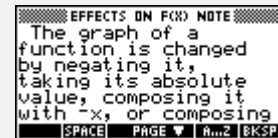


Objectives:

Using the **EFFECTS ON F(X)** applet, the student will graph functions where negations and absolute values are applied to the function and its inputs.

Functionality:

When the student presses **START**, the **NOTE** view will be displayed.



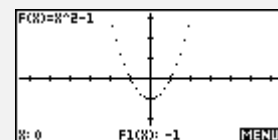
IEWS allows the student to enter a function, plot the function, or plot a geometric transformation of the function.



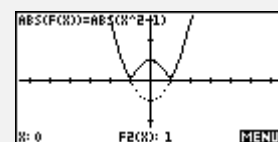
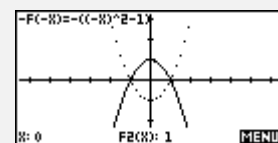
The first step is to **Enter f(x)**. This allows you to enter the function in F1(x).



For **Plot f(x)**, the graph is not connected and will reappear for comparison purposes on each successive screen as options are explored.

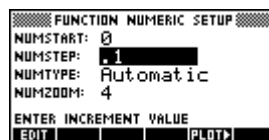
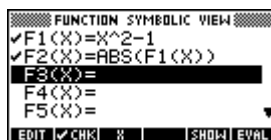


Plot f(-x), **Plot -f(x)**, **Plot -f(-x)**, **Plot ABS(f(x))**, and **Plot f(ABS(x))** are the transformation options. When a transformation is selected, f(x) will be displayed in dot mode with the transformed f(x) plotted in connected mode. The transformed f(x) will be displayed in the top left corner of the screen for analysis and verification.

**Additional Exploration:**

Find the domain and/or range for a function using the Numeric view. Using the **Function** applet, have students enter a function in F1(X). Use the up and down arrows in the numeric view to analyze the defined x and y values:

Find the domain and range of f(x) and |f(x)| when $f(x)=x^2-1$.



X	F1	F2
-.7	-.51	.51
-.6	-.36	.36
-.4	-.14	.14
0	0	0
.1	.21	.21
.2	.44	.44

Programs associated with this applet:

.REF.AX, .REF.AY, .REF.AD, .REF.PL, .REF.RX, .REF.EF, .REF.PF,
.REF.RY, .REF.SV