

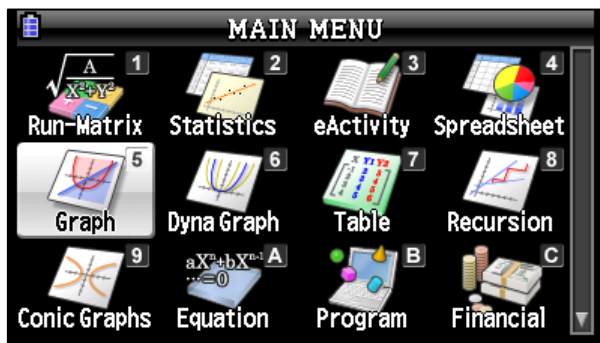
Activity 12 - Graphing a Piecewise Function

$$f(x) = \begin{cases} 2x + 7 & \text{if } x \leq -2 \\ 3 & \text{if } -2 < x \leq 2 \\ x + 1 & \text{if } x > 2 \end{cases}$$

Domain: [-10, 10] and Range [-10, 10]

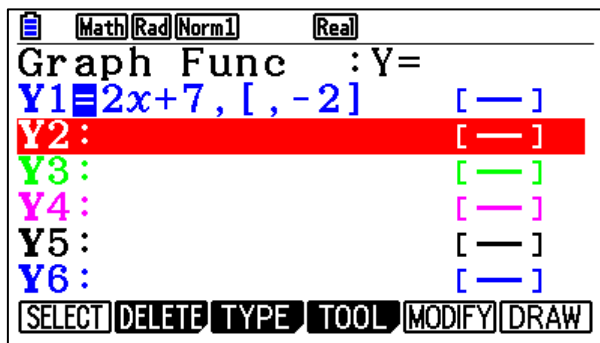
CASIO (PRIZM)

- From the Main Menu (MENU), select the **GRAPH** icon by pressing **5**.



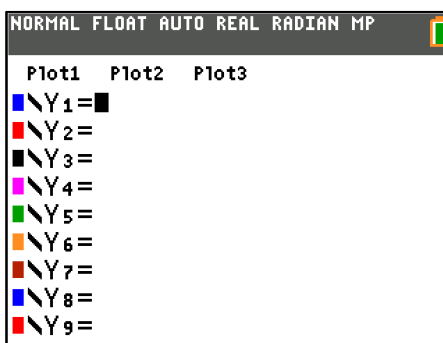
- Given the piecewise function, enter each piece in **Y1**, **Y2**, and **Y3**. Piecewise functions are entered in interval notation.

- In **Y1**, enter $2x + 7$, then **▸** **SHIFT** **+** **▸** **(←)** **2** **SHIFT** **-** **EXE**.



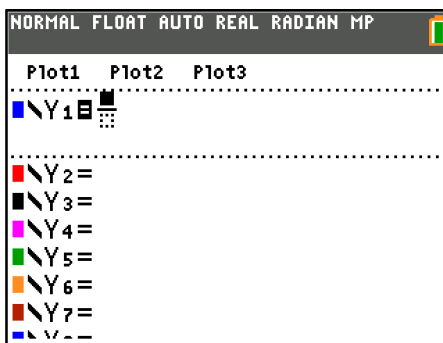
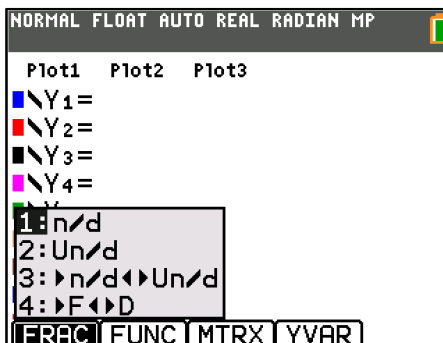
TEXAS INSTRUMENTS (84 PLUS CE)

- From the initial screen, press **Y=**.

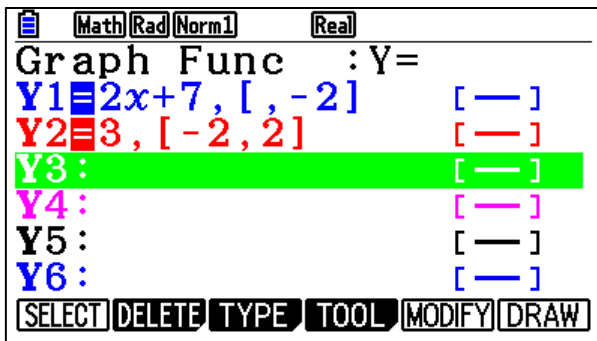


- Enter each piece of the given piecewise function in **Y1**, **Y2**, and **Y3**. Piecewise functions are entered as fractions with the equation in the numerator and the parameters in the denominator.

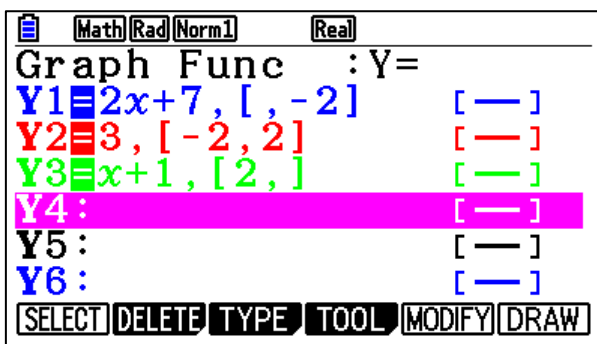
- In **Y1**, press **ALPHA** **Y=** **1** (n/d) to create the fraction template.



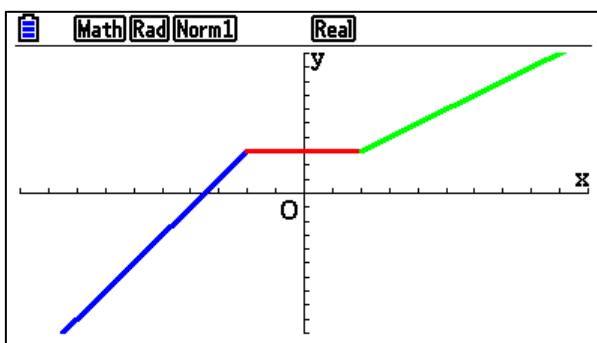
4. In **Y2**, enter 3, then \rightarrow **SHIFT** **+** **(-)** **2**
 \rightarrow **2** **SHIFT** **=** **EXE**.



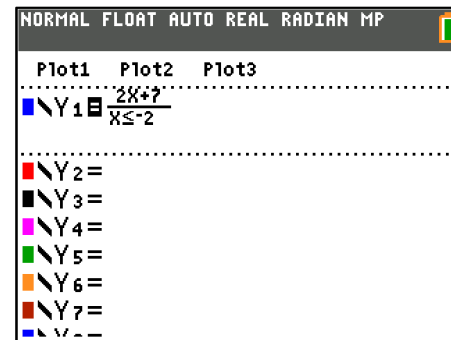
5. In **Y3**, enter $x + 1$, then \rightarrow **SHIFT** **+** **2**
 \rightarrow **SHIFT** **=** **EXE**.



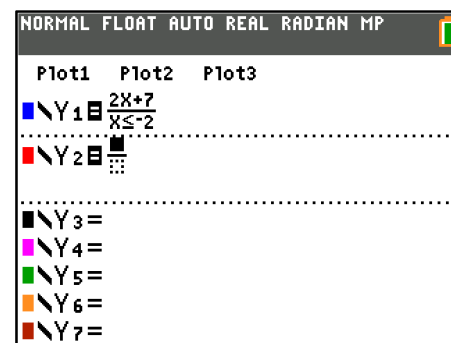
6. Press **F6** (**DRAW**) to view the graph of the piecewise function.



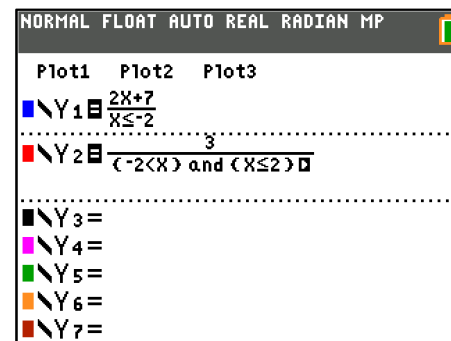
4. Enter $2x + 7$ in the numerator. To enter the parameter, press \rightarrow **X,T,θ,n** **2nd** **MATH** **6** (**<**) **(-)** **2**.



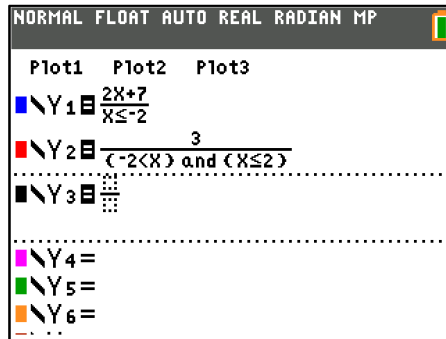
5. In **Y2**, press **ALPHA** **Y=** **1** (**n/d**) to create the fraction template.



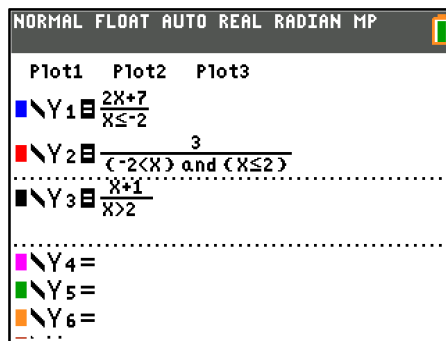
6. Enter 3 in the numerator. To enter the parameter, press \rightarrow **(-)** **2** **2nd** **MATH** **5** (**<**)
 \rightarrow **X,T,θ,n** **2nd** **MATH** \rightarrow **1** (**and**) \rightarrow **X,T,θ,n** **2nd**
MATH **6** (**<**) **2** **)**.



7. In **Y3**, press $\boxed{\text{ALPHA}}\boxed{Y=}\boxed{1}$ (n/d) to create the fraction template.



8. Enter $x + 1$ in the numerator. To enter the parameter, press $\boxed{\text{X,T,}\theta,n}\boxed{2nd}\boxed{\text{MATH}}\boxed{3}\boxed{(>)}\boxed{2}$.



9. Press $\boxed{\text{GRAPH}}$ to view the graph of the piecewise function.

