

# Lab 4.1A Using the Web-based Graphing Calculator



Name \_\_\_\_\_

Date \_\_\_\_\_ Period \_\_\_\_\_



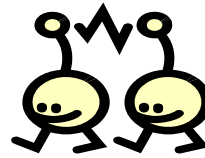
**Materials:** Personal Computer w/ Internet Access, [www.mathchamber.com](http://www.mathchamber.com) website



**Key Learning:** Become proficient in the use of the web-based graphing calculator by graphing ordered pairs and equations (functions) in the x-y coordinate plane. Experiment with the many features of the calculator.



## Guided Directions



*this is a*  
**PAIR**  
**SHARE**



- 1) Working in teams of two, logon to the internet and access the MathChamber website. Click on Algebra -> Unit 4 -> and the Graphing Calculator icon. Make a note of the help screens available for your reference.
- 2) Un-check the Auto Scale checkbox in the “Window” section of the calculator screen. This will allow you to control the graphing window at all times. **ALWAYS** un-check this box as a first step in using the calculator.
- 3) Enter the “right side” of the equation  $y = -2x + 3$  into the “function” entry box. Your entry will be in calculator language:  $-2*x+3$
- 4) Enter the following list of ordered pairs (x, y) into the “Data” box:  
1, 1  
4, 13  
-3, 7  
4, -6  
-6, 9      << *when finished, click on [Update Plot]* >>
- 5) Answer the questions on the following page.  
N.B. *Even though you are working in pairs, each partner should record their own version of the answers.*
- 6) Finished early? Try the 4.2 QuikChek on the Unit 4 web page.

## Lab 4.1A Using the Web-based Graphing Calculator



Questions:

You may answer the questions on this sheet.

The image shows a screenshot of a web-based graphing calculator interface. The main window displays a coordinate plane with a grid. The x-axis ranges from -8.0 to 10.0, and the y-axis ranges from -8.0 to 10.0. The title of the graph is "Graph Title".

Callout boxes point to various features:

- Show Function/Data**: Points to the "Show" section of the control panel, which includes checkboxes for "Function" and "Data".
- Plot Type**: Points to the "Plot Type" section, which includes radio buttons for "Connected" and "Scatter".
- Graphing Window**: Points to the "Window" section, which includes a checkbox for "Auto Scale" and input fields for "X min", "X max", "X scale", "Y min", "Y max", and "Y scale".
- Mouse Position**: Points to the "Mouse Pos:" section, which displays "Outside!".
- Data Window**: Points to the "Data Window" section, which includes a button labeled "Show Tabular Data".
- Function/Equation Entry**: Points to the "Function" section, which includes a text input field for  $y(x) =$  and an "Update Plot" button.
- Ordered Pair Data Entry**: Points to the "Data" section, which is an empty list box for entering data points.

*Describe what happens when you...*

1. Un-check and re-check the Function and Data boxes in the "Show" section.
2. Click the [Connected] and [Scatter] buttons on and off.

3. Update the Graph Title with any text of your choice.
  
4. Un-check the Auto Scale box and change the “Graphing Window” “min/max”  $\pm 20$  instead of  $\pm 10$ , and the “scale” to 5 instead of 2.
  
5. Click on [Show Tabular Data]... play with the parameters (press “set”).
  
6. Enter a 2<sup>nd</sup> and 3<sup>rd</sup> equation (use a comma as a separator).  
To graph  $y = \frac{5}{2}x$  **enter**:  $(5/2)*x$  and to graph  $y = -x^2$  **enter**  $-x^2$ .  
When done, press the [UPDATE PLOT] button.
  
7. Position your mouse pointer on anywhere on the coordinate plane.  
What is revealed in the “Mouse Position” box?