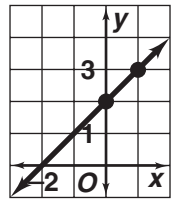
Answers for Lesson 3-6, pp. 169–170 Exercises

1.



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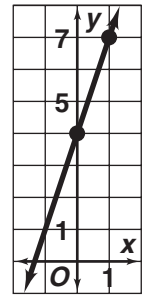

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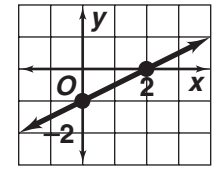

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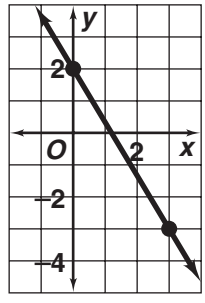

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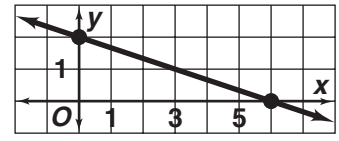

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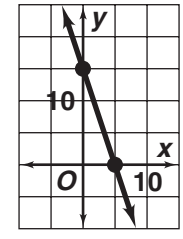

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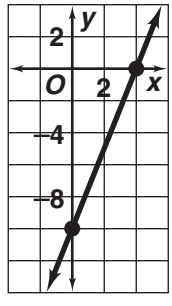

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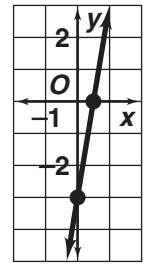

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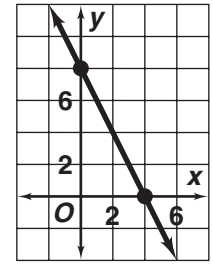

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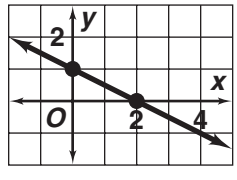
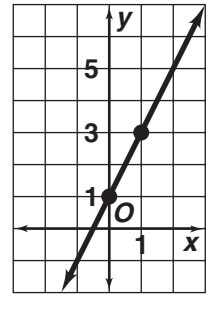
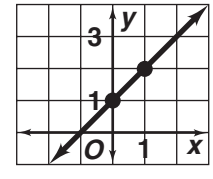


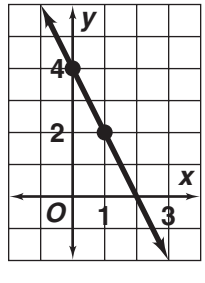
11. $y = 2x + 1$



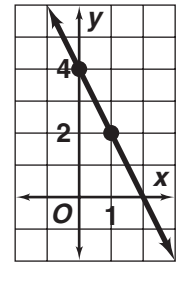
12. $y = x + 1$



13. $y = -2x + 4$



14. $y = -2x + 4$



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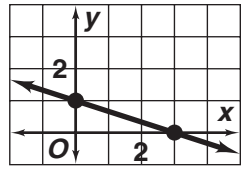
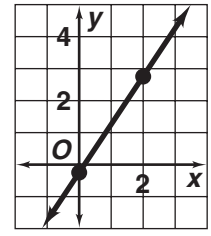
15. $y = -\frac{1}{3}x + 1$



16. $y = \frac{3}{2}x - \frac{1}{4}$



17. $y - 3 = 2(x - 2)$

18. $y + 1 = 3(x - 4)$

19. $y - 5 = -1(x + 3)$

20. $y + 6 = -4(x + 2)$

21. $y - 1 = \frac{1}{2}(x - 6)$

22. $y - 4 = 1(x - 0)$ or $y - 4 = x$

23–28. Equations may vary from the pt. chosen. Samples are given.

23. $y - 5 = \frac{3}{5}(x - 0)$

24. $y - 2 = -\frac{1}{2}(x - 6)$

25. $y - 6 = 1(x - 2)$

26. $y - 4 = 1(x + 4)$

27. $y - 0 = \frac{1}{2}(x + 1)$

28. $y - 10 = \frac{2}{3}(x - 8)$

29. **a.** $y = 7$

b. $x = 4$

30. **a.** $y = -2$

b. $x = 3$

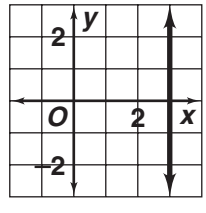
31. **a.** $y = -1$

b. $x = 0$

32. **a.** $y = 4$

b. $x = 6$

33.



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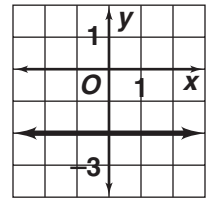

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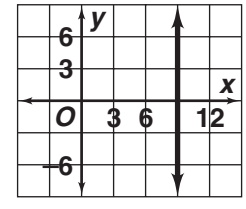

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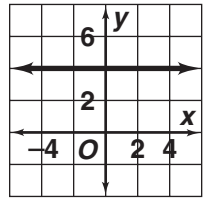

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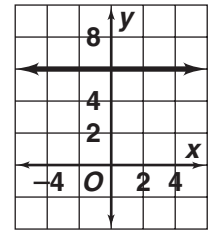

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38. a. 0.05

b. the cost per min

c. 4.95

d. the initial charge for a call

39. No; a line with no slope is a vertical line. 0 slope is a horizontal line.

40. a. $m = 0$; it is a horizontal line.

b. $y = 0$

41. a. Undefined; it is a vertical line.

b. $x = 0$

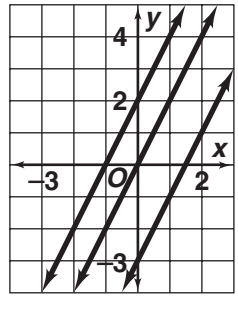
42–44. Answers may vary. Samples are given.

42. The eq. is in standard form; change to slope-intercept form, because it is easy to graph the eq. from that form.

43. The eq. is in slope-int. form; use slope-int. form, because the eq. is already in that form.

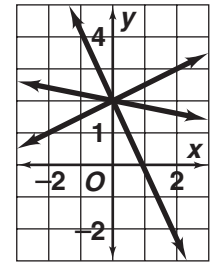
44. The eq. is in point-slope form; use point-slope form, because the eq. is already in that form.

45.



The slopes are the same, and the *y*-intercepts are different.

46.



The slopes are all different, and the *y*-intercepts are the same.

47. Check students' work.

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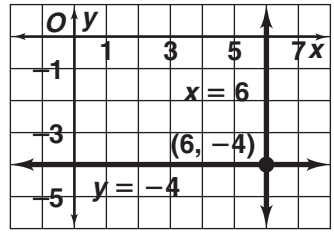
48.



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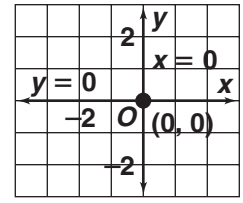
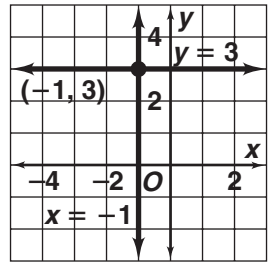
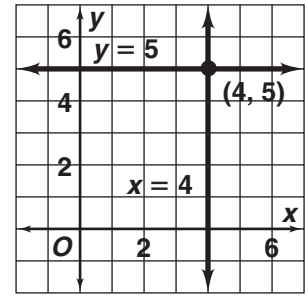


50.



51.



52. $\frac{3}{10} = 0.3, \frac{1}{12} = 0.08\overline{3}; \frac{3}{10} > \frac{1}{12}$; it is possible only if the ramp zigzags.

53. The y-intercepts are the same, and the lines have the same steepness. One line rises from left to right while the other falls from left to right.

54. Answers may vary. Sample: $x = 5, y - 6 = 2(x - 5)$, $y = x + 1$

55. $(2, 0), (0, 4); m = \frac{0 - 4}{2 - 0} = \frac{-4}{2} = -2$
$y - 0 = -2(x - 2), 2x + y = 4$ or $y = -2x + 4$

56. **a.** $y - 0 = \frac{5}{2}(x - 0)$ or $y = \frac{5}{2}x$

b. $y - 5 = -\frac{5}{2}(x - 2)$ or $y = -\frac{5}{2}x + 10$

c. The abs. value of the slopes is the same, but one slope is pos. and the other is neg. One y-int. is at $(0, 0)$ and the other is at $(0, 10)$.

57. Yes; the slope of $\overline{AB}$ = the slope of $\overline{BC}$.

58. No; the slope of $\overline{DE} \neq$ the slope of $\overline{EF}$.

59. Yes; the slope of $\overline{GH}$ = the slope of $\overline{HI}$.

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60. Yes; the slope of $\overline{JK}$ = the slope of $\overline{KL}$.

61. $y - 2 = 3(x + 2); 3x - y = -8$

62. $y - 5 = \frac{1}{2}(x - 5); x - 2y = -5$

63. $y - 6 = \frac{2}{3}(x - 2); 2x - 3y = -14$

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