60$ m²
10. $P = 52$ m, $A = 153$ m²
12. $P = 26$ ft, $A = 22$ ft²
14. 6 yd 16. 11 in.
18. 5 mi 20. 8 sec
22. Pool A: 1320 ft², 164 ft;
Pool B: 60 ft, 180 ft
24. 68°F 26. $c = 100m$
28. 190 ft
30. $P = 48$ in., $A = 126$ in.²
32. $P = 22$ in., $A = 30$ in.²;
 $P = 44$ in., $A = 120$ in.²;
the perimeter is doubled;
the area is multiplied by 4.

1.6 Mixed Review

34. 56 36. 7.5 38. 14.0

1.6 Test-Taking Practice

40. Divide 27 by 3; 9 m.

ANSWERS FOR 1.3

For use with pages 17-19

1.3 Practice and Problem Solving

12. 205 14. 12 16. 0
18. 3 20. $10 - x$
22. $\frac{x}{7}$ 24. $31\frac{1}{2}$ mi
26. $30x + 60y$
28. $17 + 3w$; 74 in.
30. 3.2 32. 4
34. 24 36. 30.72
38. $13x + 15y + 2z$
40. 8.45

1.3 Mixed Review

42. 56 44. 884 46. 41

1.3 Test-Taking Practice

48. $35 + 15c$; \$95

ANSWERS FOR 2.1

For use with pages 55-56

2.1 Practice and Problem Solving

10. $-12 < 1$
12. $0 > -5$
14. $-17 < 2$
16. $-20 < -14$
18. $-301, -155, 121, 262, 278$
20. C 22. A
24. $-162, -30, 0, 90, 445$
26. -9 28. 5
30. -17 32. -4
34. $|-6| > -|6|$
36. negative numbers;
positive numbers
38. $-|47|, -28, |-65|,$
 $-(-73), |95|$

2.1 Mixed Review

40. 80 42. 26

2.1 Test-Taking Practice

44. C

ANSWERS FOR 1.4

For use with pages 22-23

1.4 Practice and Problem Solving

12. 9^5 ; 9 to the fifth power
14. n^6 ; n to the sixth power
16. 121 18. 1000 20. 400
22. 100 24. 49
26. 54 28. 343
30. 0 or 1 32. $3^2 > 2^3$
34. $10^1 > 1^{10}$ 36. 236
38. Multiply 6561 by 3.
40. 1323 42. 54

1.4 Mixed Review

44. 3 46. 23

1.4 Test-Taking Practice

48. C

ANSWERS FOR 2.2

For use with pages 60–62

2.2 Practice and Problem Solving

14. -19 16. 2
18. -112 20. -25
22. -30 24. -29
26. -221 28. never
30. sometimes
32. $6 + 3 + (-5) = 4$; fourth floor
34. -22 36. 13
38. 328 40. -129
42. *Sample Answer:*
 $10 + (-10) = 0$; opposites
44. +1; yes 46. -2; yes
48. 3

50. Yes; yes; no. *Sample Answer:*

If x and y are both positive,
then $|x| = x$ and $|y| = y$. So
 $|x + y| = ||x| + |y||$
 $= |x| + |y|$.

If x and y are both negative,
then $|x| = -x$ and $|y| = -y$. So
 $|x + y| = ||-x| + |-y||$
 $= ||x| + |y||$
 $= |x| + |y|$.

If x is positive and y is negative,
then their sum will be less than
the sum of the absolute values.
For example, $3 + (-5) = -2$
and $|3| + |-5| = 8$, so
 $3 + (-5) < |3| + |-5|$.
Because $|3 + (-5)| = 2$,
it is also true that
 $|3 + (-5)| < |3| + |-5|$,
so they are not equal.

2.2 Mixed Review

52. 12
54. -2479, -1802, 1802, 2479

2.2 Test-Taking Practice

56. B

ANSWERS FOR 2.3

For use with pages 65–67

2.3 Practice and Problem Solving

12. -25 14. 17
16. -6 18. -8
20. -26 22. -21
24. -27 26. 43°F
28. Alaska and Mississippi;
Kentucky and Mississippi
30. -468 32. 5
34. -21 36. 0
38. 58 40. 17
42. -23 44. -23
46. always 48. 53,000 ft

2.3 Mixed Review

50. 6 52. 9 54. -28
56. 334 58. 8152

2.3 Test-Taking Practice

60. H

ANSWERS FOR 2.5

For use with pages 76–77

2.5 Practice and Problem Solving

12. -14 14. 19
16. 6 18. undefined
20. -1 22. -2
24. 4 26. -0.544 sec
28. -1.25 30. 0.2
32. -0.42
34. -326.7, or $-326\frac{2}{3}$

2.5 Mixed Review

36. 8^6 38. 88 40. 96

2.5 Test-Taking Practice

42. About -17°F . *Sample Answer:*
 $[-8 + (-1) + (-6) +$
 $(-21) + (-31) + (-34)] \div 6$
 $= -16.83 \dots$
 ≈ -17 ; approximate.

ANSWERS FOR 2.4

For use with pages 72–73

2.4 Practice and Problem Solving

10. -42 12. 0
14. -18 16. 180
18. 60 20. -280
22. 59 24. -504
26. 10 28. 224
30. -3 32. 50 points
34. No; $(-3)^2 = (-3)(-3) = 9$
and $-3^2 = -(3 \cdot 3) = -9$.
36. -10,648
38. 36 ft, 0 ft, -44 ft;
at 2.5 sec; 0 ft
40. 101,556 42. -8216
44. *Sample Answer:* -4 and $-\frac{1}{4}$

2.4 Mixed Review

46. -2 48. -11
50. 0 52. 9

2.4 Test-Taking Practice

54. I

ANSWERS FOR 2.6

For use with pages 82-84

2.6 Practice and Problem Solving

14. 65; commutative property of addition
 16. 7; associative property of multiplication
 18. -91 20. -38
 22. 3 24. -900
 26. 144 28. $-80 + x$
 30. *Sample Answer:* Reorder the numbers, then group together pairs of numbers that are easy to add. For example, group 52 with 38, and group 99 with 11. Add these sums together, and add 65 to the result. The result is
 $(90 + 110) + 65 = 200 + 65 = 265.$

32. 133 yd 34. 170

36. $5\frac{1}{7}$ 38. 98

40. No; 15 is positive in the second expression but negative in the first.

42. \$21

2.6 Mixed Review

44. -32.6°F 46. $1.2 > 0.8$

48. $0.24 < 0.25$

2.6 Test-Taking Practice

50. *Sample Answer:* Reorder the numbers and group 25 with 4 and 6 with 7 because they are easy to multiply. Then multiply the products to find the final product. The result is
 $(25 \cdot 4)(6 \cdot 7) = 100 \cdot 42 = 4200.$

ANSWERS FOR 2.7

For use with pages 87-89

2.7 Practice and Problem Solving

10. D 12. C
 14. $-108 - 12y$
 16. $95 + 19w$
 18. 39
 20. $16w + 12z$
 22. $5x + 3y - 3$
 24. $4r + s$
 26. Because $2x$ and $-5y$ are not like terms, they cannot be added. $2x - 5y$ is in simplest form.
 28. $72x$ 30. $11z$
 32. $8c - 14$
 34. $2a + 10b - 2$
 36. $4.4z - 5.6x + 4.4y$
 38. You should consider whether it is easier to multiply 8 and 998 or to subtract 16 from 8000. *Sample Answer:* $4(100 - 8)$, $4(112 - 12)$

40. $9(10 + 9) = 90 + 81 = 171$; mental math can be used to multiply and then add.

42. $65(20 + 4) = 1300 + 260 = 1560$;

mental math can be used to multiply and then add.

44.
 $8(21.5 + 35 + 27.5 + 33.5 + 22.5)$
 $= 8(21.5) + 8(35) + 8(27.5) + 8(33.5) + 8(22.5)$
 $= 1120 \text{ ft}^2$

2.7 Mixed Review

46. -90, -35, 19, 35, 80

48. -340 50. 8

2.7 Test-Taking Practice

52. 25 ft; $200 - 2(60) = 80$, so each missing side is $0.5 \cdot 80 \text{ ft} = 40$ feet. Then $10 + 5 + x = 40$
 $15 + x = 40$
 $x = 25$ feet.

To find the area, multiply the length by the width, which gives $40(60) = 2400$, or multiply each section of the length by the width and add the results:

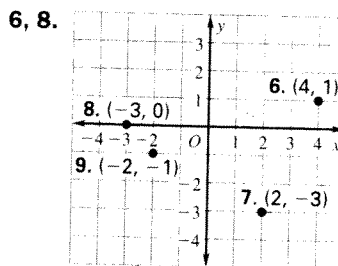
$10(60) + 25(60) + 5(60)$
 $= 600 + 1500 + 300 = 2400.$

ANSWERS FOR 2.8

For use with pages 93-95

2.8 Getting Ready to Practice

2. $(-3, 2)$ 4. $(-2, -2)$



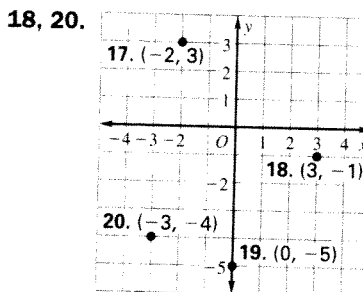
10. 2000 feet

2.8 Practice and Problem Solving

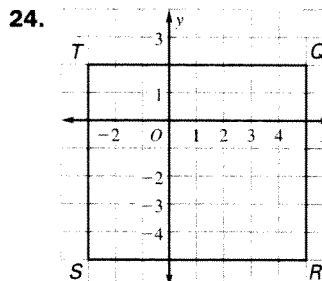
12. $(1, 3)$ 14. $(-4, -3)$

16. $(4, -1)$ 18. Quadrant IV

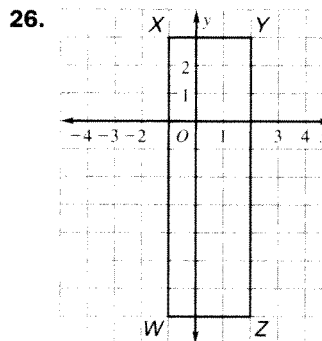
20. Quadrant III



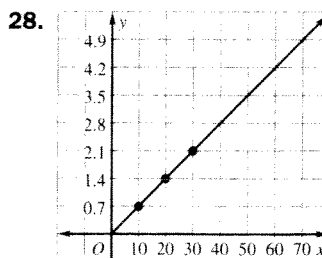
22. square; 24 units



30 units; 56 square units



26 units; 30 square units



30. *Sample Answer:* It is larger than the original; the perimeter of the second rectangle is twice the perimeter of the original rectangle.

2.8 Mixed Review

32. 3 34. -20

36. 12y 38. 17 T-shirts

2.8 Test-Taking Practice

40. B