

# C<sup>2</sup> (CONIC CREATION) PROGRAM

2006

## Stage 1

- A) Must turn in graph drawing on graph paper by \_\_\_\_\_  
Each part of the drawing should be highlighted in the corresponding color as described in part 5.
- B) List of highlighted equations you used in standard form and function form.  
(Note by each equation as to what part of your picture this equation was used to draw)

## Stage 2

- C) Calculator Program (One Major Grade)
- 1) Program Name Use the first three letters of your first name and the first three letters of your last name.
  - 2) First line of program ClrDraw (Use 2<sup>nd</sup> prgm 1)
  - 3) 2nd line of program Axes off (Use Format - put your cursor on axes off)
  - 4) Next 6 lines of program Window Settings (Use Vars Window)  
xmin        -28  
xmax        28  
xscl         1  
ymin        -32  
ymax        5  
yscl         1
  - 5) Must have at least 30 equations (minimum number) (Use 2<sup>nd</sup> prgm 6)
    - a) 6 circle (DrawF)
    - b) 6 ellipse (DrawF)
    - c) 6 parabola (DrawF)
    - d) 6 hyperbola (DrawF)
    - e) 3 line (using  $y = mx + b$ )
    - f) 3 absolute value

( must include both  
sides of the vertex )

**Equations must be highlighted in the appropriate color on the graph, equation sheet, and the program printout.**

**circle - yellow**

**parabola - pink**

**line - orange**

**ellipse - blue**

**hyperbola - green**

**absolute value - orange**

- 6) Must use the SHADE command **more** than twice in order to receive any credit (Use 2<sup>nd</sup> prgm 7)  
See Back for command instructions.
- 7) Link connection on your calculator must be operational.

## ADVICE:

1. Before starting your project, get new batteries or recharge your current batteries. Save and archive a copy as you go on your calculator or save on a friend's calculator or download to your computer using TI Connect.
2. It is very important that you get started as soon as possible. If you run into problems, come in for help. **Do not wait** until the last couple days; there may not be enough time to help you.

## NOTES

DUE DATE: \_\_\_\_\_

## Conics Project

First you are to see if you can program this project into your calculator. This should get you familiar with the keystrokes needed to get your picture programmed into the calculator. **Show me** your calculator after you have successfully programmed this into the calculator. After I have checked off that you were able to do this, you can erase this program from your calculator.

To get started go to **Program New** and type **SMILE**

Press **Enter** and you should be able to continue to type in the command lines of the program.

We will discuss how this program was determined when we discuss the project. At this time, you are just trying to put a written program into your calculator.

Here are some **Hints** if you are having trouble:

Clear Draw (**2<sup>nd</sup> Draw**)

Axes Off 82 go to (**Window**) then (**Format**), 83/84 go to (**Format**)

The windows commands . . . **xmin, xmax** through **yscl** are found under (**Vars Window**)

Arrow is (**Sto**)

The program commands . . . **DrawF, Line, Shade** are found under (**2<sup>nd</sup> Draw**)

Programming Tips

(**2<sup>nd</sup> Math>Logic**) to find **and, or**

(**2<sup>nd</sup> Math**) to get **inequality signs**

(**CLEAR**) use this key to delete a line in your program

### FEATURES UNDER THE DRAW MENU

LINE to connect  $(x_1, y_1)$  to  $(x_2, y_2)$ , select **Line** under the **draw menu** and type  $(x_1, y_1, x_2, y_2)$

DrawF This command will draw a function on the screen. If you do not want the entire function, you can set the locations at which it will start and stop. The calculator uses the Boolean method restrict the domain of the function.

Here are a variety of ways you can use this option.

Experiment with your calculator to find out what works best.

DrawF(function /  $x \geq$  smallest and  $x \leq$  largest)

DrawF(function / ( $x \geq$  smallest) and ( $x \leq$  largest))

DrawF(function) / ( $x \geq$  smallest) ( $x \leq$  largest)

DrawF(function) / ( $x \geq$  smallest) ( $x \leq$  largest))

SHADE 82 SHADE( lower func, upper func [, resolution, Xleft, Xright] \*\*\*

83/83P/84 SHADE( lower func, upper func [, Xleft, Xright, pattern\*, patres\*\*]) \*\*\*

\* pattern number – 1 (vertical) ; 2 (horizontal); 3 (negative 45°); 4 (positive 45°)

\*\* patres – 1 (shades every pixel); 2 (shades every second pixel); ... 8 (shades every eighth pixel)

\*\* Options in brackets are optional selections and are not required when executing this command