

Algebra 2 Chapter 6 Review
Answers

5. 5
6. 0.7
7. -2
8. -2
9. $9|x|$
10. $4x^2$
11. $2|x^3|$
12. $0.2x$
13. $\frac{x^2}{2}$
14. $5x^2y^3$
15. 3
16. -7
17. 4

18. $4x^2$
19. $30y$
20. 4
21. $3xy$
22. $\frac{3|x|}{y^2}$
23. $\frac{2\sqrt{3}}{3}$
24. $\frac{\sqrt{3x}}{8}$
25. $\frac{y\sqrt[3]{150x}}{10x^2}$

26. $22\sqrt{3}$
27. $26\sqrt{5x}$
28. $x\sqrt[3]{2}$
29. $14 + 7\sqrt{2}$
30. -6
31. $100 + 10\sqrt{6} - 10\sqrt{3} - 3\sqrt{2}$
32. $\frac{5 + 2\sqrt{5}}{5}$
33. $\frac{9 + 3\sqrt{2}}{7}$
34. 5
35. 3
36. 4
37. 25
38. x
39. $-2y^3$
40. $81x^2y^4$
41. $\frac{1}{x^3y^6}$
42. $\frac{1}{x}$
43. x^3y^6

44. -1
45. 15
46. 5
47. 10, -8
48. 2, -1
49. -2
50. 0, 16
51. 0, 36
52. 9.05 W
53. $x^2 + x - 20$; domain: all real numbers
54. $x^2 - x - 12$; domain: all real numbers
55. $x^3 - 4x^2 - 16x + 64$; domain: all real numbers
56. $x + 4$; domain: all real numbers except $x = 4$
57. 50
58. 5
59. 23
60. $5a^2 + 3$
61. $D(C(x)) = 0.5x - 0.5$,
 $C(D(x)) = 0.5x - 1$; use the coupon after the store discount.

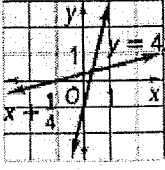
Chapter Review (continued)

62. $f^{-1}(x) = \pm\sqrt{\frac{x+8}{2}}$; no

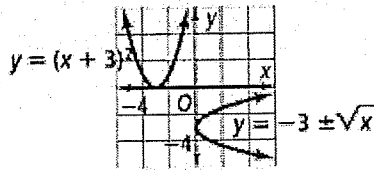
63. $f^{-1}(x) = 5 - \frac{1}{3}x$; yes

64. $f^{-1}(x) = x^2 - 6$; yes

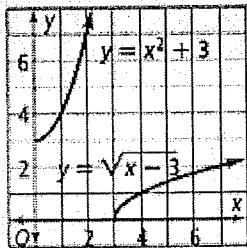
65. $f^{-1}(x) = \frac{3 \pm \sqrt{x}}{2}$; no

66.  domain of f : all real numbers, range of f : all real numbers, domain of f^{-1} : all real numbers, range of f^{-1} : all real numbers

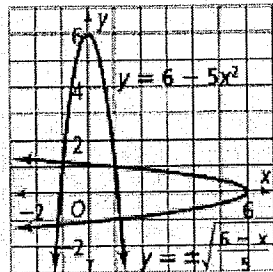
67. domain of f : all real numbers, range of f : $y \geq 0$; domain of f^{-1} : $x \geq 0$, range of f^{-1} : all real numbers



68. domain of f : $x \geq 3$, range of f : $y \geq 0$, domain of f^{-1} : $x \geq 0$, range of f^{-1} : $y \geq 3$



69. domain of f : all real numbers, range of f : $y \leq 6$, domain of f^{-1} : $x \leq 6$, range of f^{-1} : all real numbers

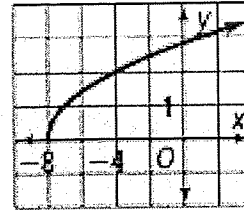


70. $s = \sqrt[3]{V}$; 4 ft

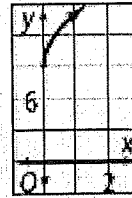
71. domain: $x \geq 0$, range: $y \geq -5$



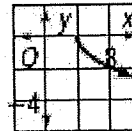
72. domain: $x \geq -8$, range: $y \geq 0$



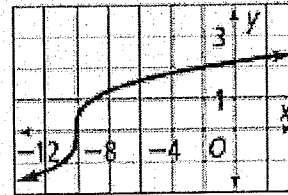
73. domain: $x \geq 0$, range: $y \geq 9$



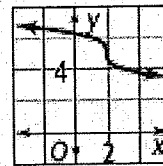
74. domain: $x \geq 4$, range: $y \leq 0$



75. domain: all real numbers, range: all real numbers



76. domain: all real numbers, range: all real numbers



77. $y = 3\sqrt{x-3} + 4$ the graph of $y = 3\sqrt{x}$ translated 3 units to the right and 4 units up

78. $y = -6\sqrt{x-4}$; the graph of $y = -6\sqrt{x}$ translated 4 units to the right

79. $y = 2\sqrt[3]{x+3}$; the graph of $y = 2\sqrt[3]{x}$ translated 3 units to the left

80. $y = \frac{1}{2}\sqrt{x-4} + 6$; the graph of $y = \frac{1}{2}\sqrt{x}$ translated 4 units to the right and 6 units up