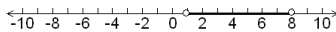
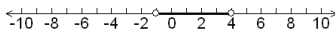
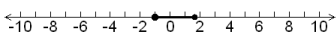
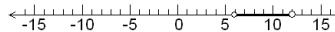
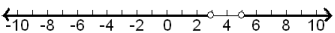
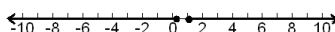
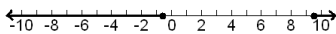

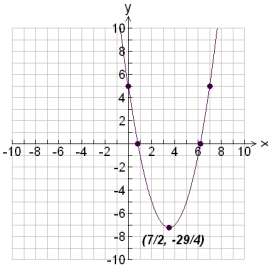
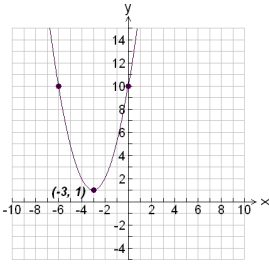
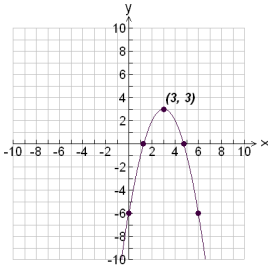
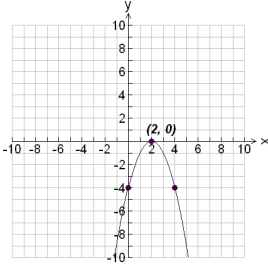
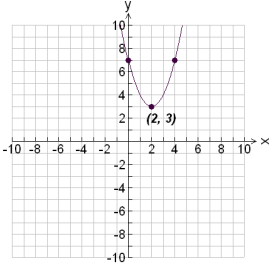
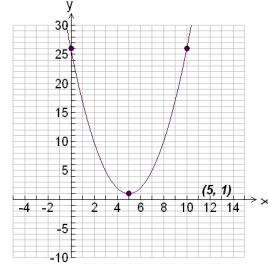
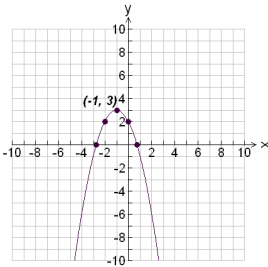
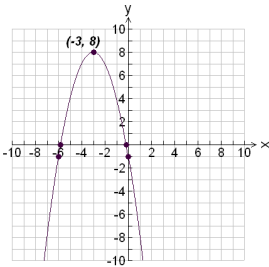
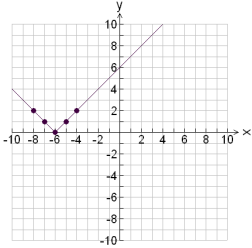
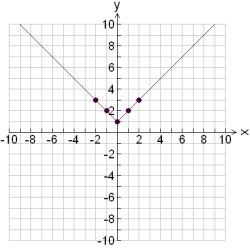
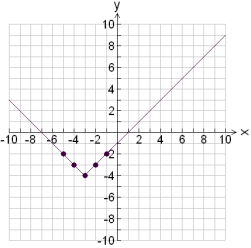
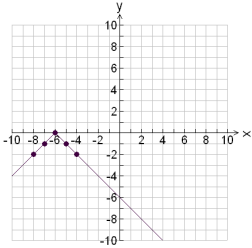
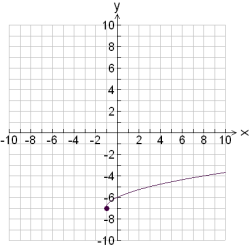
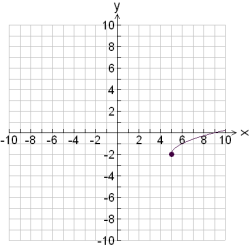
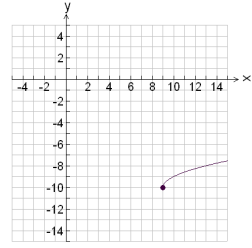
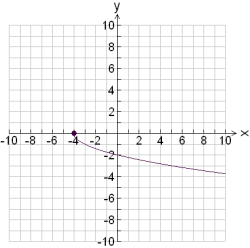
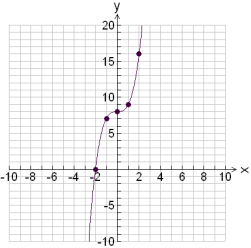
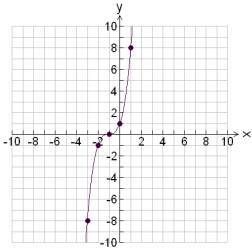
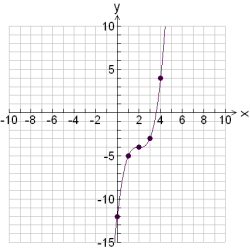
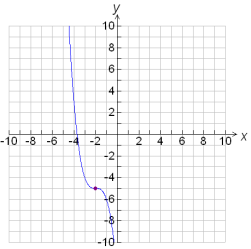


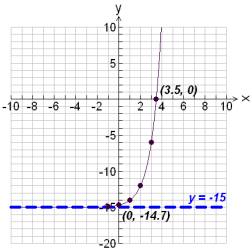
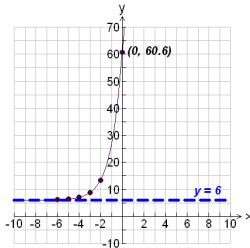
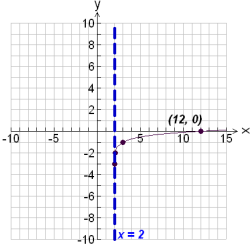
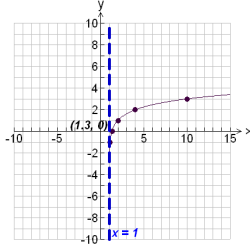
Math 230 Review Answer Key

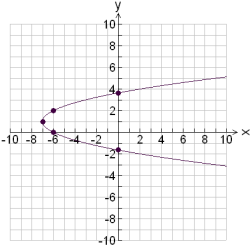
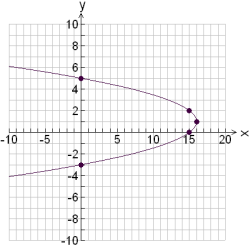
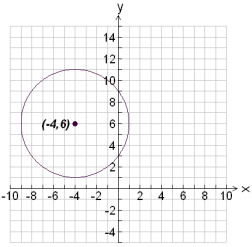
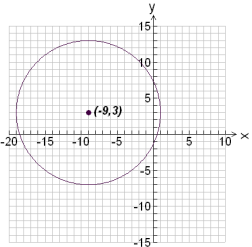
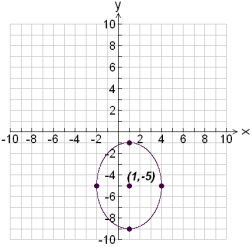
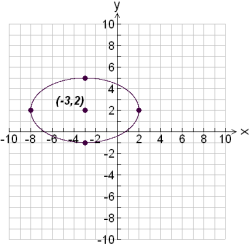
1. $\{3, 8\}$
2. $\{-5, 2\}$
3. $\left\{-\frac{4}{5}, 2\right\}$
4. $\{-20, 6\}$
5. $(1, 8)$, 
6. $(-1, 4)$, 
7. $\left[-1, \frac{5}{3}\right]$, 
8. $(6, 12)$, 
9. $(-\infty, 3) \cup (5, \infty)$, 
10. $\left(-\infty, \frac{1}{4}\right] \cup [1, \infty)$, 
11. $\left(-\infty, -\frac{1}{2}\right] \cup \left[\frac{19}{2}, \infty\right)$, 
12. $\left(-\infty, -\frac{1}{3}\right] \cup [4, \infty)$, 
13. $r^9 s^9 t^{14} \sqrt{r}$
14. $x^{10} y^7 z^8 \sqrt[3]{z}$
15. $x^{16} y^8 z^2 \sqrt[5]{z}$
16. $6x^{12} y^{10} \sqrt{5xy}$
17. $-11\sqrt{11}$
18. $13\sqrt{3}$
19. $49\sqrt[4]{2}$
20. $5\sqrt{2} + 1$
21. $-18 + 23\sqrt{6}$
22. $57 - 2\sqrt{6}$
23. -177
24. $573 + 80\sqrt{35}$
25. $\frac{x^7 \sqrt{10xy}}{5y^2}$
26. $\frac{16\sqrt{2} + 8\sqrt{3}}{5}$
27. $\frac{5\sqrt{2} + \sqrt{10} + 2\sqrt{5} + 2}{8}$
28. $\frac{18 + 4\sqrt{15} - 27\sqrt{30} - 90\sqrt{2}}{14}$
29. $\{5\}$
30. $\left\{\frac{9}{2}\right\}$
31. $\left\{-\frac{12}{5}\right\}$
32. $\{35\}$
33. 85
34. $20 - 66i$
35. $91 + 60i$
36. $-40 - 9i$
37. $\{-14 \pm 12i\}$
38. $\{-10, 4\}$
39. $\{-1 \pm 2\sqrt{6}\}$
40. $\{-6, -2\}$
41. $\{-9, 5\}$
42. $\{-4 \pm \sqrt{6}\}$
43. $\left\{\frac{-5 \pm i\sqrt{23}}{2}\right\}$
44. $\{-4 \pm 2\sqrt{7}\}$
45. $\{\pm 2i, \pm 2i\sqrt{2}\}$
46. $\{\pm i\sqrt{2}, \pm 1\}$
47. $\{4\}$
48. $\{-8, 3\}$
49. $(-9, 7)$
50. $(-\infty, -5) \cup (-3, \infty)$
51. $[-9, 3]$
52. $(-\infty, -5] \cup [9, \infty)$
53. $(-\infty, -8) \cup (6, \infty)$
54. $(-\infty, -2] \cup (-1, 2]$
55. $(-\infty, -8] \cup (-7, 1] \cup (7, \infty)$
56. $(-\infty, -11] \cup (-5, -4] \cup (12, \infty)$
57. Length: 19.4 ft, Width: 8.2 ft
58. Length: 72.1 ft, Width: 97.1 ft
59. 2500 mi
60. 6 ft
61. -115
62. 3
63. $\frac{77}{24}$
64. $4a + 41$

<p>Vertex</p> <p>y-int</p> <p>x-int</p>	<p>65.</p> <p>$\left(\frac{7}{2}, -\frac{29}{4}\right)$</p> <p>$(0, 5)$</p> <p>$\left(\frac{7 \pm \sqrt{29}}{2}, 0\right)$</p> 	<p>66.</p> <p>$(-3, 1)$</p> <p>$(0, 10)$</p> <p>None</p> 	<p>67.</p> <p>$(3, 3)$</p> <p>$(0, -6)$</p> <p>$(3 \pm \sqrt{3}, 0)$</p> 
<p>Vertex</p> <p>y-int</p> <p>x-int</p>	<p>68.</p> <p>$(2, 0)$</p> <p>$(0, -4)$</p> <p>$(2, 0)$</p> 	<p>69.</p> <p>$(2, 3)$</p> <p>$(0, 7)$</p> <p>None</p> 	<p>70.</p> <p>$(5, 1)$</p> <p>$(0, 26)$</p> <p>None</p> 
<p>Vertex</p> <p>y-int</p> <p>x-int</p>	<p>71.</p> <p>$(-1, 3)$</p> <p>$(0, 2)$</p> <p>$(-1 \pm \sqrt{3}, 0)$</p> 	<p>72.</p> <p>$(-3, 8)$</p> <p>$(0, -1)$</p> <p>$(-3 \pm 2\sqrt{2}, 0)$</p> 	

<p>Domain Range</p>	<p>73. $(-\infty, \infty)$ $[0, \infty)$</p> 	<p>74. $(-\infty, \infty)$ $[1, \infty)$</p> 	<p>75. $(-\infty, \infty)$ $[-4, \infty)$</p> 
<p>Domain Range</p>	<p>76. $(-\infty, \infty)$ $(-\infty, 0]$</p> 	<p>77. $[-1, \infty)$ $[-7, \infty)$</p> 	<p>78. $[5, \infty)$ $[-2, \infty)$</p> 
<p>Domain Range</p>	<p>79. $[9, \infty)$ $[-10, \infty)$</p> 	<p>80. $[-4, \infty)$ $(-\infty, 0]$</p> 	<p>81. $(-\infty, \infty)$ $(-\infty, \infty)$</p> 
<p>Domain Range</p>	<p>82. $(-\infty, \infty)$ $(-\infty, \infty)$</p> 	<p>83. $(-\infty, \infty)$ $(-\infty, \infty)$</p> 	<p>84. $(-\infty, \infty)$ $(-\infty, \infty)$</p> 

- 85.** 5324 ft **86.** 1.725 m **87.** 590 ft **88.** 144
89. a) $7x - 6$ **b)** 50 **c)** -27 **90. a)** $x^4 + 6x^3 - 67x^2 - 528x - 756$ **b)** -3300 **c)** 1824
91. $3x + 8$ **92.** $10x^2 - 103x + 153$ **93.** $2x + h - 10$
94. $2x + h - 9$ **95.** $2x + h + 8$ **96.** $6x + 3h - 11$
97. 0 **98.** 40
99. a) $6x + 17$ **b)** $6x + 14$ **c)** 35 **d)** -10
100. a) $x^2 - 25x + 126$ **b)** $x^2 - 7x - 27$ **c)** 60 **d)** 17
101. {4} **102.** {2.068} **103.** {11.670} **104.** {3.305}
105. {24} **106.** {7} **107.** {25} **108.** {13}
109. $f^{-1}(x) = \ln(x - 9) - 6$ **110.** $f^{-1}(x) = e^{x+18} - 10$
111. $f^{-1}(x) = \ln(x - 4) + 5$ **112.** $f^{-1}(x) = e^x + 6$
113. $f^{-1}(x) = \frac{x + 6}{7}$ **114.** $f^{-1}(x) = \frac{3x + 30}{2}$
115. $f^{-1}(x) = \frac{5x + 1}{x}$ **116.** $f^{-1}(x) = \frac{8}{3x - 4}$
117. 74 cents **118.** 4.2 yr **119.** In 2013 (16.4 yr)
120. 81.2 min **121.** 10.2 yr **122.** 6894
123. 105,561 cells **124.** 1.4 g

Domain Range	125. $(-\infty, \infty)$ $(-15, \infty)$ 	126. $(-\infty, \infty)$ $(6, \infty)$ 
Domain Range	127. $(2, \infty)$ $(-\infty, \infty)$ 	128. $(1, \infty)$ $(-\infty, \infty)$ 

<p>Vertex y-int x-int</p>	<p>129. $(-7, 1)$ $(0, 1 \pm \sqrt{7})$ $(-6, 0)$</p> 	<p>130. $(16, 1)$ $(0, -3), (0, 5)$ $(15, 0)$</p> 
<p>Center Radius</p>	<p>131. $(-4, 6)$ $r = 5$</p> 	<p>132. $(-9, 3)$ $r = 10$</p> 
<p>Center a, b</p>	<p>133. $(1, -5)$ $a = 3, b = 4$</p> 	<p>134. $(-3, 2)$ $a = 5, b = 3$</p> 
	<p>135.</p>	<p>136.</p>
<p>Center</p>	<p>$(0, 0)$</p>	<p>$(-3, 3)$</p>
<p>a, b</p>	<p>$a = 6, b = 4$</p>	<p>$a = 2, b = 5$</p>
	