Extra Practice

Chapter 3

3.1 **Plot the point in a coordinate plane. *Describe* the location of the point.**

1. $K(-4, -2)$
2. $L(5, 0)$
3. $M(3, -1)$
4. $N(-2, 2)$
5. $P(0, 4)$
6. $Q(-3.5, 5)$
7. $R(2.5, 6)$
8. $S(-1, -1.5)$

3.1 **Graph the function with the given domain. Then identify the range of the function.**

9. $y = -2x + 2$; domain: $-2, -1, 0, 1, 2$
10. $y = \frac{1}{2}x - 3$; domain: $-4, -2, 0, 2, 4$

3.2 **Graph the equation.**

11. $y - x = 3$
12. $y + 3x = 5$
13. $y - 4x = 10$
14. $y = 4$
15. $2x - y = 0$
16. $3x + y = 0$
17. $3x + 2y = -6$
18. $x = 0.5$

3.3 **Find the x-intercept and the y-intercept of the graph of the equation.**

19. $2x - y = 12$
20. $-5x - 2y = 20$
21. $-4x + 1.5y = 4$
22. $y = \frac{3}{4}x - 15$

3.3 **Graph the equation. Label the points where the line crosses the axes.**

23. $y = 3x - 6$
24. $4x + 5y = -20$
25. $\frac{2}{3}x + \frac{1}{2}y = 10$
26. $0.3x - y = 6$

3.4 **Find the slope of the line that passes through the points.**

27. $(4, 2)$ and $(6, 8)$
28. $(-3, 0)$ and $(2, -5)$
29. $(-5, 3)$ and $(-8, 10)$
30. $(9, 4)$ and $(0, 1)$
31. $(-2, 5)$ and $(-2, 10)$
32. $(6, -4)$ and $(4, -4)$

3.5 **Identify the slope and y-intercept of the line with the given equation.**

33. $y = 7x + 8$
34. $y = 10x - 6$
35. $y = 3 - 4x$
36. $y = x$

3.5 **Rewrite the equation in slope-intercept form. Then identify the slope and the y-intercept of the line.**

37. $2x + y = 8$
38. $10x - y = 20$
39. $5x + 2y = 10$
40. $-2x - y = 3$

3.6 **Graph the equation.**

41. $y = 2x - 4$
42. $y = -\frac{3}{4}x + 1$
43. $2x + y = 1$
44. $-2x + 3y = -9$

3.6 **Graph the direct variation equation.**

45. $y = 2x$
46. $y = -x$
47. $y = 4x$
48. $5x + y = 0$
49. $x - 2y = 0$
50. $3x + y = 0$
51. $2y = 9x$
52. $y - \frac{5}{4}x = 0$

3.7 **Find the value of x so that the function has the given value.**

53. $f(x) = -7x - 3$; -17
54. $g(x) = 5x - 4$; 12
55. $t(x) = 3x + 1$; -11

3.7 **Graph the function. Compare the graph with the graph of $f(x) = x$.**

56. $m(x) = x - 2$
57. $t(x) = x + 4$
58. $z(x) = 6x$
59. $h(x) = -2x$