Section 3.3
Exercises

Simplify each.

1. $7x + 4x$
2. $-11x - 9x$
3. $5ab - 6ab$
4. $2xy + 8xy$
5. $3x - 4y + 8x - 9y$
6. $-5x + 12y + 14x - 17y$
7. $a + b - 4a + 3b + 8$
8. $3q - 7p + 8 - 4q + 11p$
9. $3(2x - 5) + 8x$
10. $5y - 2(4y - 3)$
11. $a - 7(2 - 5a) + 10$
12. $3x - 5(8 - 4x) + 17$
13. $3(4x - 1) - 2(6x + 3)$
14. $-5(2x + 3) + 5(2x - 3)$
15. $x(x + y) + 3x(x + 2y) - 5$
16. $2x(4x + 5y) + x(x - 7y) + 12$
17. $\frac{1}{3}(3x - 5) - \frac{2}{3}(6x - 2)$
18. $\frac{1}{2}(2x + 7) + \frac{1}{4}(8x - 1)$
19. $\frac{1}{5}x + 7 - 2(x + 1)$
20. $10 - 4(3 - 5x) + \frac{2}{3}x$

Solve each equation.

21. $x + 9 = 21$
22. $y - 4 = 12$
23. $5x - 3 = 17$
24. $8x + 7 = -9$
25. $\frac{4}{9} = \frac{x}{15}$
26. $\frac{-2}{11} = \frac{16}{x}$
27. $\frac{x - 1}{6} = \frac{2x + 3}{3}$
28. $\frac{4x + 5}{2} = \frac{x - 7}{8}$
29. $6(x - 2) = 8x$
30. $-5(3 - 2x) = 7x$
31. $4(3x + 4) = 2(5x - 1)$
32. $-7(5x - 6) = 8(5x + 2)$
33. $2(x + 3) - 8 = 4(x - 1) + 12$
34. $3(2x - 1) + 4 = 8(5x + 1) - 7$
35. $5(3x - 8) - 9 = 3(5x - 3) + 1$
36. $2(8x + 12) + 3 = 8(4 + 2x) - 15$
37. $\frac{1}{2}x + 5 = 12$
38. $4 - \frac{2}{3}x = -5$
39. $\frac{1}{2}(x - 2) + \frac{2}{3}(5x + 6) = \frac{5}{6}$
40. $\frac{1}{3}(x + 7) + \frac{3}{4}(7x - 8) = \frac{7}{12}$
41. $\frac{1}{5}(x - 3) = \frac{3}{4}(x + 1)$
42. $\frac{3}{8}(2x + 7) = \frac{5}{3}(4x - 5)$
43. $0.25x + 1.78 = 0.57x - 3.29$
44. $2.73x - 9.15 = 5.3 - 3.11x$
45. $1.38(x - 1.4) - 2 = 6.71(x - 2.65) + 8$
46. $2.4(3x - 5) - 2 = 3.18(2.6 - x) - 9.4$