

Recall:

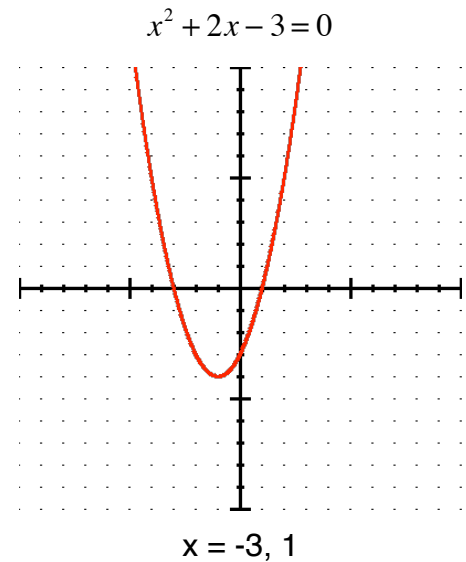
To Solve Graphically:

A) Write equation in standard form = 0

$$ax^2 + bx + c = 0$$

B) Graph $y = ax^2 + bx + c$

C) Find the x-intercepts (also called *zeros*)



Calculator Instructions:

To Solve Graphically (Find the x-intercepts):

A. Write your equation in standard form = 0

B. Press **Y=**

C. Clear out all other equations

D. Enter your equation into **Y1**

E. Press **Graph**

F. If you don't see your graph (vertex and x-intercepts), press **Window**. Change the window settings until you can see all pertinent information (Hint: find the vertex using $\frac{-b}{2a}$)

G. While viewing the graph, press **2nd Trace** [Calc]

H. Chooser **zero** (Option 2)

I. Press the left arrow until your cursor is to the left of the x-intercept. Press **Enter**.

J. Press the right arrow until your cursor is to the right of the x-intercept. Press **Enter**.

K. Press the left arrow until your cursor is very close to the x-intercept. Press **Enter**.

L. The first x-intercept will be displayed. If there is another x-intercept, repeat the above steps starting at step G.

M. Report your answers as $x = \underline{\hspace{1cm}}, \underline{\hspace{1cm}}$

Find the solutions to these quadratic equations by using your calculator.

1) $0 = -2x^2 + 8x + 1$

2) $x^2 + 10x - 4 = 0$

Solutions: _____

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3) $-15 = 4x^2 - 6x + 5$

4) $-10x + 80 = -\frac{1}{2}x^2$

Solutions: _____

Solutions: _____

5) A free throw shot by Derrick Rose is modeled by the equation $y = -\frac{1}{10}x^2 + 1.87x + 6$.

(a) Find solutions to the equation when $y = 10$ (use your calculator!) _____

(b) Derrick Rose will make the free throw if x is within a half foot of 15. Will he make the free throw?

6) Do NOT use your calculator! Find the solutions to the quadratic equation $5 = x^2 - 4x$.

