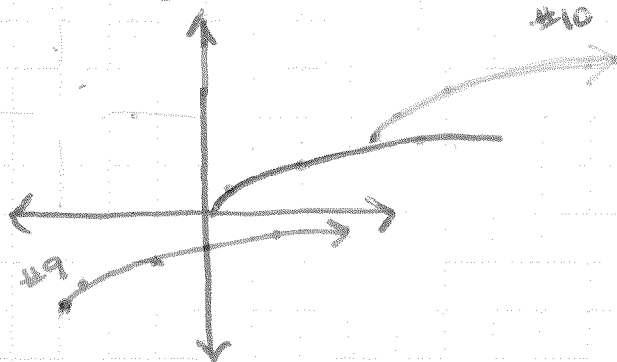


1.5) 52: 9-12, 19-23, 55, 60-63, 84-90E

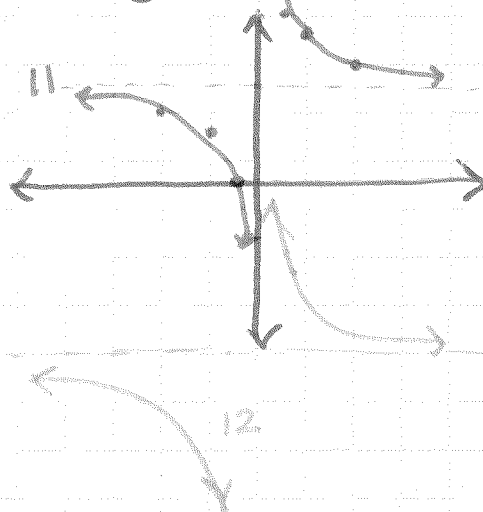
9. $g(x) = \sqrt{x+6} - 4$



10. $g(x) = \sqrt{x-7} + 3$

11. $g(x) = \frac{1}{x} + 4$

12. $g(x) = \frac{1}{x} - 6$



19. $d(x) = p(x-2)$ (Right 2 months)

$$d(x) = 10(x-2)^3 - 70(x-2)^2 + 150(x-2) - 2$$

20. $g(x)$ translate right 8 units

$$g(x) = |x-8|$$

21. $g(x)$ translate down 2 units

$$g(x) = |x| - 2$$

22. $g(x)$ translate down 8 units & left 4 units

$$g(x) = |x+4| - 8$$

23. $g(x)$ translate down 2 units, Right 1 unit

$$g(x) = |x-1| - 2$$

60. parent $f(x) = x^2$

flip, left 4, down 3

$$g(x) = -(x+4)^2 - 3$$

61. parent $f(x) = x^3$

right 4, up 2, flip

$$g(x) = -(x-4)^3 + 2$$

62. parent $f(x) = \frac{1}{x}$

down 4 $g(x) = \frac{1}{x} - 4$

63. parent $f(x) = \sqrt{x}$

flip, up 5, right 3

$$g(x) = -\sqrt{x-3} + 5$$

84. $f(x) = -2x^3 - x^2 + x - 4$ $[-2, 3]$

$f(-2) = -2(-2)^3 - (-2)^2 + (-2) - 4$
 $= 16 - 4 - 2 - 4 = 6$

$f(3) = -2(3)^3 - (3)^2 + (3) - 4$
 $= -54 - 9 + 3 - 4 = -64$

$$m_{sec} = \frac{-64 - (6)}{3 - (-2)}$$

$$= \frac{-70}{5} = -14$$

86. as $x \rightarrow \infty$, $f(x) \rightarrow \infty$
as $x \rightarrow -\infty$, $f(x) \rightarrow 0$

$$f(-1000) = 5 \times 10^{-7}$$
$$f(1000) = 5 \times 10^{-7}$$

88. y-intercept 13
zeros 2, 6

90. y-intercept \rightarrow none
zeros \rightarrow 3