Unit 2: Using Variables and Expressions	Skill Builder 2: Inputting a value for a variable

In this second lesson for Unit 2 you will learn about the different forms of the **Input** statement.

Objectives:

- Use the TI Basic **Input** statement to assign a value to a variable.
- Perform calculations within **Disp** statements.
- Use the GRAPH screen to get input to two variables at once.

The *Simple* Input Statement

The **Input** statement is followed by *only one* variable name to ask the user to enter a value for that variable. Unlike **Prompt**, **Input** only places a question mark on the screen as you can see in the program example at the right.

```
NORMAL FLOAT AUTO a+bi RADIAN MP
?
```
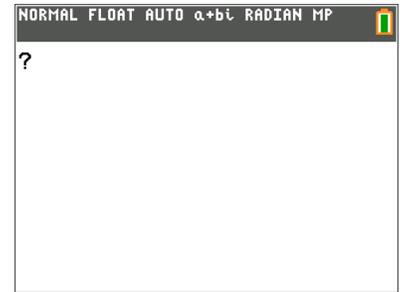
The *Improved* Input Statement

This type of **Input** statement can display a custom message that is displayed before waiting for a value for the variable. The structure of the Input statement with a message is:

Input "YOUR MESSAGE HERE",V

Note: This statement does not provide any question mark or other punctuation, so if you want one then it must be included inside the message.

```
NORMAL FLOAT AUTO REAL RADIAN MP
ENTER A: ■
```
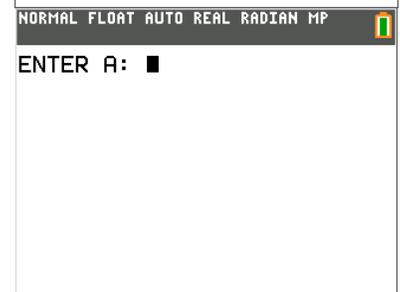
Programming with *Simple* Input

1. Start a new program.
2. For the first statement of the program use the **Input** statement found on the PRGM I/O menu.
3. After the **Input** command type the name of the variable you want your program to use. Here we use the variable **A.**
4. Use the **Disp** statement to display the cube, A^3 ; type the **A** then use the MATH menu to get the cute, small 'cubed' exponent.
5. Quit the editor and run the program.
6. After the "?" type any number and press ENTER.
7. The program displays the cube of the entered number and ends.

```
NORMAL FLOAT AUTO REAL RADIAN MP
PROGRAM:U2S2
:ClrHome
:Input A
:Disp A³
:■
```

```
NORMAL FLOAT AUTO REAL RADIAN MP
?5
                              125
                             Done
■
```
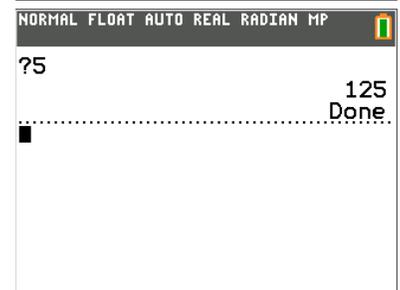
10 Minutes of Code

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Programming with *Improved* Input

1. Edit the program you started earlier.
2. Place the cursor on the variable after the word **Input**.
3. Press [INS].
4. Type a message to display. Remember to use [A-LOCK] and quotation marks.
5. Include a punctuation mark at the end of the message (inside the quotes).
6. Place a comma after the closing quote and before the variable.
7. Keep the **Disp** statement that displays **A³**.

```
NORMAL FLOAT AUTO REAL RADIAN MP

PROGRAM:U2S2
:ClrHome
:Input "ENTER A: ",A
:Disp A³
:█
```

8. Quit the editor and run the program.
9. After the message type any number and press [ENTER].
10. The program displays the cube of that number and ends.

```
NORMAL FLOAT AUTO REAL RADIAN MP

ENTER A: 25
                            15625
                             Done
█
```

Using Input without a Variable

If you use the **Input** statement *without* a variable then the program will display the GRAPH screen with a free-floating cursor.

When you press [ENTER] the program continues and the variables **X** and **Y** contain the values that you pointed to on the GRAPH screen!

Running this program…

```
NORMAL FLOAT AUTO REAL RADIAN MP

PROGRAM:U2S2B
:Input
:Disp X,Y
:
```

You can then use these two variables in the rest of your program.

The intent of this feature is to let you input values for **X** and **Y** 'graphically'. Cool, eh?

causes this. Move the cursor…

X=1.5   Y=1
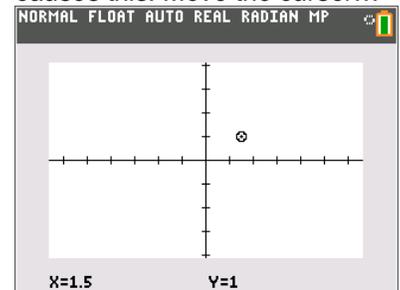
and press [ENTER] *to see this…*

```
NORMAL FLOAT AUTO REAL RADIAN MP

prgmU2S2B
                              1.5
                                1
                             Done
█
```

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Teacher Tip: When we get into graphics programming in Unit 5 this special feature will come in very handy!