

[06-01-03-L7]

2.1 Exercises

Simplify each of the following expressions by combining terms. See Examples 1 and 2.

1. $4x + 3x + 7 + 9$
2. $5m + 9m + 8 + 4$
3. $-12y + 4y - 3 + 2y$
4. $5r - 9r + 8r - 5$
5. $-6p + 11p - 4p + 6 - 5$
6. $8x - 5x + 3x - 12 + 9$
7. $3(k + 2) - 5k + 6 - 3$
8. $5(r - 3) + 6r - 2r + 1$
9. $-2(m + 1) + 3(m - 4)$
10. $6(a - 5) - 4(a + 6)$
11. $3(2y + 3) - 4(3y - 5)$
12. $-2(5r - 2) + 4(5r - 1)$
13. $-(2p + 5) + 3(2p + 4) + p$
14. $-(7m - 12) - 2(4m + 7) - 3m$
15. $2 + 3(2z - 5) - 3(4z + 6) - 8$
16. $-4 + 4(4k - 3) - 6(2k + 8) + 7$
17. $m + 2(-m + 4) - 3(m + 6)$
18. $-k + 2(k - 5) + 5(2k - 1)$
19. $4(-2x - 5) + 6(2 - 3x) - (4 - 2x)$
20. $3(-4z + 5) - 2(4 - 5z) - (2 - 9z)$
21. $-(5.923p + 6.476) - (-8.915p + 11.213)$
22. $(46.8114m + 19.217) - (-1.987 - 14.715m)$

Solve each of the following equations. See Examples 3-5.

23. $2k + 6 = 12$
24. $5m - 4 = 16$
25. $5 - 8k = -19$
26. $4 - 2m = 10$
27. $3 - 2r = 9$
28. $-5z + 2 = 7$
29. $-9y - 4 = 14$
30. $-7p - 3 = -17$
31. $-3 + 4z = -11$
32. $-1 + 2m = -11$
33. $-4 - 3p = 7$
34. $5.749y + 7.259 = 36.004$
35. $6.542x + 5.223 = 24.849$
36. $8.305p - 15.477 = -32.087$
37. $7.689z - 4.132 = -34.888$
38. $2x + 7 - x = 4x - 2$
39. $7z - 5z + 3 = z - 4$
40. $12a + 7 = 7a - 2$
41. $7m - 2m + 4 - 5 = 3m - 5 + 6$
42. $12z - 15z - 8 + 6 = 4z + 6 - 1$
43. $11p - 9 + 8p - 7 + 14p = 12p + 9p + 4$
44. $3(x + 5) = 2x - 1$
45. $2(k - 4) = 5k + 2$
46. $4(r - 1) + 2(r + 3) = 6$
47. $3(2t + 1) - 2(t - 2) = 5$
48. $6s - 3(5s + 2) = 4 - 5s$
49. $2y + 3(y - 4) = 2(y - 3)$
50. $6x - 4(3 - 2x) = 5(x - 4) - 10$
51. $4k - 3(4 - 2k) = 2(k - 3) + 6k + 2$
52. $-[z - (4z + 2)] = 2 + (2z + 7)$
53. $5y - (8 - y) = 2[-4 - (3 + 5y) - 13]$
54. $-9m - (4 + 3m) = -(2m - 1) - 5$
55. $-(-4.53 + 5.876r) + (11.721 - 3.814r) = -9.237r + 16.7493$
56. $(8.739p - 12.109) - (3.149 - 2.004p) = -7.15p - 27.7831$

CHAPTER 2**Section 2.1 (page 43)**

1. $7x + 16$ 3. $-6y - 3$ 5. $p + 1$ 7. $-2k + 9$ 9. $m - 14$ 11. $-6y + 29$
 13. $5p + 7$ 15. $-6z - 39$ 17. $-4m - 10$ 19. $-24x - 12$ 21. $2.992p - 17.689$
 23. $\{3\}$ 25. $\{3\}$ 27. $\{-3\}$ 29. $\{-2\}$ 31. $\{-2\}$ 33. $\{-11/3\}$ 35. $\{3\}$
 37. $\{-4\}$ 39. $\{-7\}$ 41. $\{1\}$ 43. $\{5/3\}$ 45. $\{-10/3\}$ 47. $\{-1/2\}$ 49. $\{2\}$
 51. $\{4\}$ 53. $\{-2\}$ 55. $\{-1.1\}$ 57. $\{-18/5\}$ 59. $\{-5/6\}$ 61. $\{6\}$ 63. $\{-15\}$
 65. $\{2\}$ 67. $\{-6\}$ 69. Identity; set of all real numbers 71. Contradiction; \emptyset
 73. Conditional; $\{0\}$ 75. Identity; set of all real numbers 77. Contradiction; \emptyset 79. $k = 37$
 81. $k = -14$ 83. $k = 7/16$ 85. (a) About 37.4 seconds for men; about 39.5 seconds for women
 (b) About 37.0 seconds for men; about 38.7 seconds for women 87. Equivalent 89. Not equivalent
 91. Not equivalent 93. 32 95. 90 97. 100 99. 13