Intro to Graphing MathPrint View

Objectives:

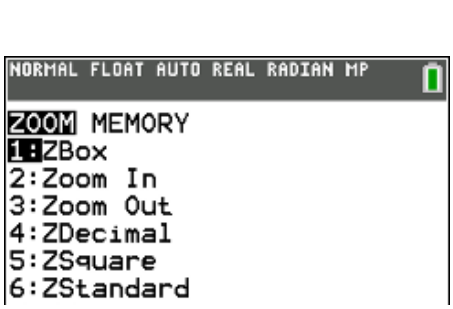
- Set the standard window
- Input a function using Y=
- See a graph in the standard window
- Return to the calculating screen
- Input and see graphs of a variety of functions

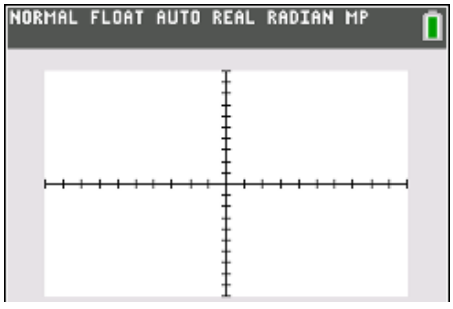
Set the standard window

The calculator can move the axes or change the scales just as we can when we draw a graph on paper.

IMPORTANT: The GC does not put numbers on the axes. You have to know that each tick mark in the standard window represents one unit, and that the standard window is -10 to 10 on both axes.

PRO TIP: To go to the standard window quickly, press format f3 L6 V: [zoom] [6]





Input a function using Y=

Example 1: See the graph of $y = -\frac{2}{5}x + 2$.

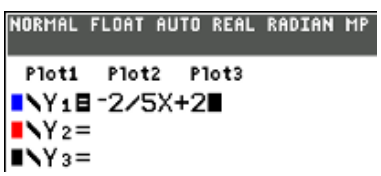
Open the Y= page, press: statplot f1 [y=].

PRO TIP: Press [clear] before typing a new function to remove all leftover characters from the past.

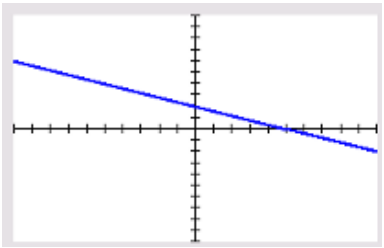
Type the function to be graphed: statplot f1 [y=] [clear] ans ? L2 [(–)] [2] Z e [÷] M L5 [5] U link [X,T,θ,n] mem " L2 [+] [2] Z table f5 [graph]

To see the graph, press table f5 [graph]

The Y= screen is:



The graphing screen is:



Return to the calculating screen

To exit the graphing window and return to the calculating window,

press clear ,OR select QUIT, which is 2nd (quit) mode.

Input and see graphs of a variety of functions

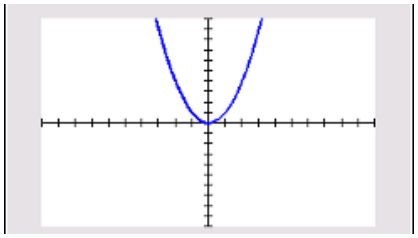
PRO TIP: When putting functions in the Y= menu, you can use the arrows ▲ ▶ ▼ ◀ and the editing keys delete del (ins) and insert 2nd del (ins). Or you can type over errors to correct them.

Example 2: Graph $y = x^2$.

Press: y= (statplot f1) clear X,T,θ,n (link)

x^2 graph (√ I table f5)

See:

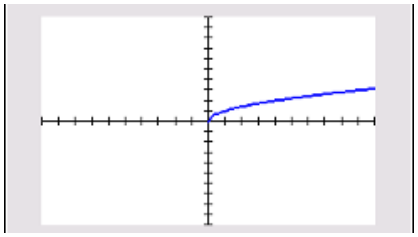


Example 3: Graph $y = \sqrt{x}$.

Press: y= (statplot f1) clear 2nd

x^2 X,T,θ,n) graph (√ I link } L table f5)

See:

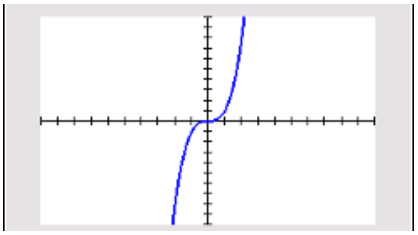


Example 4: Graph $y = x^3$.

Press: y= (statplot f1) clear X,T,θ,n (link)

^ 3 graph (π H L3 θ table f5)

See:



Example 5: : Graph $y = |x| - 2$.

Absolute value is found under the MATH menu, in the NUM sub-menu:

Press: y= (statplot f1) clear math (test A)

See:

```
MATH NUM CMPLX PROB FRAC
1:▸Frac
2:▸Dec
3:³
```

Press: ▶

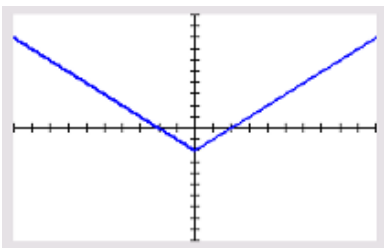
See:

```
MATH NUM CMPLX PROB FRAC
1:abs(
2:round(
3:iPart(
```

Press: enter X,T,θ,n (entry solve link) ▶ − 2 graph (] W L2 Z table f5)

IMPORTANT: Be sure to press ▶, or you'll get $y = |x - 2|$!

See:



Try It!

View the graph of the following functions using a standard window.

1) $y = -2x - 7$

2) $y = -7$

3) $y = \frac{1}{2}x^2 + 1$

4) $y = (x-1)^2$

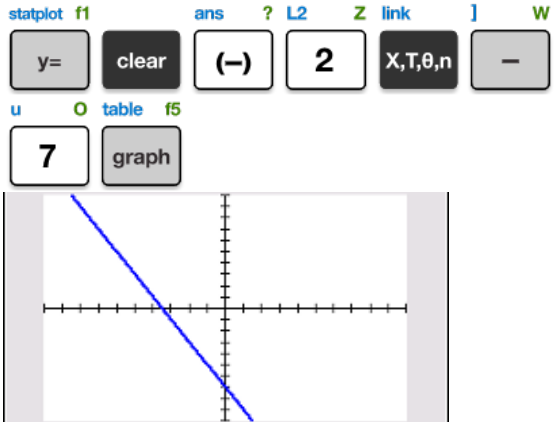
5) $y = \sqrt{x} - 2$

6) $y = -\frac{1}{2}x^3$

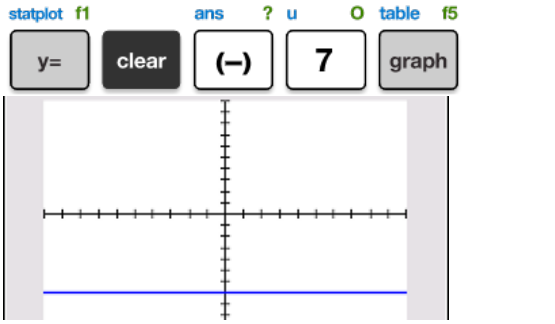
7) $y = |x+3|$

Solutions

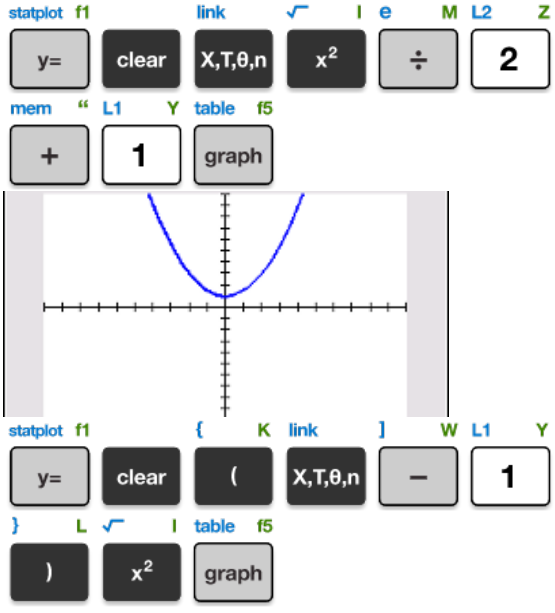
1)



2)

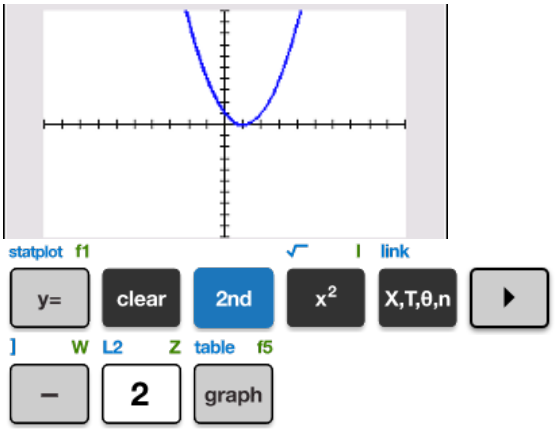


3)

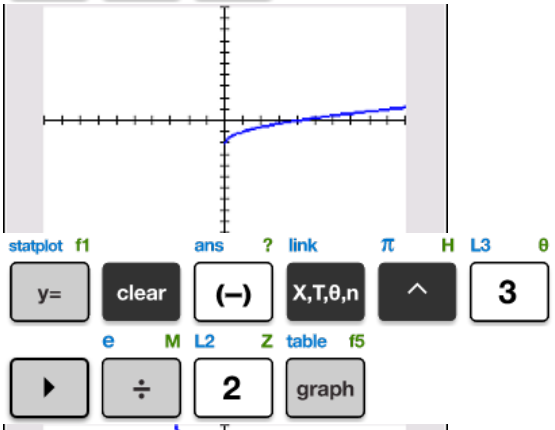


4)

5)



6)



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