

## Programming the TI-83/84+

The PRGM button on the TI-83/84+ is what I like to call "my little friend." While programming, it is your best friend. To be a successful programmer, one must be familiar with the PRGM button and a few others. So let's warm up with some exercises...

At the *home screen* type the following:

HELLO, MY NAME

IS TI-83+

MASTER

PROGRAMMER

(insert name)

DO NOT HIT ENTER,  
YOU MUST SPACE TO  
GO DOWN A LINE!

## POINTERS:

In the programming screens, hit DEL to clear one item

If you hit the wrong button and end up in another menu (apps, for instance), pressing CLR will take you back a screen

**NEVER EVER EVER PRESS CLR** while programming unless you want to erase the entire line of code.

What does it all mean?

In the programming screens, there are three headers: CTL, I/O and EXEC

CTL are control commands that tell the program when to do what. If is an introduction to a conditional statement, Then tells the program what to do if the condition is met. Else tells the program what to do otherwise, or if the condition is not met.

I/O are input/output commands that allow the program to ask the user for input (**Prompt**), or allow the program to show the user the results of calculations (**Disp**)

**EXEC** allows a program to use a program within a program.

For all the commands to work properly, the commands must be "pasted." For example, Typing **IF** will not begin a conditional statement.

If you create a very good program, it is a great idea to **archive it**, so that if your batteries die, or if a game "crashes" your calculator, your program will be safe.

Programs can be archived by pressing:

**2ND + 2 7 ENTER** (on the appropriate program)

A program is archived when there is an asterisk in front of its name. Programs can be deleted here too.

Program 1: Celsius to Fahrenheit

PRGM: CT0F

:Prompt C

:C\*1.8 + 32 (ST0) F

:Disp F

## Fancier Program 1: Celsius to Fahrenheit (Edited)

```
PRGM: CTOF
```

```
:Disp "WHAT IS THE"
```

```
:Disp "TEMP IN DEGREES"
```

```
:Disp "CELSIUS?"
```

```
:Prompt C
```

```
:C*1.8 + 32 (STO) F
```

```
:Disp "WELL, THE"
```

```
:Disp "TEMP IN"
```

```
:Disp "FAHRENHEIT IS",F
```

Program 2: Fahrenheit to Celsius

PRGM:FTOC

:Prompt F

:(F-32)/1.8 (ST0) C

:Disp C

Program 3: YES OR NO

```
:PRGM YORN  
:randint(0,1) (ST0) A  
:If A=1  
:Then  
:Disp "YES"  
:Else  
:Disp "NO"
```

Think of your own program to create. For tomorrow, you will write the code for, troubleshoot, and program your very own program into the TI-83/84+ graphing calculator.

