**Graded Classwork:** All Three Quadratics Form Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Due at the END OF CLASS FOR A GRADE**

Group 1: all equations in this group are in which form? (Circle One)

Standard Form Vertex Form Factored Form

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Equation** | $y-$**intercept** | **Axis of Symmetry** | **Vertex** | **Opens up or down?** |
| 1. $y=x^{2}+6x-9$ |  |  |  |  |
| 2. $y=x^{2}-14x$ |  |  |  |  |
| 3. $y=-x^{2}-10x+2$ |  |  |  |  |

Group 2: all equations in this group are in which form? (Circle One)

Standard Form Vertex Form Factored Form

|  |  |  |  |
| --- | --- | --- | --- |
| **Equation** | **Vertex** | **Axis of Symmetry** | **Max or Min?** |
| 4. $y=-0.4\left(x-1\right)^{2}-9$ |  |  |  |
| 5. $y=x^{2}-12$ |  |  |  |
| 6. $y=2\left(x+2.5\right)^{2}$ |  |  |  |

7. Write the equation of the quadratic function that has an $a-$value of 1 and a vertex at $\left(5, 12\right)$

8. Write the equation of the quadratic function that was reflected and has a vertex at $\left(-3, 8\right)$

9. $f(x)=0.5\left(x-8\right)^{2}-12$ Solve for $f(0)$…. aka: the $y-$intercept. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Group 3: all equations in this group are in which form? (Circle One)

Standard Form Vertex Form Factored Form

|  |  |  |  |
| --- | --- | --- | --- |
| **Equation** | **Roots/Zeros** | **A.O.S.** | **Vertex** |
| 10. $y=(x-3)(x-1)$ |  |  |  |
| 11. $y=-3(x+4)(x-6)$ |  |  |  |
| 12. $y=(2x-6)(x+7)$ |  |  |  |

The parabola below describes the path

of a swimmer diving from a springboard.

Your Task:

Write a story to describe the diver’s path.

Be specific about describing key locations on the

graph and using units in your story.

