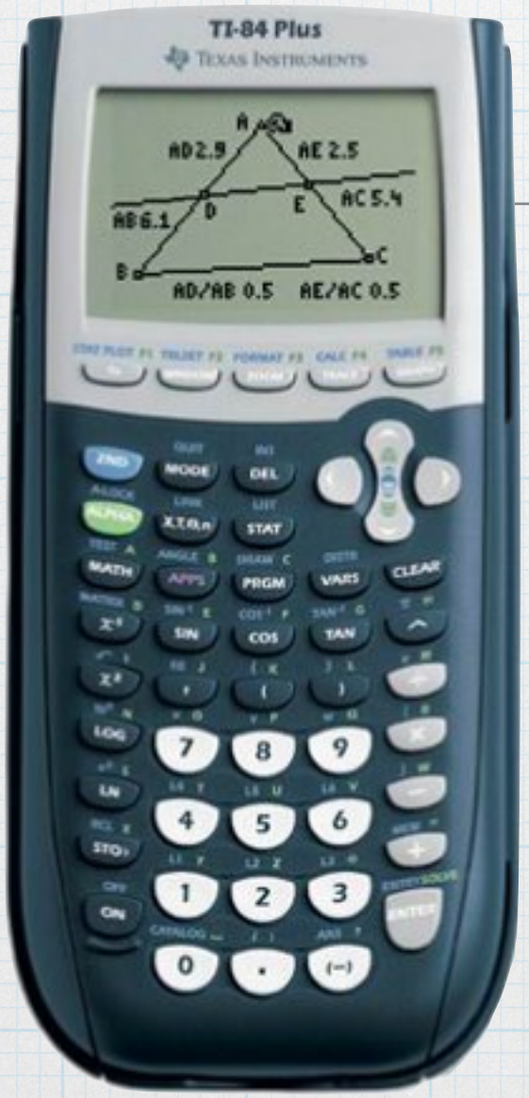
Advanced Introduction to TI-8x Calculators



Programming in TI-Basic

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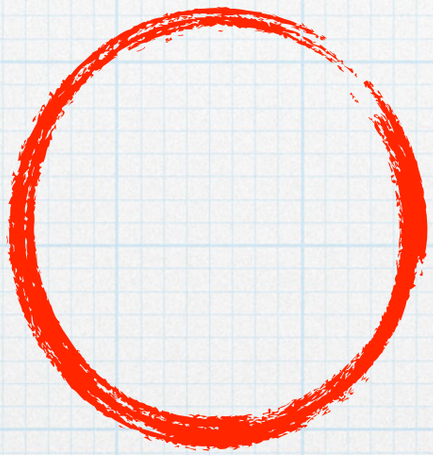
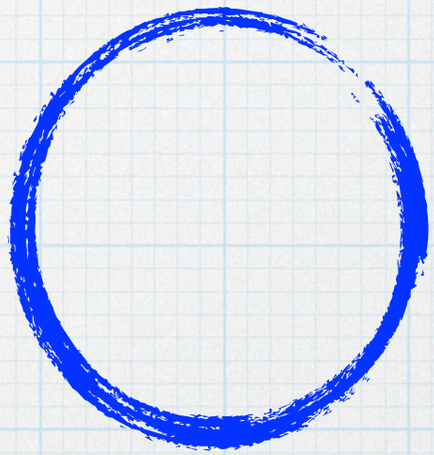
Review

Slope-Intercept Form of a straight line



Slope



y-Intercept

Review

Problem Example

Graph a line with the slope of 4/3 and a y-intercept of -4.

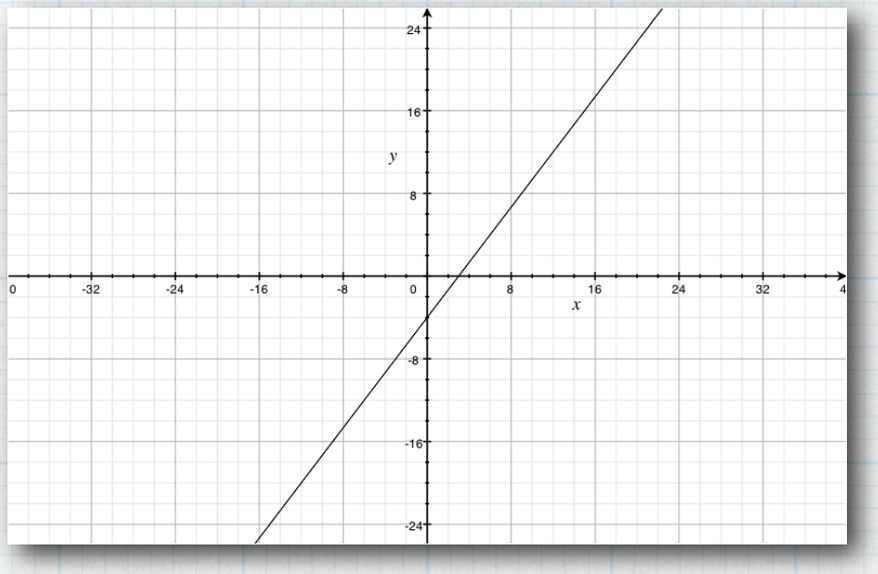
Step 1:

$y=(4/3)x + (-4)$

Step 2:

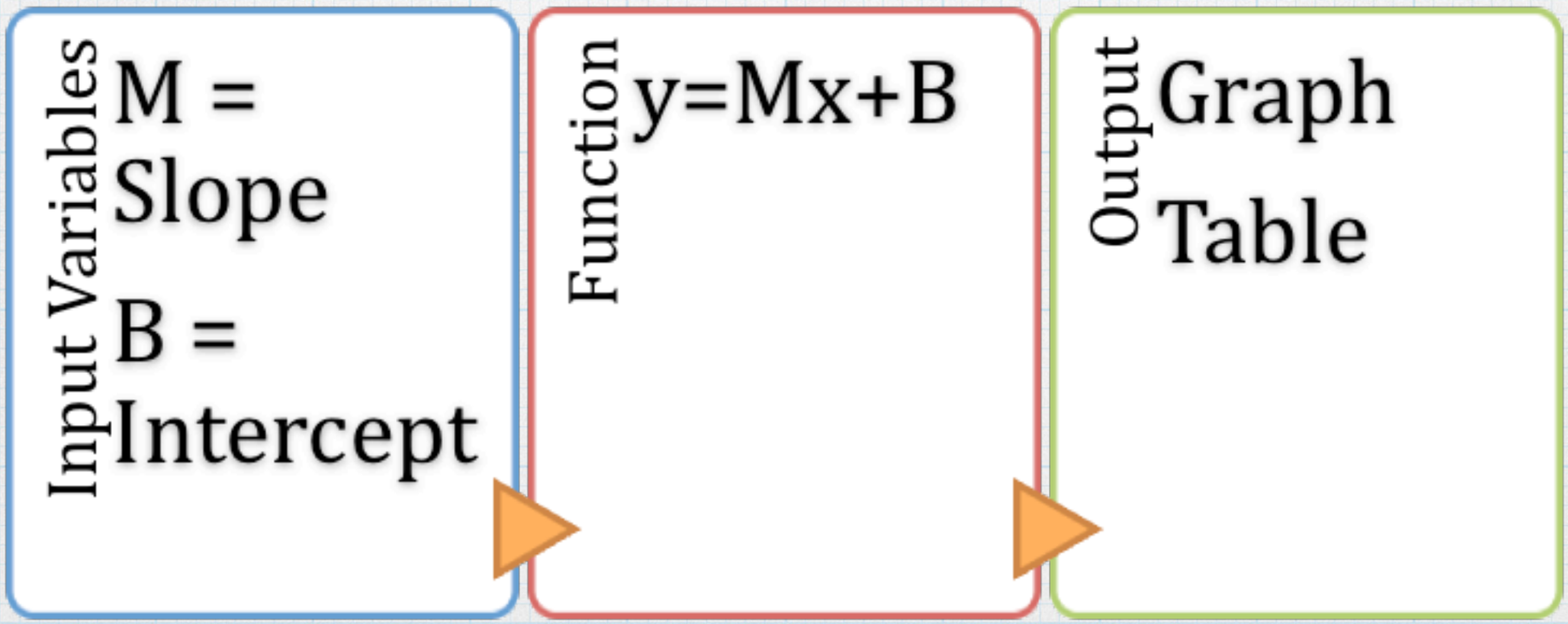
x	y
-2	-6.67
-1	-5.33
0	-4
1	-2.67
2	-1.33

Step 3:

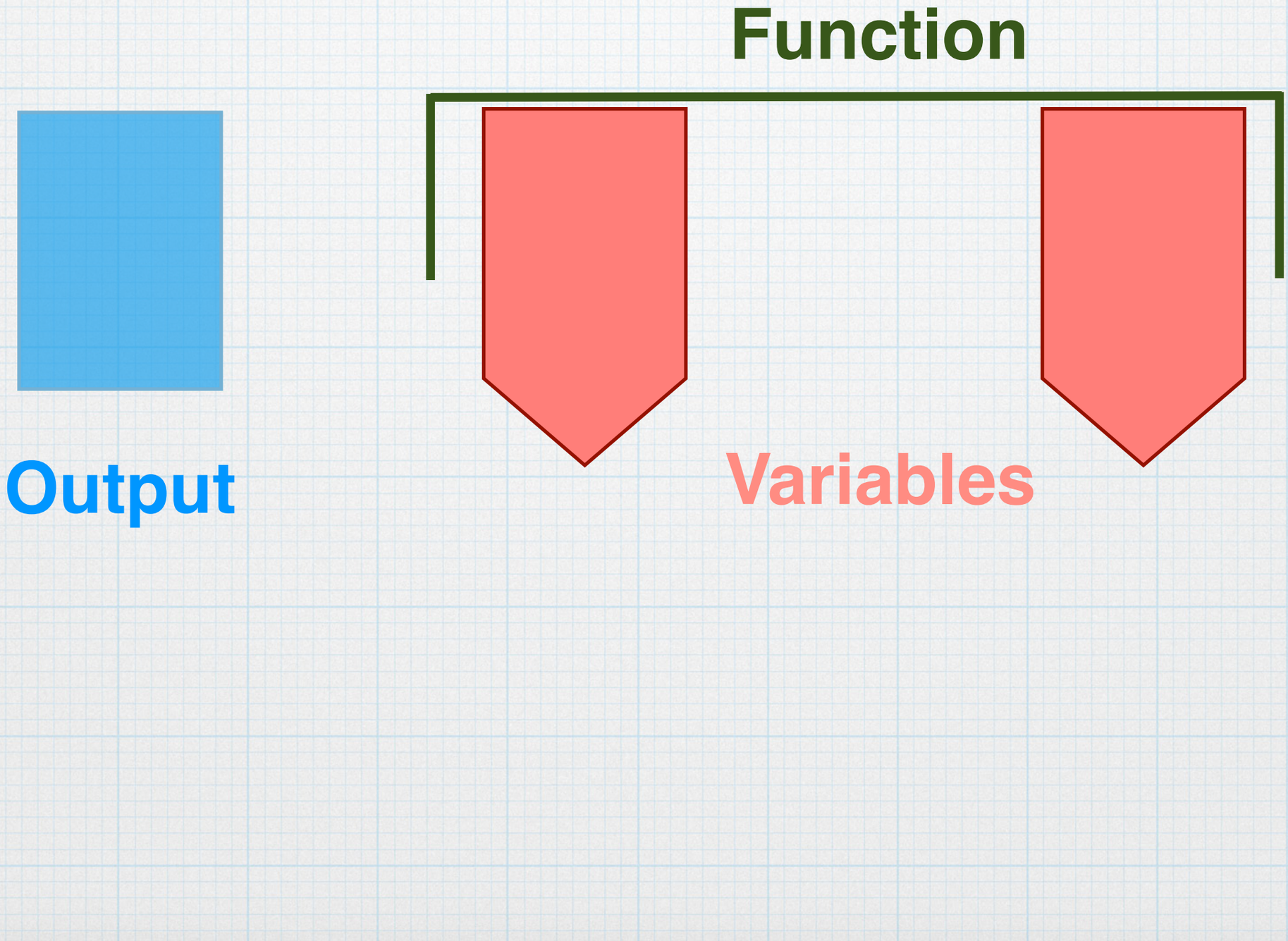


Program Objective

Create a program that inputs a slope and y-intercept, and then outputs a table of coordinates and graphs the line of the function on a TI-8x calculator.



Program Components

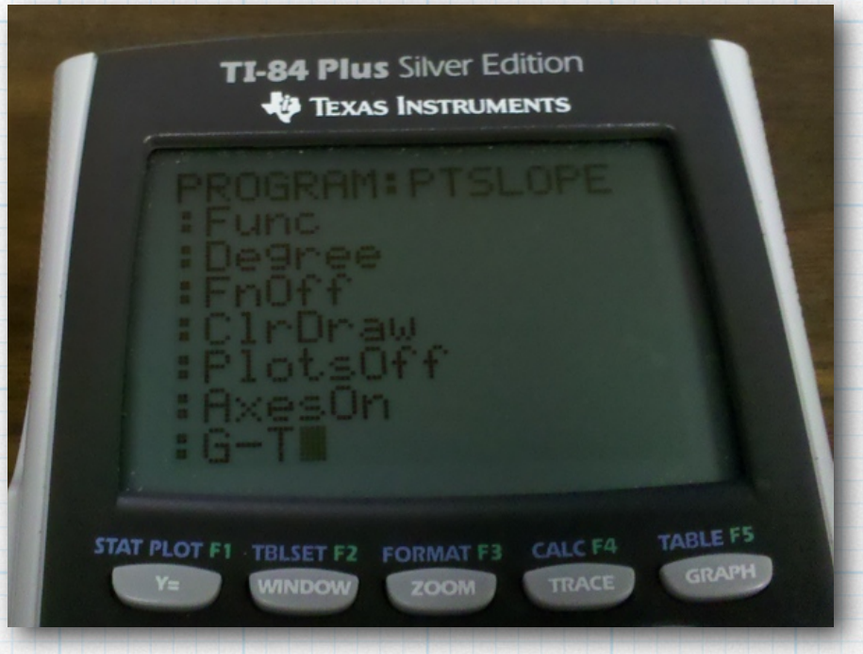


Creating the new program file

* **Press** [PGRM]
* **Select** "NEW"
* **Select** "Create New"
* **Enter** PTSLOPE

Initial Settings

* Func
* Degree
* G-T
* FnOff
* PlotsOff
* ClrDraw
* AxesOn



These may be found in:

[MODE]
{STAT PLOT}
{DRAW}
{FORMAT}
{CATALOG}

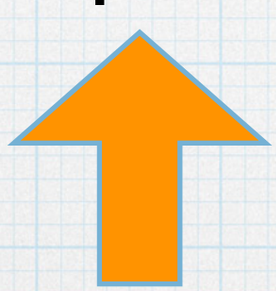
Display the program function

* DISP “Y=MX+B”

- [PGRM]
  - “I/O”
    - Disp

Input the Variables

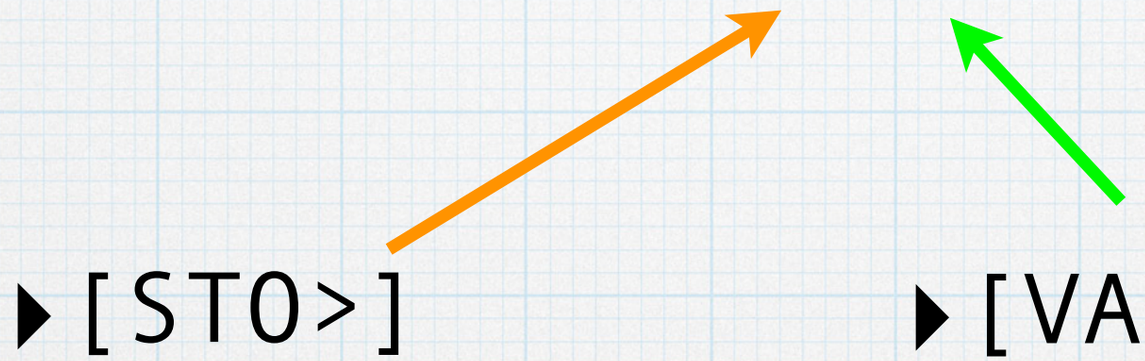
* Input “M=?”,M
* Input “B=?”,B



- [PGRM]
  - “I/O”
    - Input

Set the function

* “M*X+B”→Y1

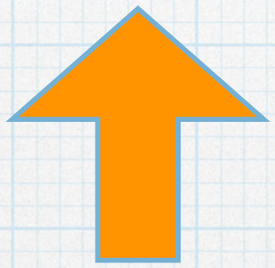


▸[STO>]

▸[VARS]
▸“Y-VARS”
▸“Function”
▸Y1

Output the Graph

* DispGraph



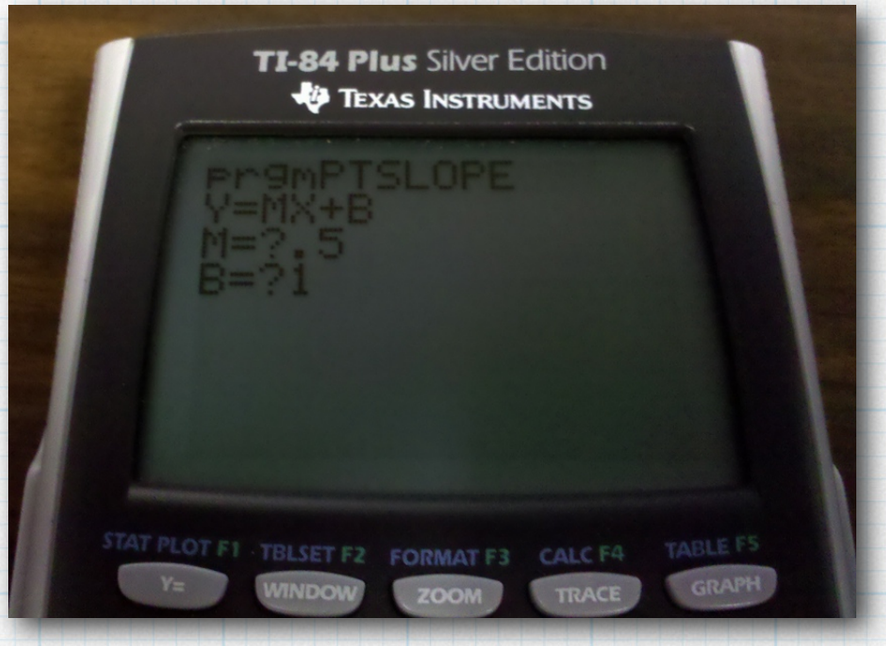
- [PGRM]
  - “I/O”
    - DispGraph

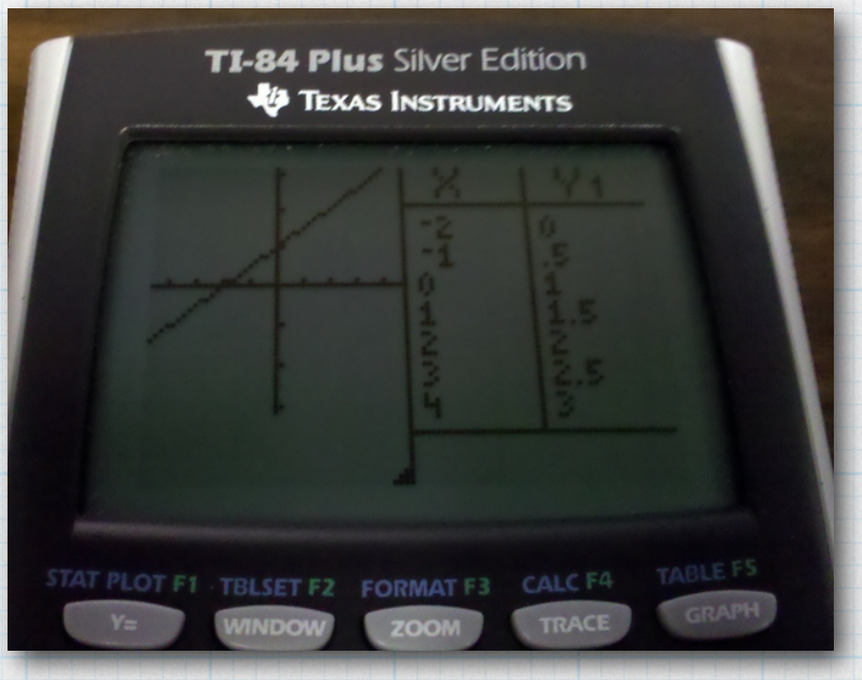
Check Your Code

```
Func
Degree
G-T
FnOff
ClrDraw
PlotsOff
AxesOn
Disp "Y=MX+B"
Input "M=?",M
Input "B=?",B
"M*X+B"→Y1
DispGraph
```

Execute your code

* [PGRM]
* “EXEC”
* PTSLOPE
* [ENTER]





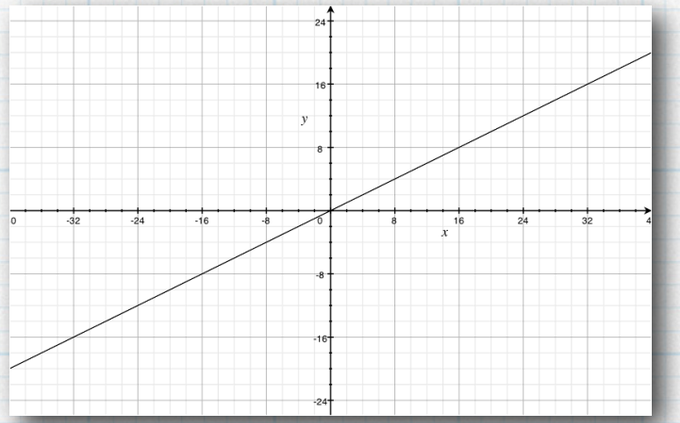
Examples

1. Slope = .5
   y-Intercept = 0

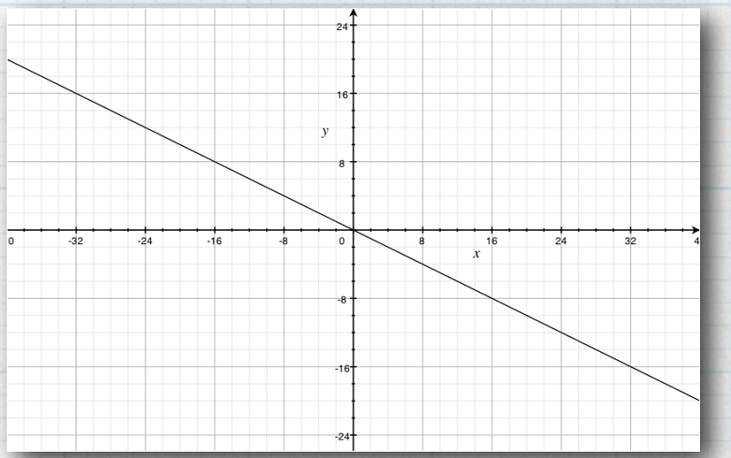
2. Slope = -.5
   y-Intercept = 0

3. Slope = 4/3
   y-Intercept = -4

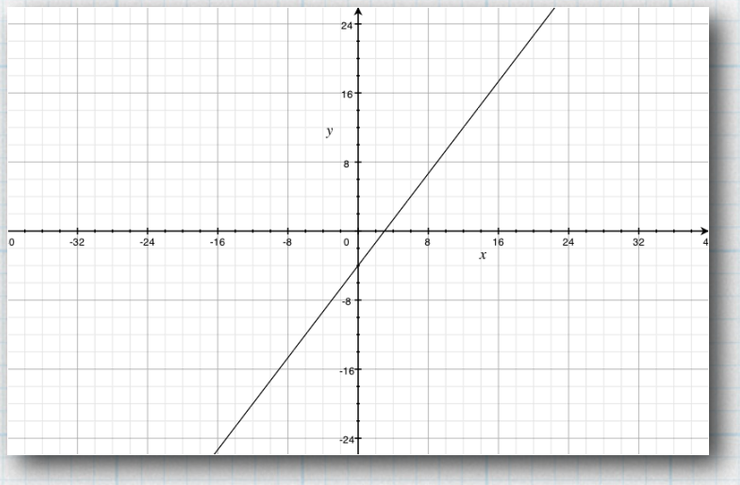
4. Slope = 4/3
   y-Intercept = 4



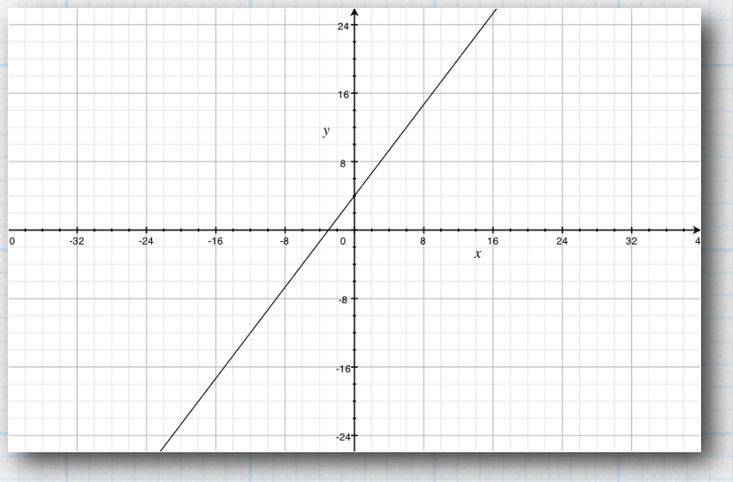
1



2



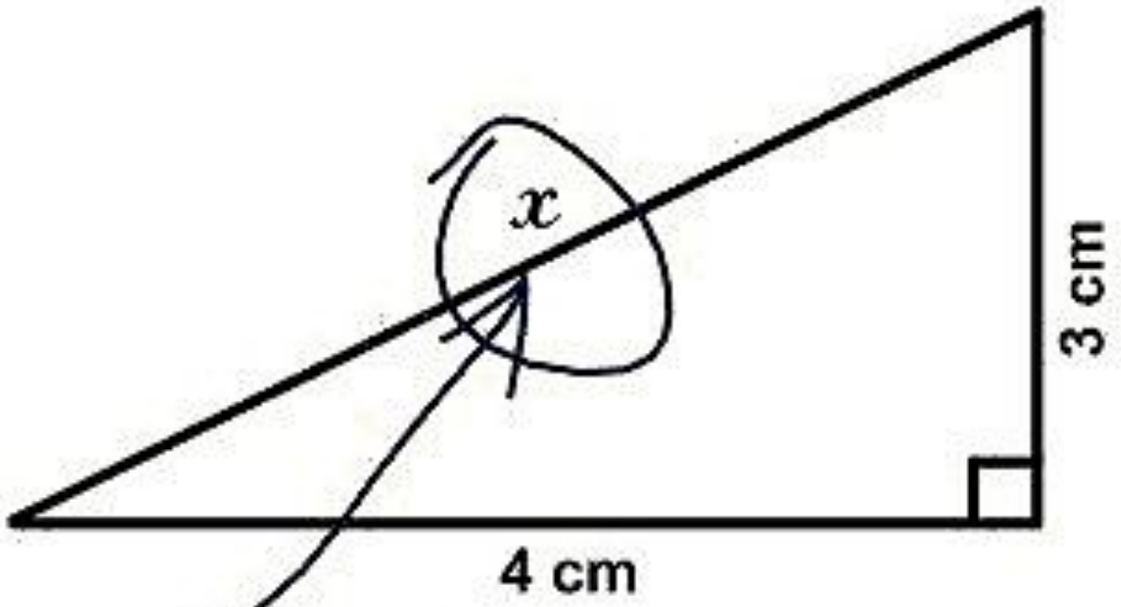
3



4

Questions?

3. Find x.



Here it is

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