**Secondary Math 2 8.3 Homework Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_**

**Graphing Quadratics in Any Form**

**Identify the vertex and the listed key features of each quadratic equation. Then graph each equation.**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | $$y=2x^{2}-8x+11$$

|  |  |
| --- | --- |
| Vertex:  | Axis of Symmetry: |
| y-intercept: | x-intercepts: |
| Domain: | Range: |

 |  | $$y=-x^{2}+2x-3$$

|  |  |
| --- | --- |
| Vertex:  | Axis of Symmetry: |
| y-intercept: | x-intercepts: |
| Domain: | Range: |

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**Review Problems:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Solve by completing the square.$$x^{2}+18x+73=-9$$ |  | Solve by factoring. (Hint: you will need to set equal to zero first)$$2x^{2}+8=17x$$ |

**Identify the x-intercepts of each quadratic. Sketch a basic graph of the function and identify the key information.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | $$y=-2\left(x-7\right)\left(x-3\right)$$

|  |  |
| --- | --- |
| Vertex:  | Axis of Symmetry: |
| y-intercept: | x-intercepts: |
| Domain: | Range: |

 |  | $$y=\left(x-3\right)^{2}-1$$

|  |  |
| --- | --- |
| Vertex:  | Axis of Symmetry: |
| y-intercept: | x-intercepts: |
| Domain: | Range: |

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1. **Graph the following quadratic equation by first putting the equation in factored form.**

**Also, put the equation in vertex form.**

|  |  |  |
| --- | --- | --- |
| $$y=x^{2}+6x+5$$A) Factor the quadratic and identify the X-Intercepts.B) Put the quadratic in vertex form. (Hint: complete the square) |  | **Identify Critical Information:****Vertex (**Max/Min)**:** **Axis of Symmetry:****Y-Int:****X-Int:****Domain:****Range:**  |