5 (AM) Advanced Mastery 100%
4 (M) Mastery 93%
3 (VM) Vital Mastery 82%
2 (FM) Foundational Mastery 70%
1 (NYM) Not Yet Mastered 45%
0 (NA) No Attempt 0%

Name: _____

Per: _____ Date: _____

Pre-Assessment

IM2 – 3.3 (A – Pre V1) Quadratic Function Forms (Reveals)

Standards & Skill Mastery

Student Self-Score	Skills Assessed / Goals	Teacher Score
	F.IF.8a – I can identify quadratic function forms based on their characteristics and vice versa.	
	SMP – I can self-reflect and clearly communicate my plan for improvement.	

Pre-Assessment Reflection

Check all that apply. To study for this assessment, I will…

- ☐ independently, rework the pre-assessment.
- ☐ complete all of my practice.
- ☐ watch tutorials online.
- ☐ study my notes until I understand them.
- ☐ work through practice problems & recheck answers.

My plan to maintain or improve my mastery is… (what, when, and how?)

_____

_____

_____

_____

_____

Key Terms, Formulas, & Notes

$\underline{Quadratic\ Parent\ Function} \equiv f(x) = x^2$

Directions *– Match the quadratic function with its form name. Write the letters a, b, or c, next to the appropriate function.*

1. _____ $f(x) = a(x-h)^2 + k$ $a.\ Vertex\ Form$
2. _____ $f(x) = a(x-r_1)(x-r_2)$ $b.\ Standard\ Form$
3. _____ $f(x) = ax^2 + bx + c$ $c.\ Factored\ Form$

Directions *– Match the quadratic function with the key characteristics it reveals. Write the letters a, b, or c, next to the appropriate function.*

4. _____ $f(x) = a(x-h)^2 + k$ $a.\ Roots,\ Zeros, \&\ x-intercepts$
5. _____ $f(x) = a(x-r_1)(x-r_2)$ $b.\ y-intercept$
6. _____ $f(x) = ax^2 + bx + c$ $c.\ vertex$

Directions *– Determine the form name and all key characteristics that can be determined by each function, below, without rewriting the function in another form. For key characteristics that cannot be determined, write "N/A."*

7. $f(x) = -12(x+3)^2 - 8$
   a. Form: _____
   b. Roots: _____ & _____
   c. Zeros: _____ & _____
   d. x-intercepts: _____ & _____
   e. y-intercept: _____
   f. Vertex: _____
   g. Axis of Symmetry: _____
   h. Concavity: up or down ← Circle one
   i. Dilation: stretched by ____, compressed by ____, or none (1)

8. $f(x) = 2x^2 + 8x + 12$
   a. Form: _____
   b. Roots: _____ & _____
   c. Zeros: _____ & _____
   d. x-intercepts: _____ & _____
   e. y-intercept: _____
   f. Vertex: _____
   g. Axis of Symmetry: _____
   h. Concavity: up or down ← Circle one
   i. Dilation: stretched by ____, compressed by ____, or none (1)

9. $f(x) = -\frac{1}{3}(x-2)(x+6)$

   a. Form: _____

   b. Roots: _____ & _____

   c. Zeros: _____ & _____

   d. x-intercepts: _____ & _____

   e. y-intercept: _____

   f. Vertex: _____

   g. Axis of Symmetry: _____

   h. Concavity: up or down ← Circle one

   i. Dilation: stretched by ____, compressed by ____, or none (1)

Directions *– Error Analysis: A student wrote each form of function based on the graph, below. Circle any or all mistakes you find within the student's work below. Then, correct the error(s).*

10. Factored Form: $f(x) = -(x-2)(x+4)$

11. Standard Form: $f(x) = -x^2 + 2x + 8$

12. Vertex Form: $f(x) = -(x+1)^2 + 9$