

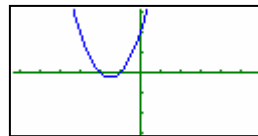
# Graph drawing – Zooming in and out.

*This resource was written by Derek Smith with the support of CASIO New Zealand. It may be freely distributed but remains the intellectual property of the author and CASIO.*

Select GRAPH mode from the main menu by using the arrow keys to highlight the GRAPH icon or pressing 5.

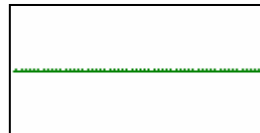


**Example:** Draw  $y = x^2 + 3x + 2$



**Answer:** Type in the equation and then F6 to draw.  
BUT . . . this is what you wanted and got . . .

THIS!



NOTHING!

The **V-Window** (Graph Viewing Window) has not been set up for the graph that you want to see.

To get the **V-Window** press **SHIFT** **F6**

The axes drawn above was this:

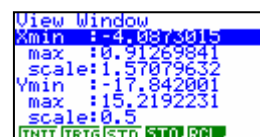
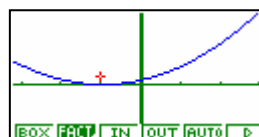
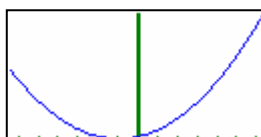


Using the **AUTO ZOOM** the calculator will adjust the axes so that you can see 'your graph' better then you can adjust the **V-Window** to a more appropriate scale to suit what you want.

To get **AUTO ZOOM** press **SHIFT** **F2** then **F5**



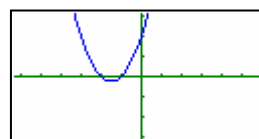
A cursor appears in the 'middle of the screen. You can move it to the left, right, up or down to readjust the axes the **EXE** to redraw.



The most important viewing windows are:

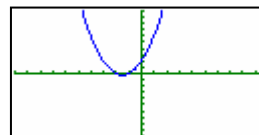
Initial SETTING  
F1

```
View Window
Xmin :-6.3
max :6.3
scale:1
Ymin :-3.1
max :3.1
scale:1
INIT TRIG STD STO RCL
```



STANDARD SETTING  
F3

```
View Window
Xmin :-10
max :10
scale:1
Ymin :-10
max :10
scale:1
INIT TRIG STD STO RCL
```



and for Trigonometrical graphs  
TRIG SETTING

F2

There are two setting here that  
are used most often, depending  
what angular measure you are in.

Degree

```
View Window
Xmin :-540
max :540
scale:90
Ymin :-1.6
max :1.6
scale:0.5
INIT TRIG STD STO RCL
```

OR

Radian measure

```
View Window
Xmin :-9.4247779
max :9.42477796
scale:1.57079632
Ymin :-1.6
max :1.6
scale:0.5
INIT TRIG STD STO RCL
```

**N.B.**

1. The more graphs that you experience drawing on the graphical calculator the more familiar you will get with understanding the relationship between the graphs and their equations that are represented algebraically.
2. **GRAD**ient angular measure is also available on these calculators, but are very rarely used.