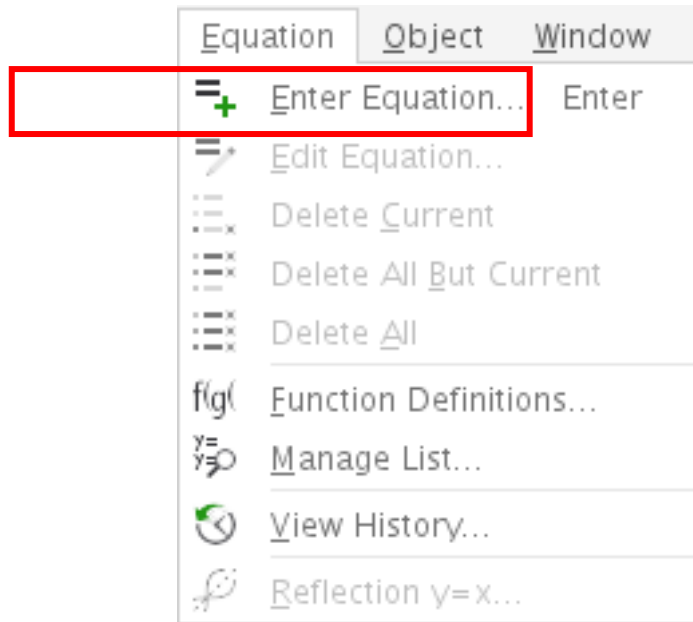


1. We want to create a graph of the form  $y = mx + c$

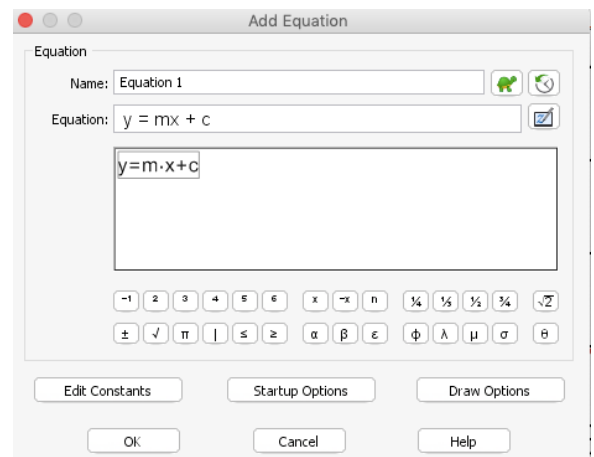
From the top toolbar select **Equation** and then select **Enter Equation**



2. The Add Equation dialog box will open. In the Equation line enter

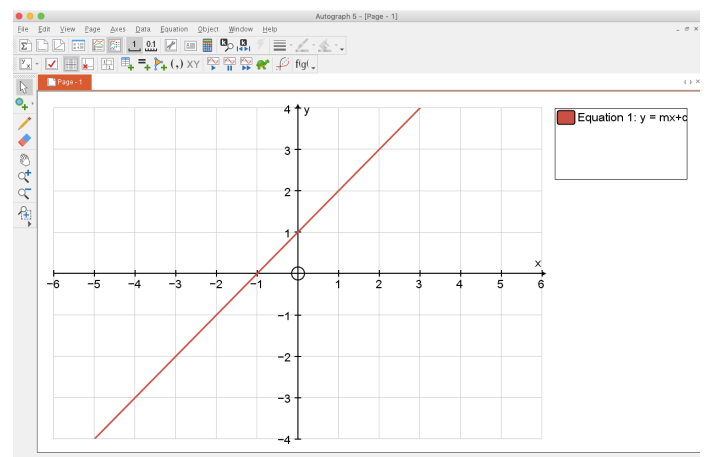
$$y = mx + c$$

And click ok.

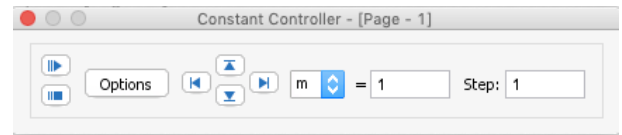


3. The graph of  $y = x + 1$  will be displayed. This is because the default value for  $m$  and  $c$  is 1. We can use the constant controller to change this.

You will see that the equation  $y = mx + c$  is displayed in the results box.



4. To change the gradient of the line,  
Click **View** from the top toolbar



Select **Constant Controller...**

The constant controller dialog box will open. You can select the constant that you want to change.

The left/right arrows change the step with which the variable will be changed. For example, 0.1, 1, 10, 100, 1000 etc

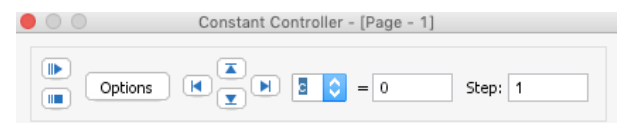
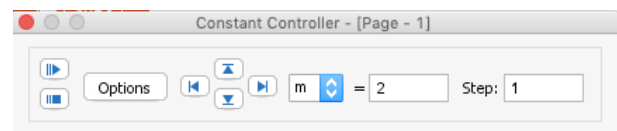


The Up/Down arrows change the variable by the selected step

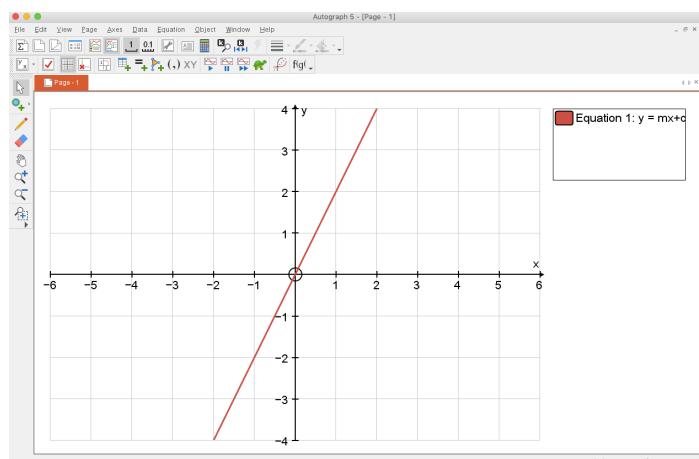



5. We want to create a graph  $y = 2x$

Change the value of  $m$  to 2  
Change the value of  $c$  to 0



The graph will now be displayed.



1. Click slow plot  from the toolbar



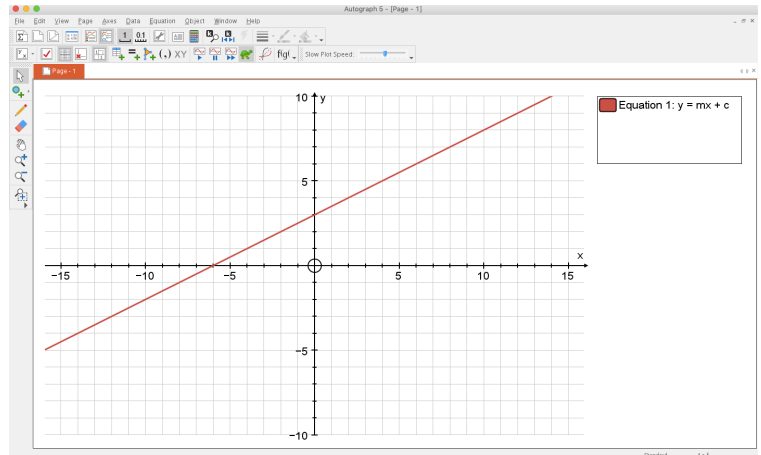
Enter the equation in the form  $y = mx + c$

Use the values  $m = 0.5$   
 $c = 3$



Click the pause button.

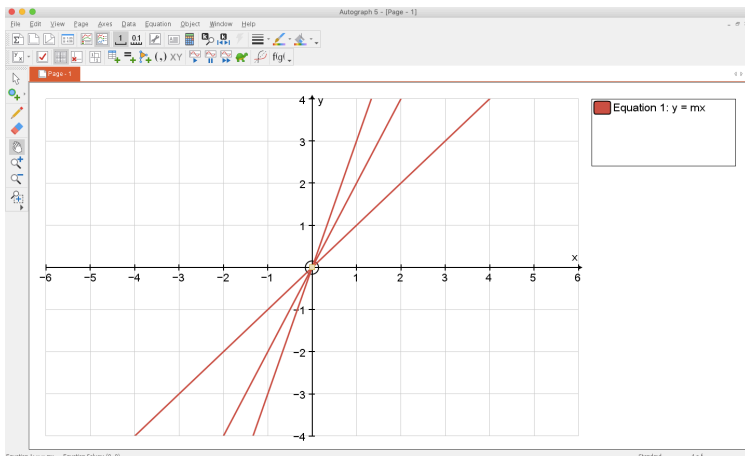
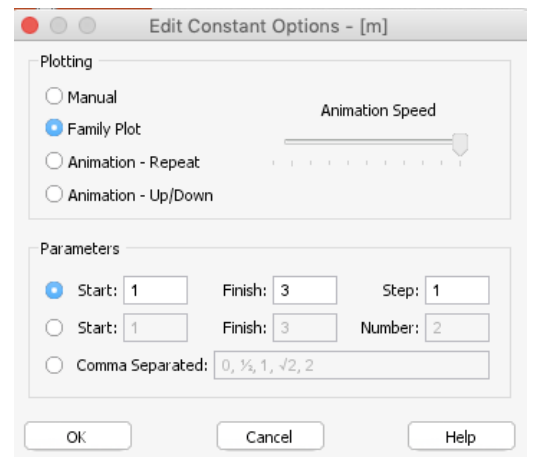
Edit the axes to go from  $y = -10$  to  $10$  using the edit axes setting



2. Create a new 2D graph with line  $y = mx$



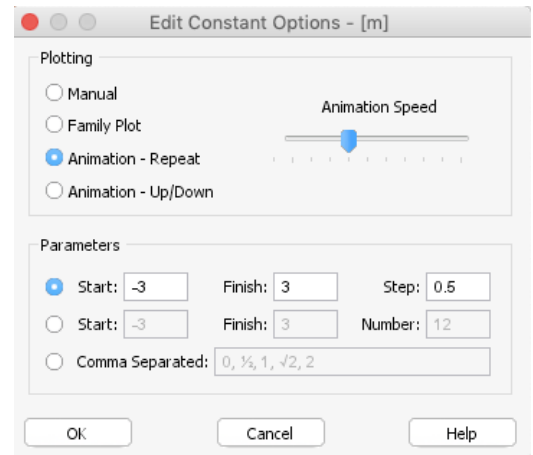
Use the constant controller set to  
Family Plot  
Start 1  
Finish 3  
Step 1



### 3. Create a new 2D graph with line $y = mx$

Use the constant controller set to  
 Animation Repeat  
 Start -3  
 Finish 3  
 Step 0.5

Change the animation speed.



### 4. Create a new 2D graph with line $y = mx$

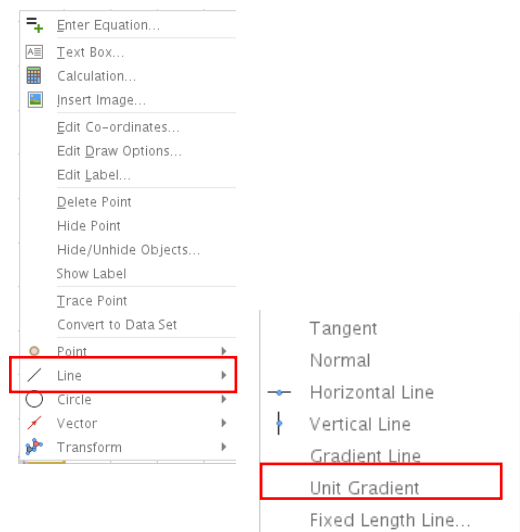
Create a point

Right click, Line, Unit Gradient

Use the Constant Controller to change value of  $m$

You may need to change zoom settings.

Use  for Equal Aspect



If you need to reset to get the

default scales use 

