

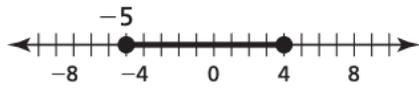
CH 9

Cumulative Review

1. $x = -4$

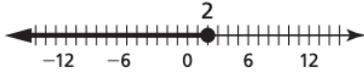
2. $y = -3, y = 4$

3. $-5 \leq h \leq 4$



Answers

4. $y \leq 2$

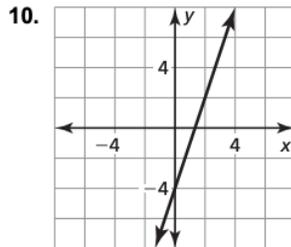
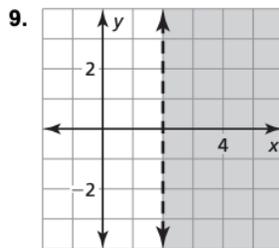
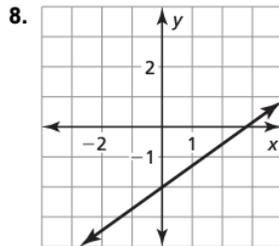


5. no solution

6. a. $y \geq 350x + 1050$

b. at least 4 h

7. $2x - 4 \geq 14$



11. $y = -\frac{1}{2}x + 3$

12. $y = 4x - 12$

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

14. $(3, -2)$

15. $(-6, 4)$

16. no solution

17. \$7 for a small box and \$13 for a large box

18. $\frac{1}{4x^9yz}$

19. $7m^3$

20. $\frac{yz}{x}$

21. $x = 1$

22. $x = 9$

23. $x = -10$

24. $-4g + 13$

25. $3y - 2$

26. $x^2 + 5x - 24$

27. $49x^2 + 42xy + 9y^2$

28. $x = -4, 6$

29. $g = 0, 5$

30. $(m - 4)(m - 2)$

31. $(z + 5)(z - 7)$

32. $2(w + 2)(w + 1)$

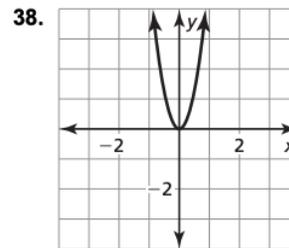
33. 1 sec

34. $z = -5, z = 5$

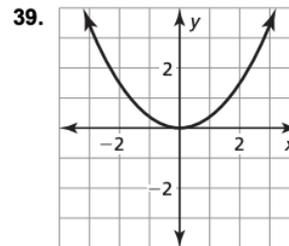
35. $y = -11$

36. $(3x^2 - 4)(x - 5)$

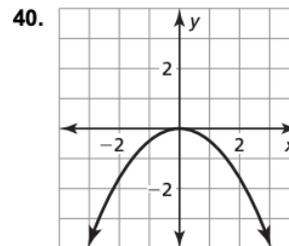
37. $(4y^2 - 7)(y - 1)$



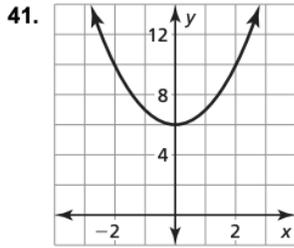
vertical stretch by a factor of 5



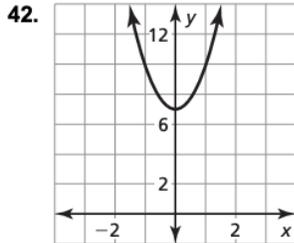
vertical shrink by a factor of 0.375



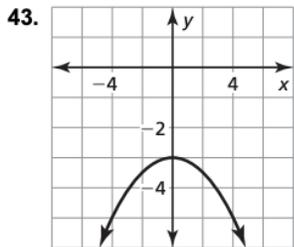
vertical shrink by a factor of $\frac{3}{7}$ and a reflection in the x-axis



translation 6 units up



vertical stretch by a factor of 3, followed by a translation 7 units up

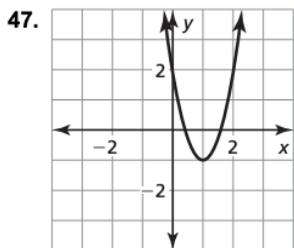


vertical shrink by a factor of $\frac{1}{8}$, and a reflection in the x -axis, followed by a translation 3 units down

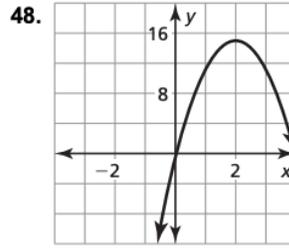
44. a. 25 sec
 b. If k is positive, it will increase part (a); if k is negative, it will decrease part (a).

45. a. axis of symmetry : $x = -3$
 b. vertex: $(-3, 30)$

46. a. axis of symmetry: $x = 5$
 b. vertex: $(5, -80)$



domain : all real numbers; range: $y \geq -1$



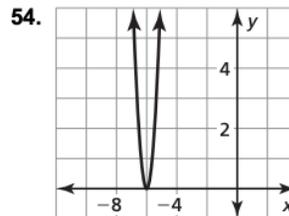
domain: all real numbers; range: $y \leq 15$

49. maximum: 4 50. minimum: -91

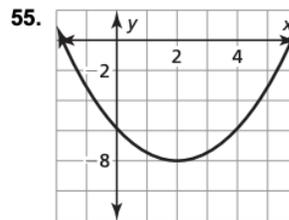
51. vertex: $(3, 0)$; axis of symmetry: $x = 3$

52. vertex: $(-5, 0)$; axis of symmetry: $x = -5$

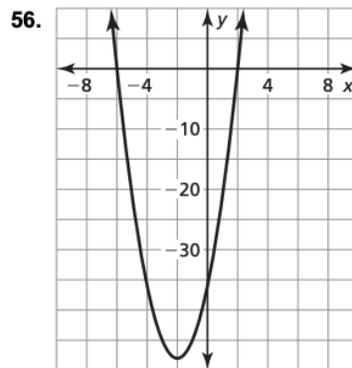
53. vertex: $(5, 4)$; axis of symmetry: $x = 5$



translation 6 units to the left and a vertical stretch by a factor of 7

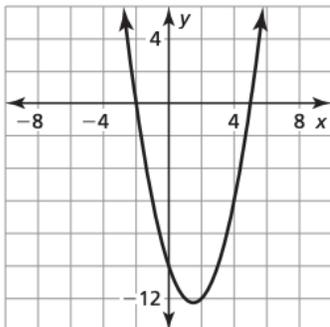


translation 2 units to the right and 8 units down, followed by a vertical shrink by a factor of $\frac{4}{7}$



Answers

57.



58. quadratic function; $y = x^2 + 4x - 12$

59. $4y\sqrt{5y}$

60. $\frac{\sqrt{2}}{3}$

61. $-3\sqrt{2} - 2\sqrt{6}$

62. $\frac{2x^3\sqrt{4x^2}}{5y^3}$

63. $-5\sqrt{30} + 3\sqrt{2}$

64. $\frac{1}{2}$

65. $x = -9, x = 4$

66. $x = -1, x = 1$

67. $x = -5, x = 1$

68. $x = 3, x = 4$

69. $x = \pm 4$

70. $x = \pm 5$

71. no real solutions

72. 2 sec

73. $x = -2, x = -1$

74. $y = -2, y = -10$

75. $w \approx -17.3, w \approx 1.3$

76. $t = -7, t = -3$

77. $n = -2, n = 4$

78. $h = -4, h = -\frac{8}{3}$

79. a square fence, with side length 15 ft

80. $x = -\frac{3}{2}, x = -\frac{1}{2}$

81. $y = -4, y = \frac{5}{2}$

82. $w = -0.4, w = 3.9$

83. $z = -1.8, z = 1.3$

84. 0 x -intercepts

85. 1 x -intercept

86. 2 x -intercepts

87. 0 x -intercepts

88. $(-2, 2)$ and $(4, -10)$

89. $(-2, -4)$ and $(1, -1)$