

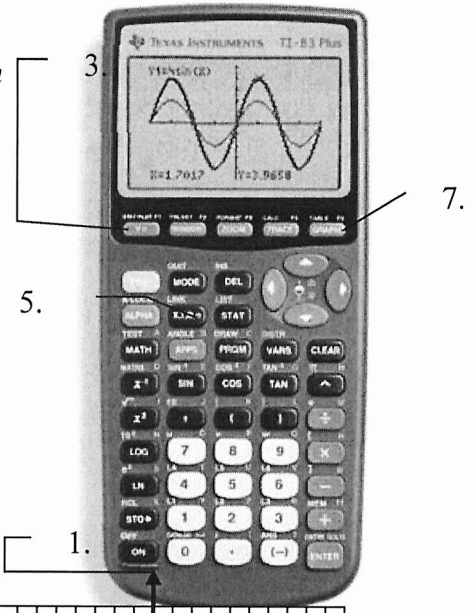
Graphing Linear Equations

Name _____

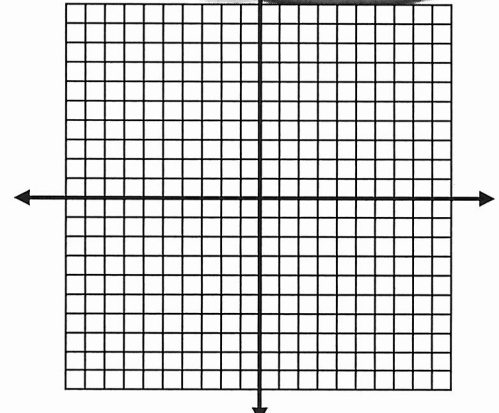
With the TI-83+

This activity will help you become familiar with the graphing calculator. In it, you will learn to graph equations of lines, change the window, locate intercepts, and work with the table function of the calculator.

1. Start by turning the calculator on.
2. If you don't have a blank screen, press the 2nd button, then *QUIT* (shift of *MODE*).
3. Press the *Y=* button.
4. If there is an equation stored in Y_1 , press the *CLEAR* button. Repeat for Y_2 and any other values that have an equation stored.
5. With your cursor in the Y_1 line, type 2 $\boxed{X,T,\theta,n}$ +3 then *Enter*. You now have the equation $y = 2x + 3$ entered into the computer.
6. Press the *ZOOM* key. Choose option 6 for *ZStandard*. This gives you a coordinate plane with -10 to 10 as its x and y values.
7. Press the 2nd button, then *TABLE* (shift of *GRAPH*) to see a table of values for your equation.
8. Draw the table with 6 values for x and y below.

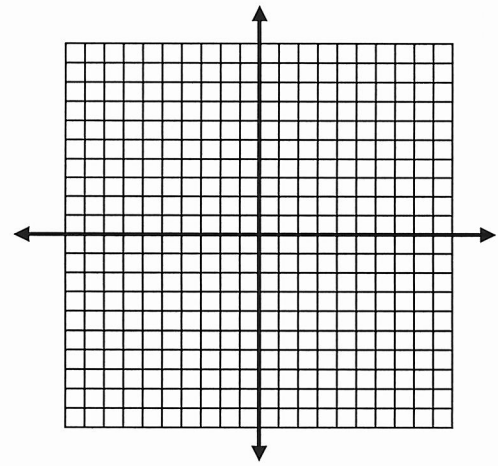


x	y



9. Press the *GRAPH* button to see the line again and sketch what you see on the calculator on the coordinate plane at the right.
10. Repeat the process with the equation $4x + y = -5$.

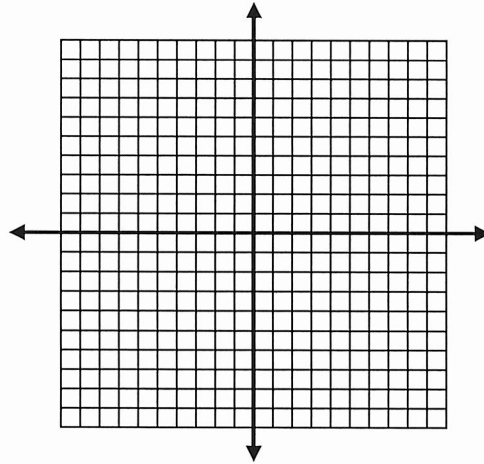
x	y



11. Repeat the process with the equation $y = \frac{2}{3}x + 20$.
12. Did you get a line? _____ What do you think happened to it? _____

13. Press the *WINDOW* key. Change the values to reflect those in the table at the right.
14. Press the *GRAPH* button. Sketch the equation below. Be sure to change your scale on your graph paper.

WINDOW	
Xmin =	-40
Xmax =	10
Xscl =	5
Ymin =	-10
Ymax =	40
Yscl =	5



15. Determine which values are needed to display the x- and y- intercepts of the graph of $y = 5x + 60$.

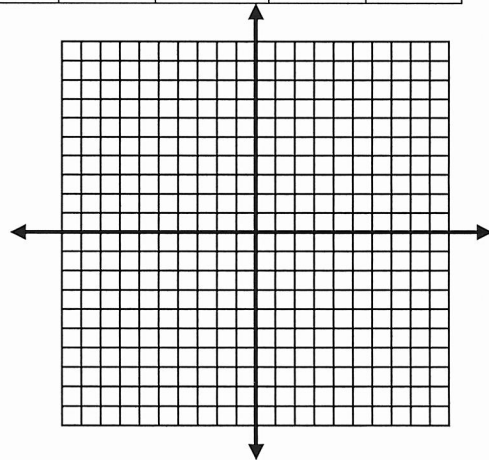
WINDOW	
Xmin =	
Xmax =	
Xscl =	
Ymin =	
Ymax =	
Yscl =	

Solve $y = \frac{2x-6}{3}$ if the domain is $(-6, -3, 0, 3, 6, 9)$.

16. Type the equation $y=(2x - 6)/3$ in Y_1 . Press 2^{nd} then *TBLSET* (*shift of WINDOW*). Change *TblStart* = to -6 and ΔTBl = to 3. Press 2^{nd} then *TABLE* to view the values for x and y. Record your table below.

x						
y						

17. Sketch the graph to the right.



18. Why did $2x - 6$ have to be in parenthesis in number 16? _____
19. Why did we choose ΔTBl = to be equal to 3? _____