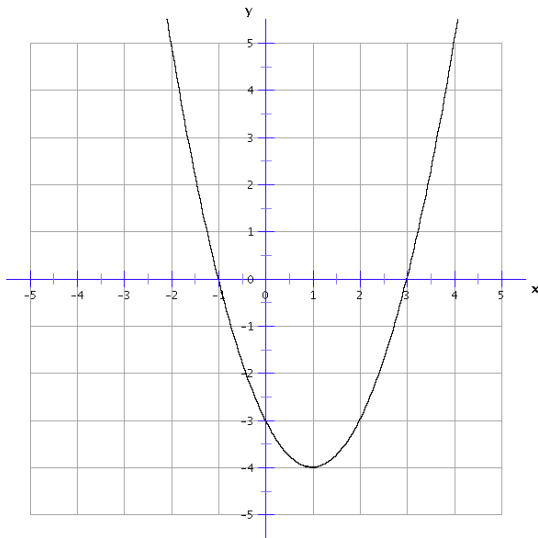


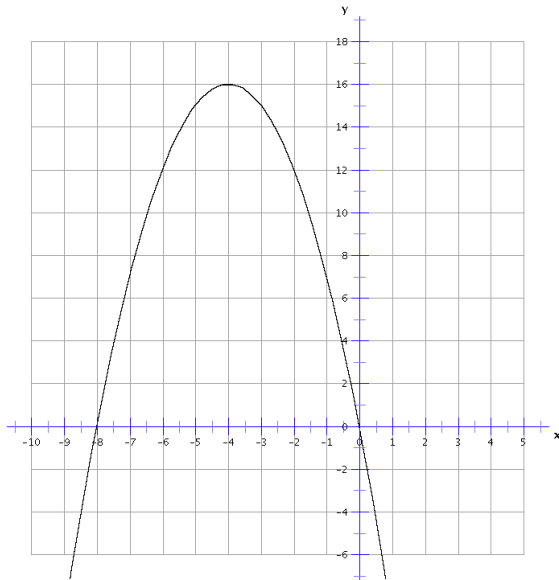
## Algebra I Homework #22 – Answer Key

- 1)  $3ax(4x - 3)(3x + 2)$
- 2) No Solutions  $x \neq \frac{4}{3}, \frac{5}{2}$
- 3)  $150x\sqrt{3x} - 40x\sqrt{5x}$
- 4)  $a = \frac{17yh}{5w - 13m} \quad 5w \neq 13m$
- 5) The rocket was launched 6 miles away from the control tower, it crashed 10 miles downrange, it was 8 miles downrange when it got to its maximum height, and the rocket's maximum height was 4 miles.
- 6) Vertex =  $(1, -4)$   $x_{\text{int}} = (-1, 0), (3, 0)$



- 7)  $2xy(x - 2)(x^2 + 2x + 4)$
- 8)  $x = \frac{7 + \sqrt{73}}{4}, \frac{7 - \sqrt{73}}{4}$

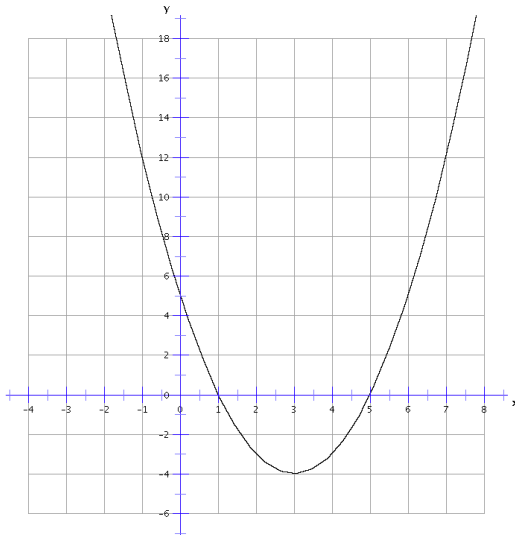
9) Vertex =  $(-4, 16)$        $x_{\text{int}} = (0, 0), (-8, 0)$



10)  $2(2x + 3y)(4x^2 - 6xy + 9y^2)$

11)  $x = -3 + \sqrt{23}, -3 - \sqrt{23}$

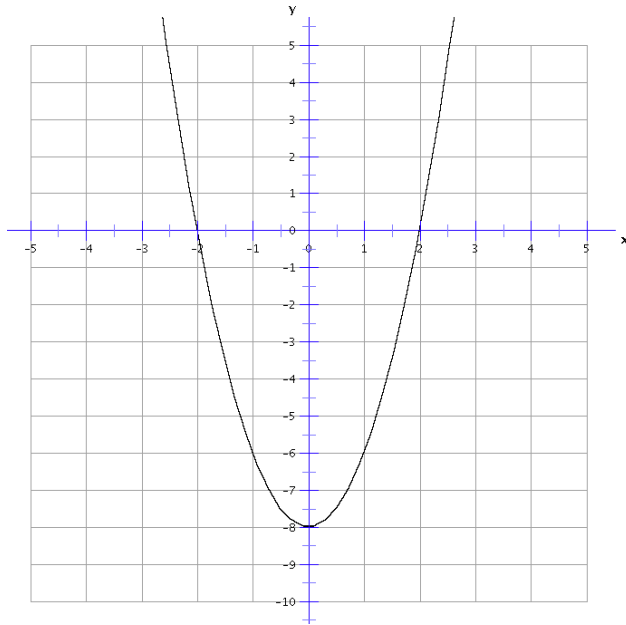
12) Vertex =  $(3, -12)$        $x_{\text{int}} = (1, 0), (5, 0)$



13)  $5x^2(x + 5)(x^2 - 5x + 25)$

14)  $x = \frac{7 + \sqrt{193}}{18}, \frac{7 - \sqrt{193}}{18}$

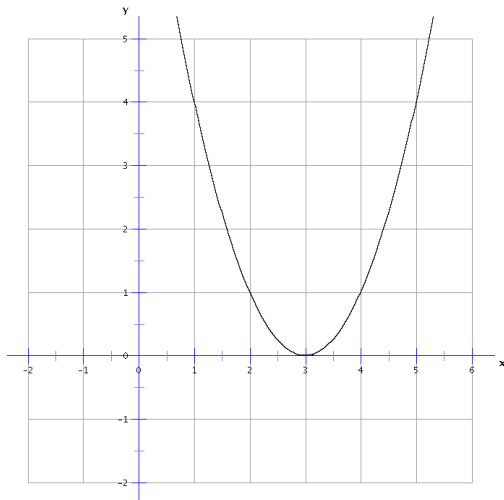
15) Vertex =  $(0, -8)$   $x_{\text{int}} = (-2, 0), (2, 0)$



16)  $2x(5x - 4)(25x^2 + 20x + 16)$

17)  $x = \frac{-2 + 2\sqrt{37}}{9}, \frac{-2 - 2\sqrt{37}}{9}$

18) Vertex =  $(3, 0)$   $x_{\text{int}} = (3, 0)$



19)  $(x + 1)(x^2 - x + 1)$

20)  $x = \frac{-7 + \sqrt{305}}{16}, \frac{-7 - \sqrt{305}}{16}$