Name _____ Date _____ Pd ____

CYU 2.1 Transformations of Quadratic Functions DAY ONE

☑ *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*

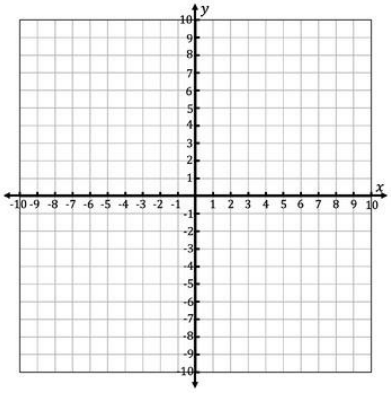
X *Use when a question was attempted but wrong (get help)*

N *Use when a question was not even attempted*

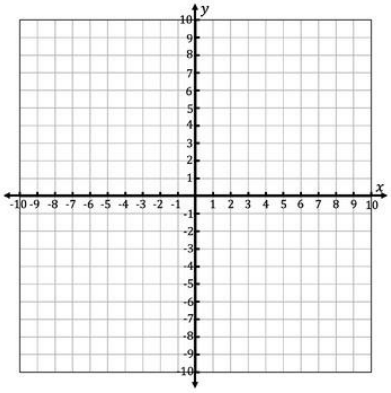
CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Describing Transformation	1 - 3	7 - 9	10 - 16
Graphing Quadratics	4, 5	1, 2, 3, 6	
Using your Calculator	1 - 3	7 - 9	
Identifying the Vertex	10 - 12		13 - 16

Describe the transformations of $f(x) = x^2$ represented by g. Then graph each function.

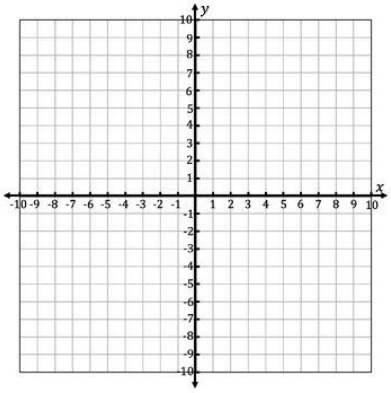
1. $g(x) = (x + 6)^2 - 2$



2. $g(x) = (x - 9)^2 + 5$



3. $g(x) = (x + 10)^2 - 3$

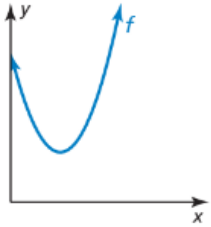


Sketch a graph that would show the transformation from graph f given the rule.

4. $y = f(x - 1)$

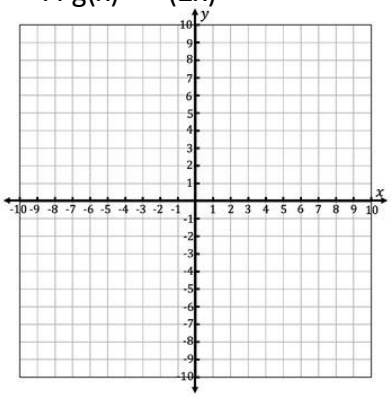
5. $y = f(x) + 1$

6. $y = f(x - 1) + 1$

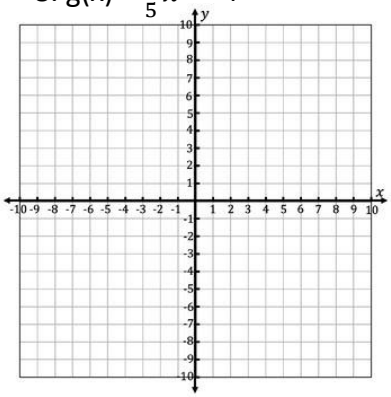


Describe the transformation of $f(x) = x^2$ (the quadratic parent function) represented by g. Then graph each function.

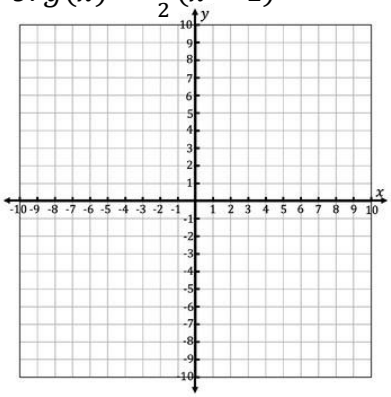
7. $g(x) = -(2x)^2$



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



9. $g(x) = \frac{1}{2}(x-1)^2$



Describe the transformation of the graph of the parent quadratic function. Then identify the vertex.

10. $f(x) = -2x^2 + 5$

11. $f(x) = \frac{1}{2}(x-1)^2$

12. $f(x) = 3(x+2)^2 + 1$

Write the rule for g(x) described by the transformations of the graph of f(x). Then identify the vertex.

13. $f(x) = 8x^2 - 6$; horizontal stretch by a factor of 2 and a translation 2 units up, followed by a reflection over the y-axis.

14. $f(x) = (x+6)^2 + 3$; horizontal compression by a factor of $\frac{1}{2}$ and a translation 1 unit down, followed by a reflection over the x-axis.

15. $f(x) = x^2$; vertical stretch by a factor of 4 and a reflection over the x-axis, followed by a translation 2 units up.

16. $f(x) = x^2$; vertical compression by a factor of $\frac{1}{3}$ and a reflection over the y – axis, followed by a translation 3 units right.

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.