

## TI-73 BASICS OF GRAPHING

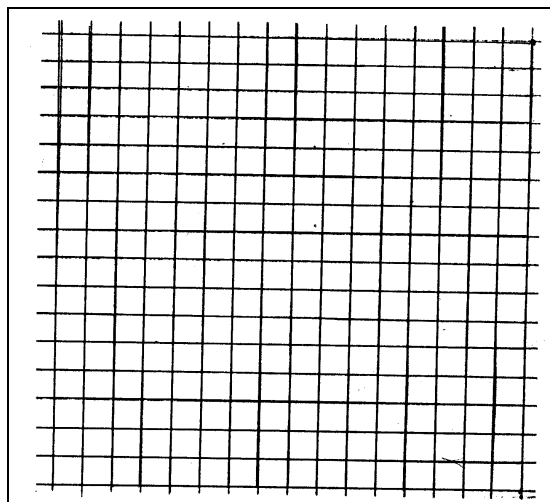
To examine the graphing features of the TI-73 it is a good idea to first review graphing "by hand."

Back in Algebra I class we graphed equations like  $y = 3x - 2$ . The first way we learned to do this is by making a table and plotting the points. Do this now:

Make the table of ordered pairs that satisfy the equation

X	3	2	1	0	-1	-2	-3
Y							

Plot those ordered pairs and look for a pattern:



Now to graph this on the graphing calculator and explore its graphing capabilities.

Press  $Y =$

Where the cursor is blinking, type  $3X - 2$  NOTE: The X key is to the left of 7

Before graphing, you must "draw" the axes by setting the WINDOW

```

Plot1 Plot2 Plot3
\Y1=█
\Y2=
\Y3=
\Y4=
    
```

```

Plot1 Plot2 Plot3
\Y1=3X-2
\Y2=
\Y3=
\Y4=
    
```

```

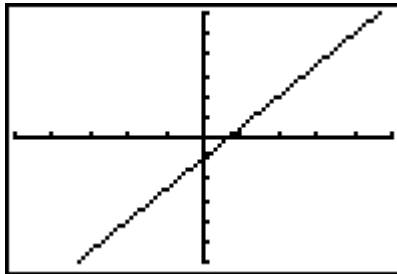
WINDOW
Xmin=47
Xmax=47
ΔX=1
Xscl=10
Ymin=-31
Ymax=31
Yscl=10
    
```

Looking at the table we made by hand, Let's choose to have the following window:

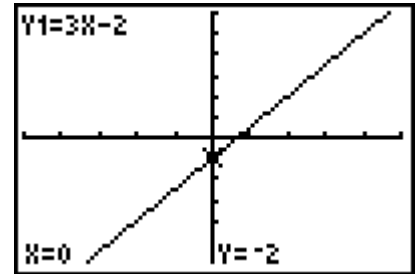
```

WINDOW
Xmin=-5
Xmax=5
ΔX=.1063829787...
Xscl=1
Ymin=-12
Ymax=12
Yscl=2
    
```

Notice the value of  $\Delta X$  which is .1063829787... We will discuss this later. Press the <GRAPH> key



Recall what Xscl and Yscl were. Also Xmin and Xmax. Ymin and Ymax. Press <TRACE>



Investigate the TRACE key. Experiment by changing the window values and regraph.

### THE ZOOM MENU

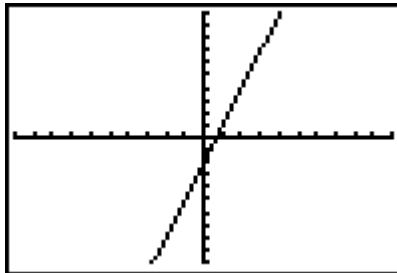
Press the <ZOOM> key

Cursor down to 6: Zstandard and press <ENTER> or just type 6

Check to see what size Window ZStandard makes:

```

ZOOM MEMORY
1:ZBox
2:Zoom In
3:Zoom Out
4:ZQuadrant1
5:ZSquare
6:ZStandard
7↓ZoomStat
    
```



```

WINDOW
Xmin=-10
Xmax=10
ΔX=.2127659574...
Xscl=1
Ymin=-10
Ymax=10
Yscl=1
    
```

Press <TRACE> and investigate.

Explore some of the other options on the ZOOM menu, and look at the WINDOW each generates: ZOOM5 (square), ZOOM4 (1<sup>st</sup> quadrant), ZOOM8 (decimal), ZOOM0 (integer).

### THE FORMAT (2<sup>nd</sup> ZOOM) MENU

Press 2<sup>nd</sup> FORMAT  
Notice all the default settings are on the left column

- CoordOff when tracing, the values of the coordinates are NOT shown
- GridOn Places dots on the screen to simulate graph paper
- AxesOff Turns off the x- and y-axes
- LabelOn Places x and y on the screen (but not necessarily in the best spot)
- ExprOff When tracing, the equation is NOT shown on the top of the screen.

```

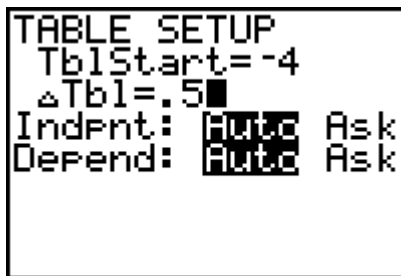
CoordOn CoordOff
GridOff GridOn
AxesOn AxesOff
LabelOff LabelOn
ExprOn ExprOff
    
```

Press  $\langle 2^{nd} \rangle \langle TABLE \rangle$

### THE TABLE MENU

Before you can view a table  
You must first "set the table."  
Press  $\langle 2^{nd} \rangle \langle TBLSET \rangle$

Set up the table as  
Shown below:



X	Y1	
-3	-11	
-2	-8	
-1	-5	
0	-2	
1	1	
2	4	
3	7	

X = -3

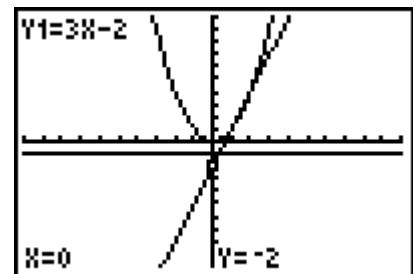
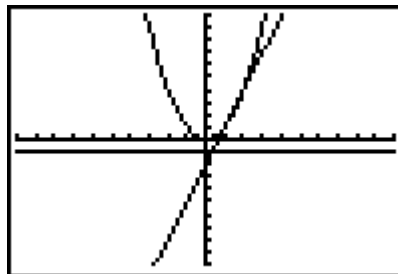
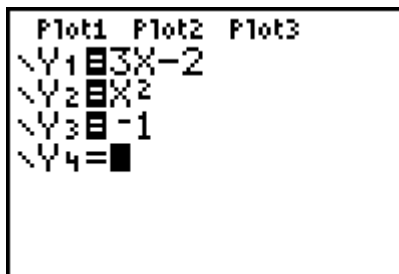
Explore the TBLSET options.

### OTHER "NEAT" STUFF

Back to the Y= menu  
Type as shown below:

Press ZOOM6  
(Zstandard)

Press  $\langle TRACE \rangle$

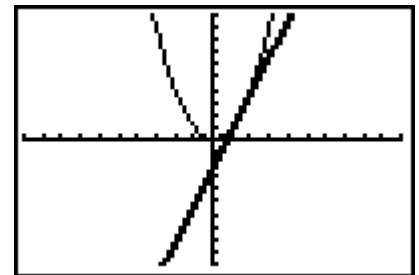
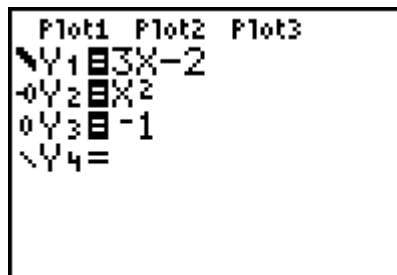
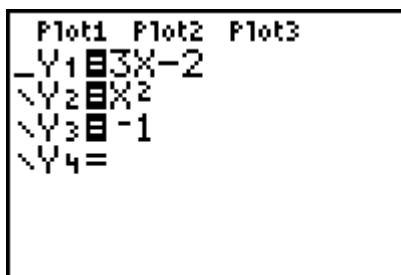


Explore how to trace on multiple graphs. Recall that the up and down cursor keys takes the cursor from curve to curve. The left and down arrow keys "move" the cursor along the curve.

Again back to the Y= menu  
But this time move the cursor  
All the way to the left as shown:

Press  $\langle ENTER \rangle$  to  
obtain the following  
window:

Press  $\langle GRAPH \rangle$   
sit back and enjoy.



Investigate how to STOP and PAUSE the graphs.

- To Stop the graph from being drawn, press the  $\langle ON \rangle$  key
- To Pause the graph while it is being drawn, press the  $\langle ENTER \rangle$  key. To continue graphing just press  $\langle ENTER \rangle$  again. You may do this as often as you like.

Investigate some of the other patterns for the graphs. **C 1999 REARDON FUN GIFTS, INC.**