

3 main things you have to be able to do on **MONDAY'S QUIZ**:

- Graph an equation in the form  $y = ax^2 + bx + c$
- Solve an equation in the form  $0 = ax^2 + bx + c$  by finding the x-intercepts
- Find the x-intercepts of a quadratic equation on your calculator

Practice Problems:

A. Graph the following **WITHOUT YOUR CALCULATOR**. Be sure to show 5 points, including the vertex. Also, state the axis of symmetry, y-intercept, maximum, and minimum.

1)  $y = -2x^2 + 8x - 4$

2)  $y = -\frac{1}{2}x^2 + 7$

3)  $y = 5x^2 - 10x - 5$

B. Solve the following equations by graphing **WITHOUT YOUR CALCULATOR**.

4)  $x^2 - 2x = 3$

5)  $-x^2 + 5x = -3x + 16$

6)  $-x^2 + 10x - 28 = x^2 - 22x + 102$

C. Solve the following equations by graphing **WITH YOUR CALCULATOR**. Round your answers to two decimal places.

7)  $0 = 2x^2 - 5x - 8$

8)  $-1 = 4x^2 - 7x$

9)  $-5.36x^2 = 17x + 2.67$

D. Answer the following word problem. **USE YOUR CALCULATOR!**

10) Lisa kicks a soccer ball - it's path is modeled by the equation  $y = -0.04x^2 + 1.2x$  where x is the horizontal distance the ball travels and y is the vertical height. When will the height (y-value) be equal to 5 feet?

E. Are you ready for the final?

11) Solve:  $-2|x + 3| > -6$

12) Simplify:  $\left(\frac{2x^2}{y^3}\right)^3 \cdot \frac{4y^4}{x^{-1}}$

13) Factor:  $x^2 - 2x - 48$