

**Basic Graphing Calculator Workshop**  
**Academic Support Center**  
**By Bruce Bordwell**

This workshop is intended for the basic operations of the TI-83/84 families, 85/86 families and 89/92 families of calculators. Try to sit next to someone or in a group with the same family of calculator. Follow through the examples and make notes where appropriate.

**Starting Out:**

ON/Off, Screen Contrast, Resetting or Clearing Memory

<b>Basic calculations:</b>	<b>Answer:</b>	<b>NOTES</b>
1) $3+2*5$	13	Order of operations
2) a) $3-(-2)^4$	-13	There is a difference between (-) signs
b) $3+5(-2)^4$	83	Entry, Edit and Insert
3) a) $\frac{3+2(2-5)}{3^2+2}$	$-0.2727272727$ or $-\frac{3}{11}$	Parentheses , ANS, fractions?
b) $\frac{3+2(2-5)}{3^2+2}+4/5$	$0.5272727272$ or $\frac{29}{55}$	ANS or Entry key
4) $\sqrt{25-16}$	3	
5) $\sqrt[5]{-32}$	-2	nth root, fractional powers
6) $\left  \frac{2}{7}+4(-3) \right $	$11.7142857143$ or $\frac{82}{7}$	Math + Num+Abs
7) Evaluate $3x^2-7$ when $x = -2$	5	STO, and Catalog, DelVar

**Graphing:**1) Graph the equation  $y - 3x = -2$ Or  $y = 3x - 2$ **Notes:**

Must solve for y first.

**Commands covered:**  $y=$  , Zoom Std (standard), Trace, Window Adjustments2) Graph  $y = x^2 + 11$ 

Where is it?

**Commands Covered:** **Trace + Enter** (centers graph at traced point), Zoom In, Out, Box, Turning Functions on and off3) Solve  $-x^2 + 3x + 4 = 3x - 2$ 

Trace, Math (Calc) Intersect

5) a) Find maximum value of  $f(x) = -x^2 + 3x + 4$ 

maximum

b) Find the values of  $f(3)$  and  $f(\sqrt{2})$ 

Trace or Value, From the Home screen using y1

c) Solve  $f(x) = 0$ 

Calc+Zeros (x-intercepts)

d) Solve  $f(x) = 3$ Graphically with  $y2 = 3$

**Data Analysis:**

1) Enter the data in the following chart

Commands Covered:

STAT Edit, Clear List, (Don't Delete lists), StatPlot, ScatterPlot, Histogram, Zoom Stat, Trace Data

X	Y
1	4
1	5
3	11
4	17
6	23
6	25

2) Creating a Regression Line Command \_\_\_\_\_

**Diagnostic On**

3) Plot the regression line with the data.    VARS, STAT

4) Use the regression line to predict the value of y when  $x = 12$ .    Trace+Enter, Window adjustment

**Individual Questions** – Write down anything that you might be interested in learning about your calculator. I will be around to help groups or individual students with questions. If I do not get to your question, I will be in the Tutoring Center from 11:00-Noon on Thursdays.

**Question:**

**Answer:**


## **Graphing Calculator Reference Website:**

Through my website at <http://webs.anokaramsey.edu/bordwell>  
or the ARCC Math Department website at <http://webs.anokaramsey.edu/math/>