

Quadratic functions practice**NAME:**

For questions 1 through 3, determine the function's orientation, y-intercept, and vertex (without graphing). Remember, a vertex has an x and a y value. Then provide a quick sketch of the parabola. Show your work and write your answers in the spaces provided. (You may check your graphs with your calculator.)

1. $y = 2x^2 + 4x - 4$

orientation_____ y-intercept_____ vertex_____ sketch_____

2. $y = -x^2 + 6x - 2$

orientation_____ y-intercept_____ vertex_____ sketch_____

3. $f(x) = 3x^2 + 6x - 4$

orientation_____ y-intercept_____ vertex_____ sketch_____

4. Solve graphically. Show a complete graph with the solutions labeled and circled. Also, label specifically what you graphed. Round your answers to two decimal places.

$$5 = 2x^2 - 3x$$

5. Draw the graph that would be used to solve $0 = 2x^2 + 4x + 5$. Explain, using the graph, why this equation has no real solution. Use your QUADRATIC (or QUAD2) program to find the complex solutions.