

Graphing Piecewise Defined Functions

Instructions for the TI-84 Plus

(Note: Before you begin this example you might want to review the worksheet, Preparing Your Calculator for Graphing.)

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

Press $\boxed{Y=}$. The function editor should be clear of all previous functions. Your screen should look like the one in Fig.1. Enter the first expression into Y₁. The inequality

symbols are located under Test. Test is found by pressing $\boxed{2nd} \boxed{MATH}$. To enter the

first express press $\boxed{(} \boxed{2} \boxed{X,T,\theta,n} \boxed{+} \boxed{1} \boxed{)}$ $\boxed{\div}$ $\boxed{(} \boxed{X,T,\theta,n} \boxed{2nd}$

$\boxed{MATH} \boxed{6} \boxed{(-)} \boxed{1} \boxed{)}$ \boxed{ENTER} . The result will look like the screen shown in Fig.2. To enter the second expression into the function editor, place the cursor to

Fig.1

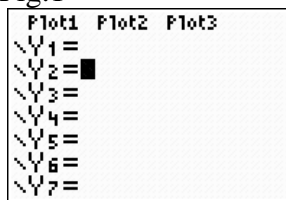
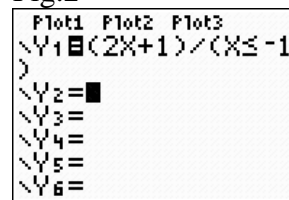


Fig.2



the right of Y₂. Press $\boxed{(} \boxed{3} \boxed{X,T,\theta,n} \boxed{-} \boxed{2} \boxed{)}$ $\boxed{\div}$ $\boxed{(} \boxed{X,T,\theta,n} \boxed{2nd}$

$\boxed{MATH} \boxed{3} \boxed{(-)} \boxed{1} \boxed{)}$ \boxed{ENTER} . The result is shown in Fig.3. Press $\boxed{ZOOM} \boxed{6}$

. This will set the window settings to the standard window setting and graph the piecewise defined function. The result is shown in Fig.4.

Fig.3

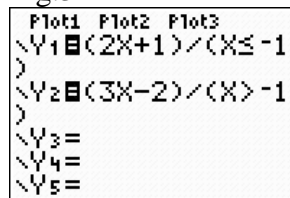


Fig.4

