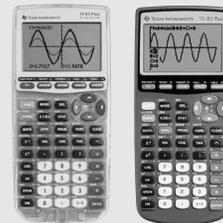


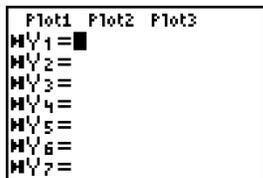
# Transformation Graphing App

For the TI-83 Plus and TI-83 plus Silver Edition

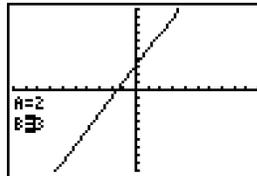


## Exploring the Translation Of A Linear Function

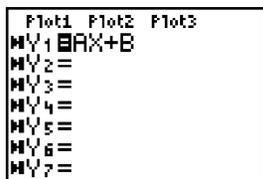
This App helps students improve graphing comprehension. By simply inputting functions, students can view changes in the function as the parameters change. This means they have a visual diagram of the function, allowing them to visually draw conclusions.



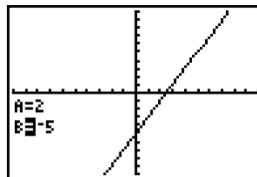
**1**  
Press **[APPS]**, highlight Transform  
Press **[ENTER]**  
Press any key



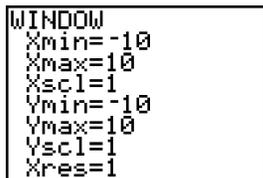
**5**  
Press **[GRAPH]**. The function  $2X+3$  appears on the screen as well as one solution,  $A=2$  and  $B=3$ .



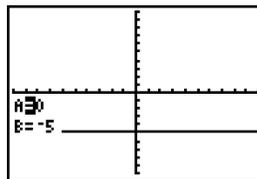
**2**  
Press **[Y=]**. In Y1, enter  $AX+B$ . Press **[ALPHA]** **[X.T.O.n]** **[+]** **[ALPHA]** **[B]**, the equation for a general linear function.



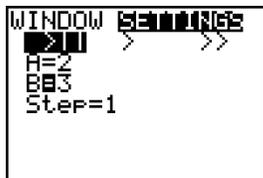
**6**  
From this screen, change the value of B by 1 by pressing **[↑]** **[↓]** (change the function to  $y=2X+2$ ,  $y=2X+4$ , etc. – remember on a previous screen  $STEP = 1$  – that was the change in value of the highlighted variable each time). Using **[←]** **[→]**, explore what happens to the function when the value of B changes.



**3**  
Press **[WINDOW]** and make the following changes using the cursor key **[←]** **[→]**:  
Xmin= -10  
Xmax=10  
Xscl= 1  
Ymin=-10  
Ymax=10  
Yscl=1  
Xres=1



**7**  
Explore what happens to the function when the value of A changes. Using **[←]** **[→]**, highlight A. Then use **[↑]** **[↓]** to change the value of A in STEPs of 1.



**4**  
To set some initial conditions for the function (define A and B), press **[WINDOW]** and cursor **[↓]** to highlight SETTINGS. Scroll **[↑]** until the cursor is flashing on the value for A. Press **[2]**. This will set the initial value of A to equal 2. Scroll **[↑]** again until the cursor is flashing on the value for B. Press **[3]**. This set the initial value of B to equal 3. At this point,  $STEP = 1$  (don't worry about this right now).