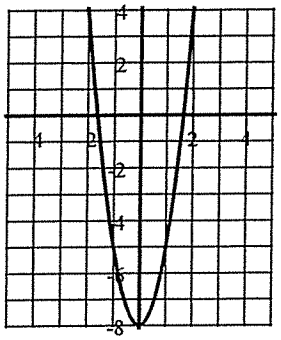
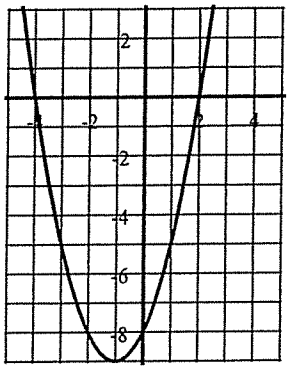
Alg 2A Review Sec 2-4, 5-1 to 5-4 Spring 2017 **ANSWERS**

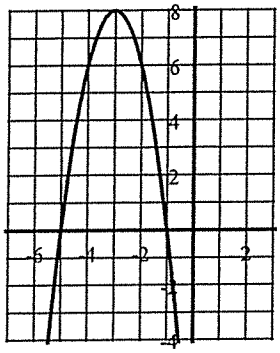
1. $y = 3x^2 - 8$
a) $LOS: x = 0$
b) $Vertex(0,-8)$
c) $y-int = -8$

2. $y = x^2 + 2x - 8$
a) $LOS: x = -1$
b) $Vertex(-1,-9)$
c) $y-int = -8$

3. $y = -2x^2 - 12x - 10$
a) $LOS: x = -3$
b) $Vertex(-3,8)$
c) $y-int = -10$



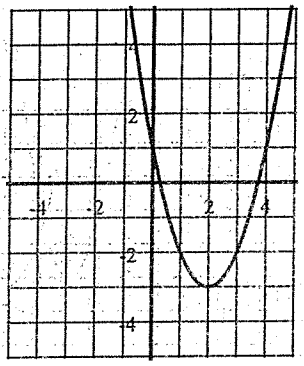


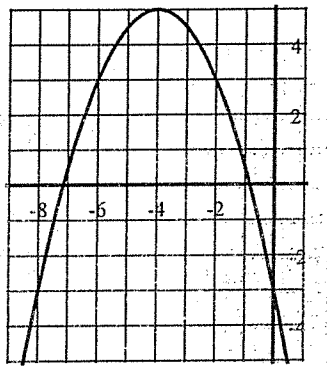


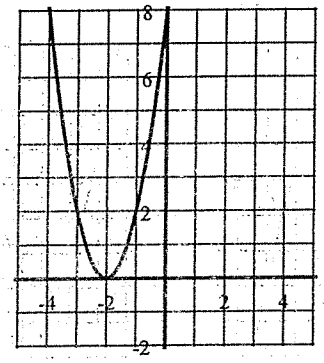
4. $y = (x-2)^2 - 3$
a) $LOS: x = 2$
b) $Vertex(2,-3)$
c) $y-int = 1$

5. $y = -\frac{1}{2}(x+4)^2 + 5$
a) $LOS: x = -4$
b) $Vertex(-4,5)$
c) $y-int = -3$

6. $y = 2(x+2)^2$
a) $LOS: x = -2$
b) $Vertex(-2,0)$
c) $y-int = 8$







7. a) #of additional exmployees hired = 4 b) Min expenses= \$3404 8. a) Down b) Up
9. a) Min b) Max c) Min 10. a) max ht = 420 ft b) time to reach max ht = 5 sec
11. a) $y = -\frac{17}{36}(x-13)^2 - 5$ b) $y = 2(x+3)^2 - 7$ c) $y = -4(x-1)^2 + 5$

12. a. Quad Reg EQ: $y = 0.14x^2 - 7.24x + 116.74$. It will take 599.14 feet to stop if traveling at 90mph.
b. Linear Reg EQ: $y = 26.92x + 13.20$. If a snake is 350 cm long it is approximately $12\frac{1}{2}$ years old.

13. $(m-6)(m-9)$ 14. $(w+12)(w+8)$ 15. $5(c-1)(c-7)$
16. $7r(r+7)(r+2)$ 17. $(v+8)(v-6)$ 18. $(q+4)(q-12)$
19. $2(n+4)(n-5)$ 20. $(11x-3)(x-1)$ 21. $4(3x+1)(x-7)$
22. $(2y+3)(4y+3)$ 23. $(z+2)(6z-5)$ 24. $(m-15)(m+15)$
25. $6(11h^2-36)$ 26. $3(3a-8)(3a+8)$ 27. $4c^3(2c^2+7)$ 28. $6ab^2(9a^3-5b^2)$