

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## ALG 2 - Quiz Review 2.1 - 2.2

Use when you get it right all by yourself  
**S** Use when you did it all by yourself, but made a silly mistake  
**H** Use when you could do it alone with a little help from teacher or peer  
**G** Use when you completed the problem in a group  
**X** Use when a question was attempted but wrong (get help)  
**N** Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Describing Transformations	1	2, 4	3
Graphing Quadratics	5	6, 7	8
Vertex	5	6, 7	8
Axis of Symmetry	5	6, 7	8
Vertex Form	5		
Standard Form		6	
Creating a t-chart	5, 6	7	8
x-intercepts, Roots, Zeros, Solutions	7, 8		
Intercept, Root, Factored Form		7	8
y-intercept	9, 10		
Domain/Range		9, 10	
Direction of Opening	9, 10		
Maximum/Minimum	9, 10		
Evaluating Functions	11 - 14		

**1 – 4: Describe the transformation in words from the parent function,  $f(x) = x^2$ , represented by  $g(x)$ .**

1.  $g(x) = (x - 4)^2 + 2$

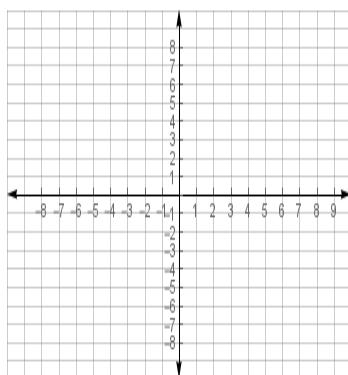
2.  $g(x) = -2(x)^2$

3.  $g(x) = \left(\frac{1}{3}x\right)^2 - 4$

4.  $g(x) = \frac{1}{2}(x + 5)^2$

**5 – 6: Graph the function using the table provided. Label the vertex and axis of symmetry. Use correct notation.**

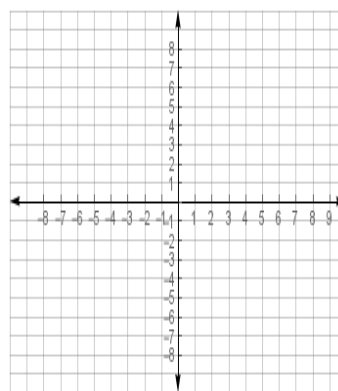
5.  $g(x) = (x - 2)^2 - 3$



x	g(x)	y

Vertex: \_\_\_\_\_  
 AofS: \_\_\_\_\_

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

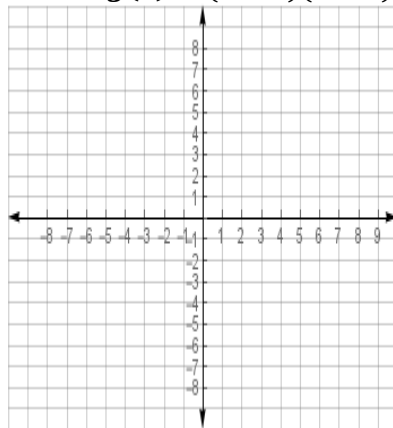


x	f(x)	y

Vertex: \_\_\_\_\_  
 AofS: \_\_\_\_\_

**7 – 8: Graph the function using the table provided. Label the x-intercepts, vertex, and axis of symmetry. Use correct notation.**

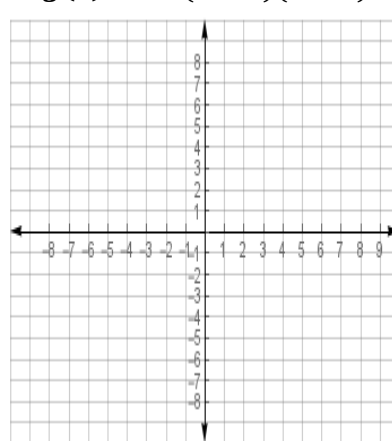
**7.  $g(x) = (x - 4)(x + 2)$**



x	g(x)	y

x-intercepts: \_\_\_\_\_  
 Vertex: \_\_\_\_\_  
 AofS: \_\_\_\_\_

**8.  $g(x) = -2(x + 3)(x + 5)$**



x	g(x)	y

x-intercepts: \_\_\_\_\_  
 Vertex: \_\_\_\_\_  
 AofS: \_\_\_\_\_

**9 – 10: State the y-intercept, and circle the word maximum or minimum based on the graph. Describe the domain and range (in interval notation), and tell whether the graph opens up or down by circling the correct word.**

**9.  $y = -x^2 + 4x - 1$**

y-intercept: \_\_\_\_\_  
 Maximum or Minimum  
 Domain: \_\_\_\_\_  
 Range: \_\_\_\_\_  
 Opens Up or Down

**10.  $y = 3x^2 + 6x - 4$**

y-intercept: \_\_\_\_\_  
 Maximum or Minimum  
 Domain: \_\_\_\_\_  
 Range: \_\_\_\_\_  
 Opens Up or Down

**11 – 14: Evaluate the following functions with the given x value. Show work for partial!**

11.  $f(x) = x^2 - 2x + 3; f(-2)$

12.  $g(x) = -2x^2 + 3x - 7; g(1)$

13.  $h(x) = -x^2 - 4; h(h(0))$

14.  $f(x) = 3x^2 - x; f(f(-1))$

\*\*\*Spiral ACT questions will be added to the quiz from Algebra 1, Geometry and Chapter 1!\*\*\*

**CYU Reflection:** *How far can you go: basic, intermediate, or advanced?*

**Rate your mastery level!**

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

