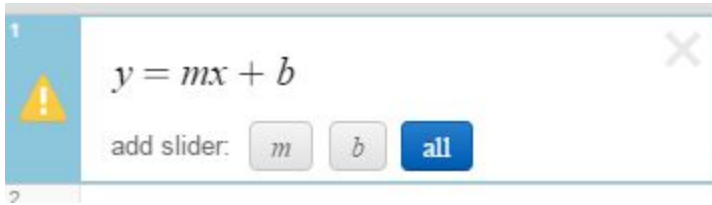



## Desmos Investigation of linear functions

Go to [www.desmos.com](http://www.desmos.com) click "launch Calculator."


1. On the Left hand side type in " $y=mx+b$ "
2. push the blue button labeled "all" after "add slider:".



3. Carefully watching the graph (red line) on the screen, move the slider labeled  $m$  back and forth. You can also press the  button.
4. Describe the graph (red line) when  $m$ =positive number.

5. Describe the graph (red line) when  $m$ =negative number.

6. Describe the graph (red line) when  $m=0$ .

7. put the slider back to  $m=1$
8. Carefully watching the graph (red line) on the screen, move the slider labeled  $b$  back and forth. You can also press the  button.
9. What happens to where the graph (red line) crosses the  $y$  axis (up and down black line)?