

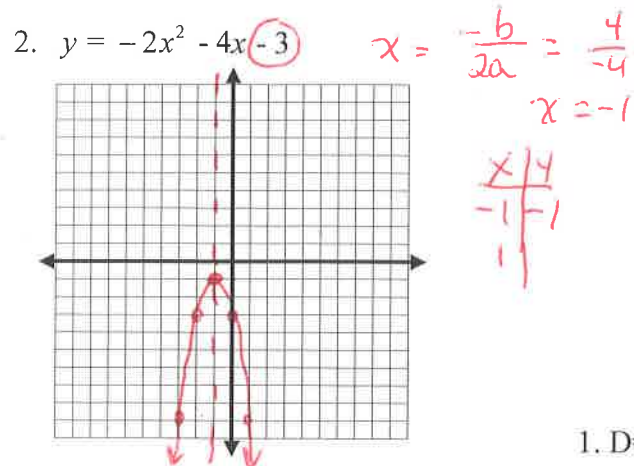
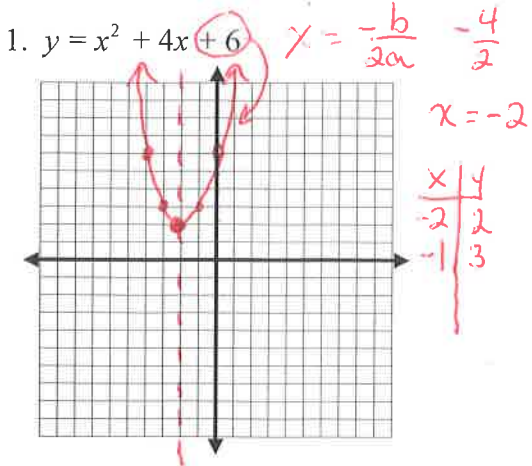
Algebra 1

Practice Quiz 9.1-9.4

NAME _____

KEY

Graph each function and determine the domain and range. (3 Points)



Find the vertex, the equation of the axis of symmetry, the y-intercept, circle minimum(Mi) or maximum(Ma), and determine its value. (4 Points)

3. $y = x^2 - 16$
 $x = \frac{-b}{2a} = \frac{0}{2} = 0$

4. $y = -x^2 + 6x - 1$
 $x = \frac{-b}{2a} = \frac{-6}{-2} = 3$

1. D = \mathbb{R} R = $y \geq 2$

2. D = \mathbb{R} R = $y \leq -1$

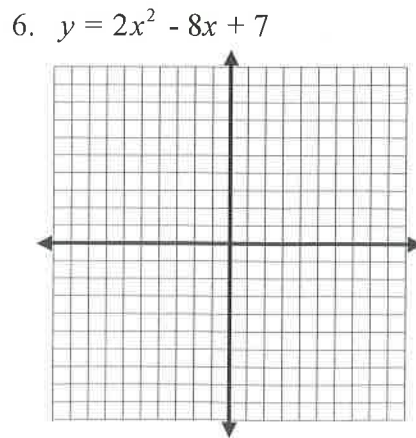
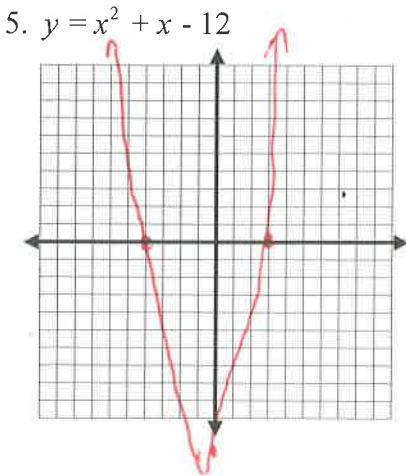
3. V = (0, -16) AS = $x = 0$

y-int = -16 (Mi) / Ma = -16

4. V = (3, 8) AS = $x = 3$

y-int = -1 (Mi) / Ma = 8

Solve each equation by graphing. (3 Points) *Graphing Calculator*



5. 3, -4

6. 1.3, 2.7

Points(20) _____

Describe how the graph of each function is related to the graph of $f(x) = x^2$. (2 Points)

7. $y = x^2 + 4$

Up 4

8. $y = -5x^2$

Vertical Stretch
Reflection

9. $y = 4x^2 - 6$

Down 6
Vertical Stretch

10. $y = -\frac{1}{3}x^2 + 2$

Up 2
Vertical Shrink
Reflectin

7. _____
8. _____
9. _____
10. _____

Find the value of c that makes each trinomial a perfect square. (2 Points)

11. $x^2 + 10x + c$

$\frac{10}{2} = 5$ $5^2 = 25$

12. $x^2 - 5x + c$

$(\frac{5}{2})^2 = \frac{25}{4}$

11. _____
12. _____
13. _____

Solve each equation by completing the square. (4 Points)

13. $x^2 - 10x - 24 = 0$

$x^2 - 10x = 24$
 $x^2 - 10x + 25 = 24 + 25$
 $(x-5)^2 = 49$
 $\sqrt{(x-5)^2} = \sqrt{49}$
 $x-5 = 7$ $x-5 = -7$
 $x = 12$ $x = -2$

14. $x^2 + 16x - 17 = 0$

$x^2 + 16x = 17$
 $x^2 + 16x + 64 = 17 + 64$
 $(x+8)^2 = 81$
 $\sqrt{(x+8)^2} = \sqrt{81}$
 $x+8 = 9$ $x+8 = -9$
 $x = 1$ $x = -17$ Points (28)

14. _____
15. _____
16. _____

15. $x^2 - 6x = 27$

$x^2 - 6x = 27$
 $x^2 - 6x + 9 = 27 + 9$
 $(x-3)^2 = 36$
 $\sqrt{(x-3)^2} = \sqrt{36}$
 $x-3 = 6$ $x-3 = -6$
 $x = 9$ $x = -3$

16. $2x^2 - 18x + 11 = -15$

$2x^2 - 18x = -26$
 $\frac{2x^2}{2} - \frac{18x}{2} = \frac{-26}{2}$
 $x^2 - 9x + \frac{81}{4} = -13 + \frac{81}{4}$
 $(x - \frac{9}{2})^2 = \frac{29}{4}$
 $\sqrt{(x - \frac{9}{2})^2} = \sqrt{\frac{29}{4}}$
 $x - \frac{9}{2} = 2.7$ $x - \frac{9}{2} = -2.7$
 $x = 7.2$ $x = 1.8$