

Extra Practice

Chapter 1

1.1 Graph the numbers on a number line.

1. $-2, \frac{5}{3}, 0.2, -\sqrt{2}, -\frac{5}{4}$ 2. $-\frac{4}{3}, 1, -1.2, \sqrt{3}, 1.9$ 3. $3.7, -\sqrt{7}, -\frac{1}{2}, 4, \sqrt{15}$

1.1 Perform the indicated conversion.

4. 18 feet to inches 5. 20 ounces to pounds 6. 3 years to hours

1.2 Evaluate the expression for the given value of the variable.

7. $-2p + 5$ when $p = -5$ 8. $3x^2 - x + 7$ when $x = -1$ 9. $8z^3 - 6z$ when $z = 2$

1.2 Simplify the expression.

10. $2y^2 - 3y + 5y^2$ 11. $4r^2 - 5r + 2r^2 + 12$ 12. $-w^3 + w^2 - 7w^2 - 8w^3$
13. $2(b + 5) + 3(2b - 10)$ 14. $-7(t^2 + 2) + 9(t - 2)$ 15. $4(m - 3) - 5(m^2 - m)$

1.3 Solve the equation. Check your solution.

16. $3a + 2 = 11$ 17. $-9 = b - 14$ 18. $8 - 0.5c = 1$
19. $-3n - 7 = -n + 17$ 20. $12m = 15m - 7.5$ 21. $6p + 1 = 21 - 4p$
22. $6(x + 1) = 2x - 10$ 23. $4(y - 3) = 2(y + 8)$ 24. $11(z - 5) = 2(z + 6) - 13$

1.4 Solve the equation for y. Then find the value of y for the given value of x.

25. $6y - x = 18; x = 2$ 26. $2x + 3y = 12; x = -6$ 27. $4y - 9x = -30; x = 6$
28. $3x - xy = 20; x = 8$ 29. $4y + 6xy = 10; x = -2$ 30. $5x + 8y + 4xy = 0; x = -1$

1.5 Look for a pattern in the table. Then write an equation that represents the table.

31.

x	0	1	2	3
y	25	22	19	16

32.

x	0	1	2	3
y	1.5	4	6.5	9

1.6 Solve the inequality. Then graph the solution.

33. $x + 2 > 9$ 34. $-13 - 3x < 11$ 35. $4x - 9 \leq 2x + 1$
36. $-3x - 8 \geq -9x + 10$ 37. $-7 < x + 3 \leq 1$ 38. $-4 \leq 3x - 7 \leq 4$
39. $-9 \leq 5 - 2x < 7$ 40. $x + 3 < -2$ or $x - 7 > 0$ 41. $2x + 9 \geq 3$ or $-5x + 1 \leq 0$

1.7 Solve the equation. Check for extraneous solutions.

42. $|g + 5| = 4$ 43. $\left| \frac{1}{3}q - \frac{2}{3} \right| = 1$ 44. $|10 - 3t| = t + 4$ 45. $|3z + 1| = -6z$

1.7 Solve the inequality. Then graph the solution.

46. $|a| < 2$ 47. $|2c| > 14$ 48. $|g + 11| \geq 2$ 49. $|4j - 7| \leq 9$
50. $|0.25m + 3| \geq 1$ 51. $|10 - 2p| > 9$ 52. $|0.6r + 8| \leq 17$ 53. $|5t - 9| + 9 < 10$