

**Multiple Graphic Objects : Part One - The Problem**

Creating a graph in LiveMath is a three step process:

- 1) define y via an equation
- 2) highlight the equation

3) click on the graph button  in the palette

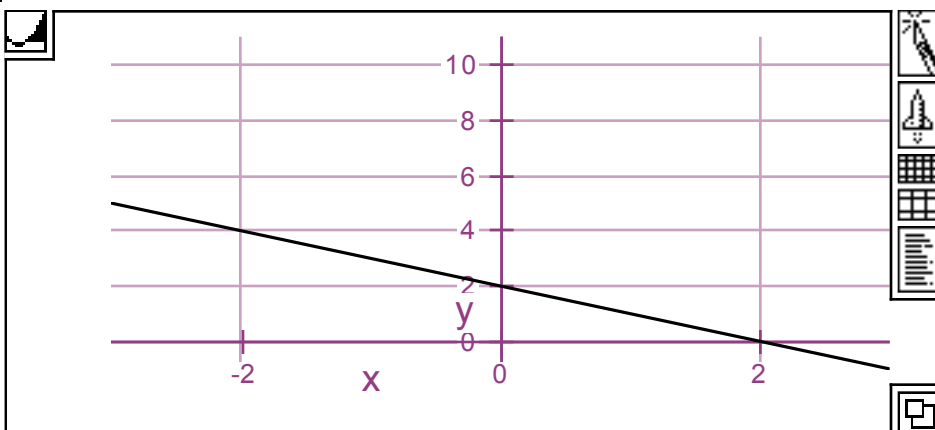


The above steps work fine if you are graphing a single expression. However, you want to create two graphs in a notebook you will experience the following situation:

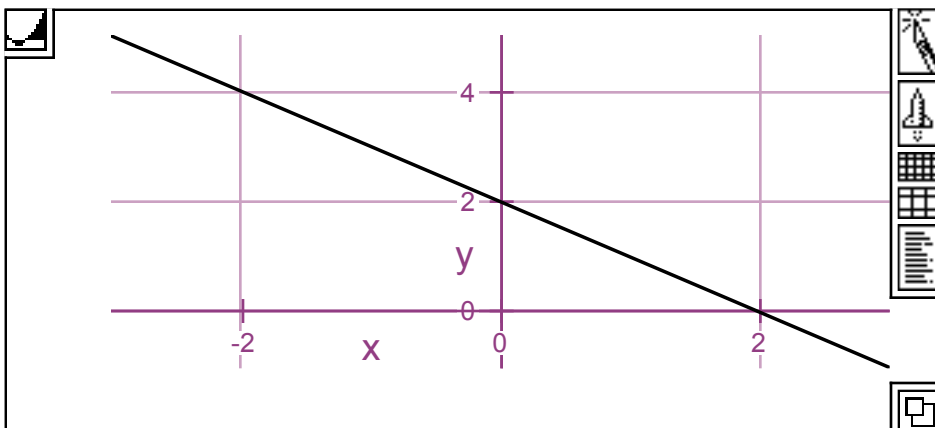


As we saw in the first lesson there can only be one active definition of a variable. If you follow the above steps for both graphs you will end up with two definitions of y in the same notebook. One intended for the first graph and one intended for the second graph. However, since there can only be one active definition of y in a single notebook, one of these definitions will be active and one will be inactive. The result is two graphs of the active definition and no graphs of the inactive definition.


$y = 2x + 5$



$y = x + 2$




Notice that only one of the definitions of y is active. Only one of the statement icons for the definitions has a dot in it.

-  The graphs are both graphing the same active y . The axes may be different because LiveMath chose scale as it was initially creating the graphs and that scale was kept even though the definition was changed.


In other words the first graph was all complete with its scale chosen before the second graph was begun. When the second graph was created and the second definition of y became the active definition the first graph was forced to update reflecting the active definition of y . However, that only changed the graph drawn. The scale of the first graphing window remains as it was.




Now It's Your Turn... Follow the directions below to get hands on experience.

-  You are going to do two activities here.
1) [Alternate the active definitions of \$y\$ above.](#)



Click on each statement icon and then click on the active button  on the palette. This will make the selected definition active. Watch the graphs change. Make the other definition active. Watch the graphs change. Make the other definition active.

-  2) [Find the inactive definition of \$y\$. Change it to \$y = 3 \sin\(x\)\$](#)

Watch what happens....nothing. That definition is not the active definition. Make it active. Watch both graphs.