

Name: _____

8A; Algebra 1

Date: _____

Period _____

How Can The TI-84 Plus Graphing Calculator Help Us Solve Quadratic Equations?

Example:

Solve $x^2 + 2x = 3$

On the Graphing Calculator:

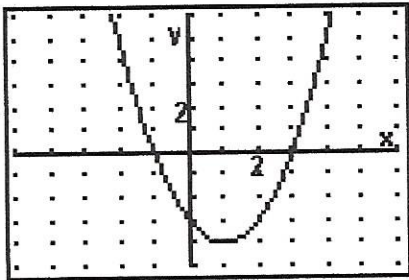
1. Push the $y =$ button
2. Type in the quadratic equation you want to solve (you must type it in standard form)
3. Press the **GRAPH** button.
You should see a parabola representing the graph of your quadratic equation
4. The points where the graph intersects the x-axis are the roots, or solutions of the equation.

To find these points:

- Press the 2^{nd} button and the **TRACE** button.
 - Push the 2 button.
 - Using your \leftarrow or \rightarrow button, move the cursor slightly to the left of the first point where the graph intersects the x-axis.
Press **ENTER**
 - Next move your cursor slightly to the right of the first point where the graph intersects the x-axis.
Press **ENTER**
 - Press **Enter** again
 - The value given for x is your first root.
5. Repeat Step 4 for the second point where the graph intersects the x-axis. This will give you your second root.

Practice:

1)

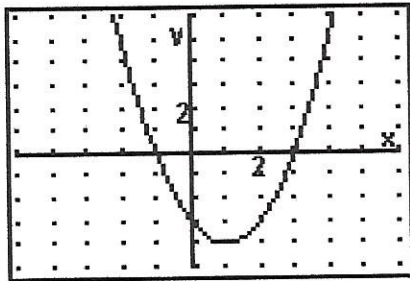


What are the roots Choose:
of this parabola?

- a) 3 and 1
- b) 1 and 0
- c) 3 and -1
- d) -4 and 0

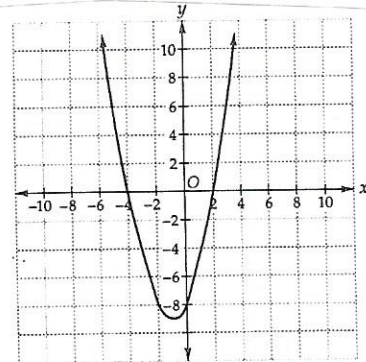
2)

What is the equation for the
accompanying graph?



3)

What is the equation for the
accompanying graph?



Review

4) Solve: $x^2 - 10 = 3x$

5) Solve: $w^2 - 18 = 0$