#  Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Writing Quadratic Functions HOMEWORK**

 **Date \_\_\_\_\_\_\_\_\_\_\_\_ Block \_\_\_\_\_\_**

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| **1-6: Write a quadratic function in vertex form AND then in standard form for the graph shown.**  |
| **1.**  | **2.**  | **3.** |
| **4.** | **5.** | **6.** |
| **7-12: Write the standard form of each quadratic described. (Hint: Think of all three forms.)** |
| **7.** I have a minimum of (3, -5) and  a vertical stretch of 3 | **8.** I have zeros at -2 and 1 and  the point (2, -8) | **9.** I have only one zero at -2 and  a y-intercept at (0, 12) |
| **10.** I have a minimum of (3, -7)  and a vertical stretch of  | **11.** I have zeros at 4 and 6  and my y-intercept is -6.   | **12.** I have a vertical stretch of 4  and zeros at and  |
| **13-18: Use the calculator to answer each question. Round decimals to the nearest hundredth.**  |
| **An object is fired straight up from the top of a 200 foot tower at a velocity of 80 feet per second. The height h(t) of the object t seconds after firing is given by h(t) = -16t2 + 80t + 200.** |
| 1. What is the y-intercept? What is the meaning of the y-intercept in the context of this problem?
2. What was the maximum height reached by the object?
3. When did the object reach its maximum height?
4. How high would the object be after 3.2 seconds?
5. When did the object reach 100 feet?
6. When did the object hit the ground?
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