

# Graphing inequalities.

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



This worksheet shows you how to produce and graph an inequality.

Inequalities 'shade in'  $\frac{1}{2}$  of the plane (the x-y axis system)

Types available are:  $y <$ ,  $y >$ ,  $y \leq$  and  $y \geq$

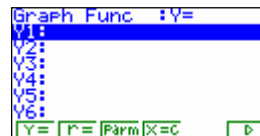
Setting up the graphing screen: The V- window is usually set to 'Init' setting: **SHIFT** **F3**, **F1**.



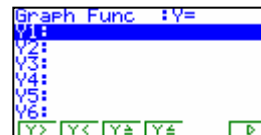
Entering into the **GRAPH** mode from the **MAIN MENU**. This will give you the Graph Func :Y= 'screen'.



Press **F3** (**TYPE**) key. Obtaining this screen.



Press **F6** (**More choices**) key. Obtaining this screen.



If you now Press **F2** to select Y<, you will obtain the screen shown:

[Note: **Graph Func :Y=** is now **Graph Func :Y<**]

The calculator is ready to enter Y< type equations, which can be any function of x.



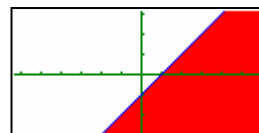
Remember: The V- window is set to the 'Init' setting: **SHIFT** **F3**, **F1**

**Example 1:** Draw  $y < x - 1$ .

**Answer:** Type  $x - 1$



Press **EXE** to store and **F6** to draw the inequality graph.



The screen should look like this:

**Example 2:** Try  $y < x - 1$ ,  $y > 2x - 3$   $y > -x - 2$

**Answer:**



**Extension activity:** Find the intersection points of the 3 lines by using **G-Solve**, **SHIFT** **F5**

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