

Cumulative Review

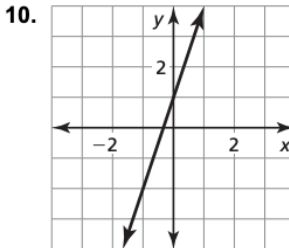
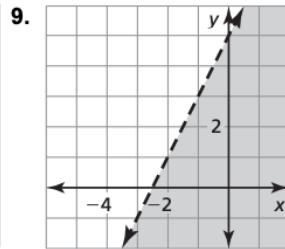
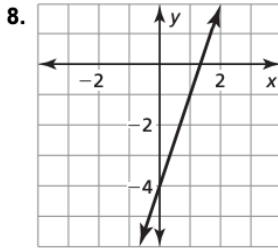
1. $x = -4$ 2. $y = 0, y = 2$

3. not possible 4. $x \geq -9$

5. x is equal to all real numbers.

6. You must sell at least 34 subscriptions this week.

7. $4(x - 8) \leq 50$



11. $y - 5 = -(x + 1)$ 12. $y + 4 = -4(x - 2)$

13. $y + 0 = -\frac{1}{2}(x + 8)$ 14. $(0, 4)$

15. $(9, 1)$ 16. $(2, 3)$

17. 1500 children and 700 adults

18. $\frac{1}{16x^4}$ 19. $\frac{1}{2x^5}$ 20. $8x^8y^6$

21. $x = 3$ 22. $x = 4$ 23. $x = 4$

24. -25 25. $10y + 8$ 26. $x^2 - 6x + 5$

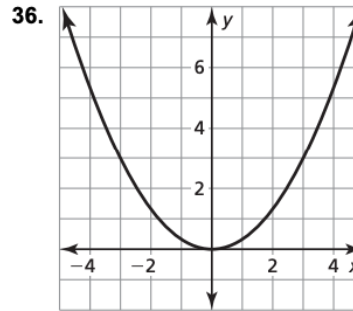
27. $16x^2 - 24xy + 9y^2$ 28. $(m - 3)(x + 7)$

29. $(z - 11)(z - 4)$ 30. $4(w + 3)(w + 8)$

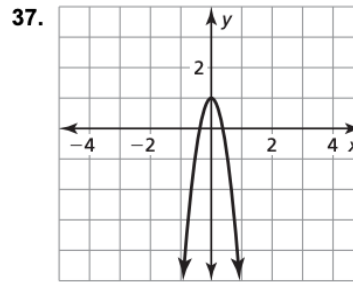
31. 3 sec 32. $z = -10, 10$

33. $y = -25, -2$ 34. $(3x^2 + 1)(2x - 5)$

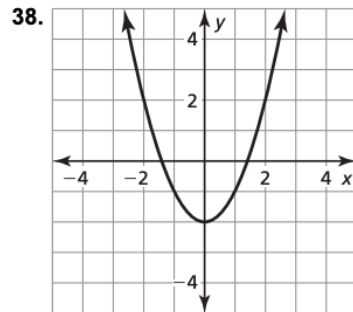
35. $(y^2 + 1)(y + 1)$



vertical shrink by a factor of $\frac{1}{3}$



reflection in x-axis, a vertical stretch by a factor of 7, and a translation 1 unit up



translation 2 units down

39. a. 7 sec

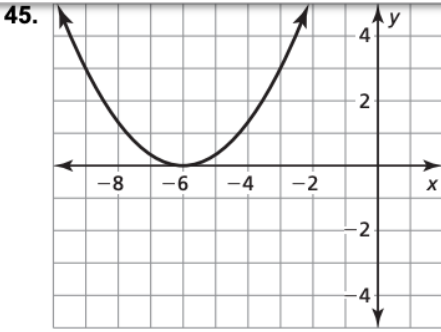
b. If k is positive, it will increase the time in part (a), and if k is negative, it will decrease the time in part (a).

40. maximum: 51 41. minimum: -74

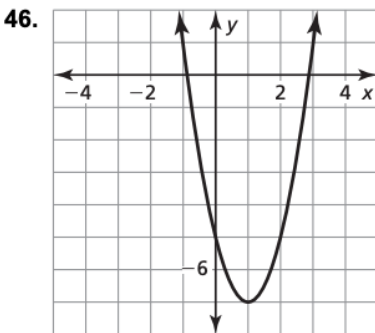
42. vertex: $(3, 0)$; axis of symmetry is $x = 3$

43. vertex: $(0, 0)$; axis of symmetry is $x = 0$

44. vertex: $(-6, 2)$; axis of symmetry is $x = -6$



translation 6 units left and a vertical shrink by a factor of $\frac{1}{3}$



translation 1 unit right and 7 units down, and a vertical stretch by a factor of 2

47. $\frac{2x^3 \sqrt[3]{2x}}{y}$

48. $\frac{25 - 15\sqrt{3}}{2}$

49. $-6\sqrt{5} + 6\sqrt{2}$

50. $x = -1, x = 3$

51. $x = 2, x = 5$

52. $x = \pm 4$

53. $x = \pm 7$

54. $x = \pm 3$

55. $x = 3, x = 5$

56. $y = -15, y = -4$

57. 25 ft by 25 ft by 50 ft

58. $x \approx -0.6, x \approx 2.6$

59. $y \approx -1.5, y \approx 5.5$

60. $(-4, -1)$ and $(2, 5)$

61. $(0, 1)$ and $(1, 2)$

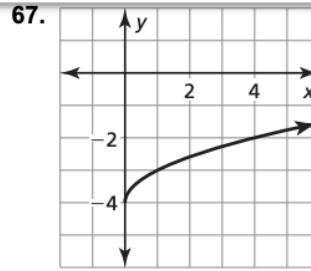
62. $(-3, 0)$ and $(5, 8)$

63. 18 m by 20 m

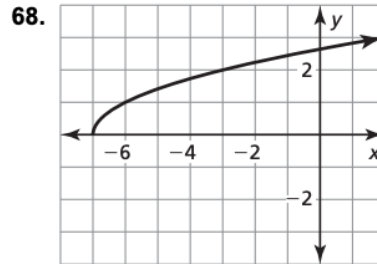
64. $x \geq 0$

65. $x \geq 4$

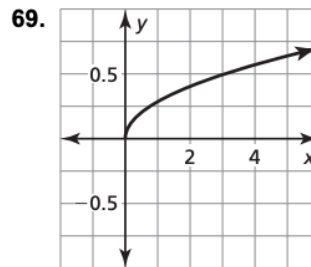
66. $x \leq 2$



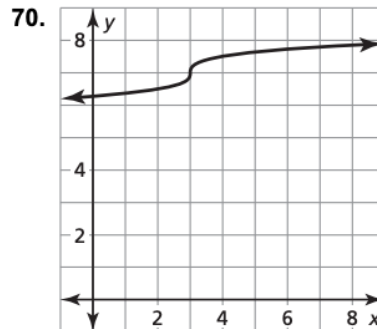
range: $y \geq -4$



range: $y \geq 0$

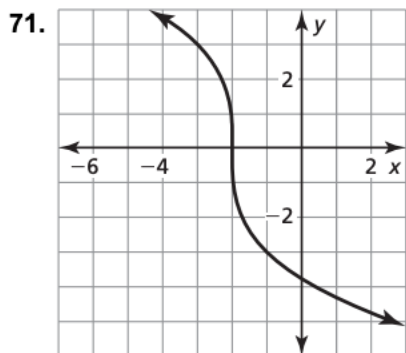


range: $y \geq 0$



translation 3 units right and 7 units up, and a vertical shrink by a factor of 0.5

Answers



translation 2 units left and 1 unit down, and a vertical stretch by a factor of 3

72. $w = 222$

73. $r = 16$

74. $x = 4$

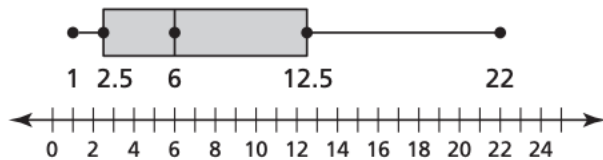
75. $g(x) = \frac{5(x + 1)}{3}$

76. $g(x) = \frac{x + 8}{7}$

77. mean: 15, median: 14, mode: 13; The median best represents the data. The mode is less than all of the other data values, and the mean is greater than most of the data.

78. mean = 25.75, median: 24, mode: 23; The median best represents the data. The mode is less than most of the other data values, and the mean is greater than most of the data.

79. 1, 1, 2, 2, 3, 3, 4, 4, 6, 7, 8, 10, 11, 14, 15, 20, 22; median: 6, lower quartile: 2.5, upper quartile: 12.5



80. symmetric distribution; The numbers of leaves are 3, 5, 3, which is symmetric.

81. qualitative

82. qualitative

83. 80