WARM UP:

Solve each of the following for y:

$3x + 2y < -12$

$-3x \quad -3x$

$\frac{2y}{2} < \frac{-12}{2} - \frac{3x}{2}$

$y < -6 - \frac{3}{2}x$

or

$y < -6 - 1.5x$

$4x - 3y \geq 6$

$-4x \quad -4x$

$\frac{-3y}{-3} \geq \frac{-4x}{-3} + \frac{6}{-3}$

$y \leq \frac{4}{3}x - 2$

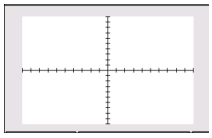
flip sign when you divide by negative

Some basics you should know about the graphing calculator.

Standard Graphing Window

x → (-10,10)

y → (-10,10)



You can set your calculators window to the the standard size by pressing Zoom 6.

Zoom →

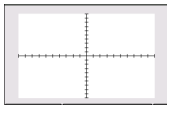
6 →

Press the Window button and look at the dimensions of the viewing screen.

window →

Xscl=1 refers to the tick marks along the x axis.

Yscl=1 refers to the tick marks along the y axis.



You can change the dimensions of the viewing screen by changing any of the numbers.

Try Ymax = 20 and then press graph

See the change!?!

Graph →

Now, how do you get back to standard zoom???

Let's graph a linear equation!

* The equation must first be solved for y.
(Put the equation in the form y=mx+b)

Type $y = 2x + 1$ into y=

y= →

x →

You should have this on your screen

Press graph

graph →

Press trace and use the left and right arrows to trace along the line.

trace →

Notice it shows what line the cursor is on. (Good to know when you graph more than 1 line!)

Notice it shows the coordinates of where the cursor is on the line.

Clear the first equation out of the calculator

Clear →

Now graph the line

$y = -2x + 4$

Negative sign →

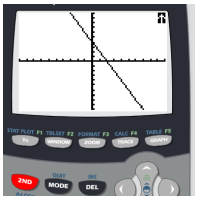
graph →

Question: How do I take the graph that's on the calculator and put it on my paper? (Accurately!)

Answer: Use the table to find points that are on the line.

Press 2nd table

2nd →



See all of the points you can graph!

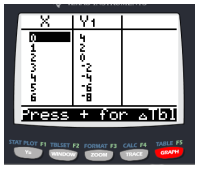
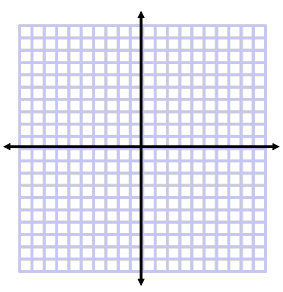


Table →

Use your up and down arrows to view more points.



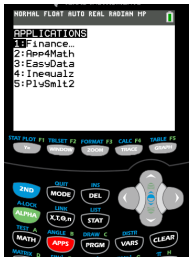
Let's graph a linear inequality!

* The equation must first be solved for y. (Put the equation in the form y=mx+b)

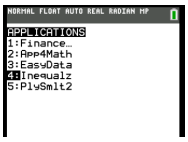
1. Turn Inequalz on in the Apps on your calculator.

(Once it's turned on it will remain on)

Apps →



Inequalz →



2. Press the button y=

Y= →

Now we are ready to enter an inequality...

Example: $y < -2x + 4$

To change the equal sign to an inequality use ALPHA F2, ALPHA F3, ALPHA F4, ALPHA F5

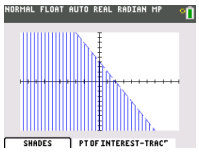
See the A flashing? That means you pressed Alpha →

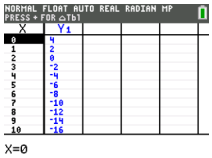
Alpha →

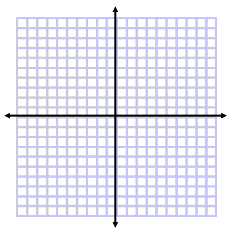
Notice the shading below the dashed line →

F2 →

Inequality →







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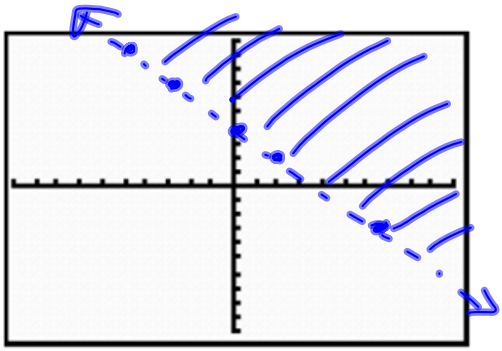
1) Graph each inequality using your graphing technology.
Draw the graph in the frame provided and complete the table of values from the TABLE feature of your calculator.

a) Graph $y > -x + 4$



[–10,10] xscl:1 [–10, 10] yscl:1

x	Y_1
–5	9
–3	7
0	4
2	2
7	-3
15	-11

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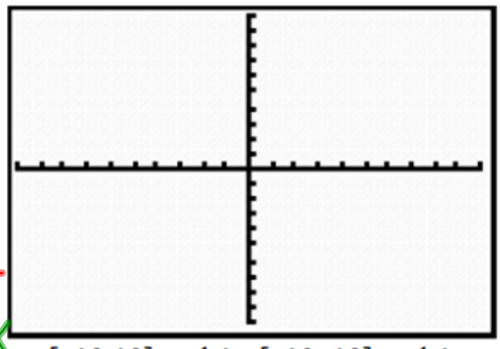
c) Graph $2x + 5y \geq -15$



[–10,10] xscl:1 [–10, 10] yscl:1

x	Y_1
–14	2.6
–10	1
–3	-1.8
0	-3
4	-4.6
9	-6.6

$2x + 5y \geq -15$

$-2x \quad -2x$

$\frac{5y}{5} \geq \frac{-15}{5} - \frac{2x}{5}$

$y \geq -3 - \frac{2}{5}x$ or $y \geq \left(-\frac{2}{5}\right)x - 3$