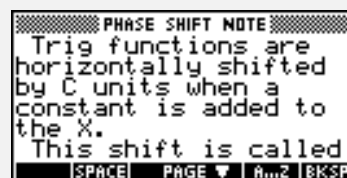


Objectives:

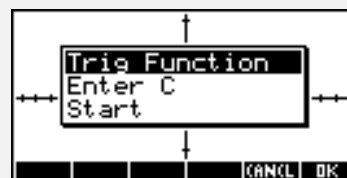
Using the **PHASE SHIFT** applet, the student will investigate the parameter C to see how it effects the functions $y = \sin(x+C)$, $y = \cos(x+C)$, $y = \tan(x+C)$, $y = \sec(x+C)$, $y = \csc(x+C)$, $y = \cot(x+C)$.

Functionality:

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



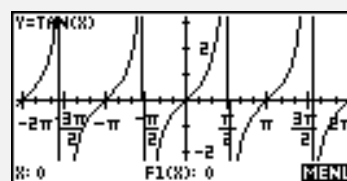
The student should press **VIEWS** to select the trigonometric function to be investigated and to enter values for C .



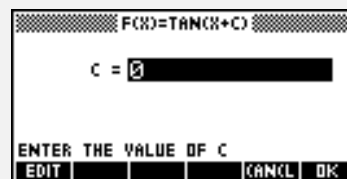
Use the up or down arrow to scroll through this menu. Press **OK** to select a specific trig function.



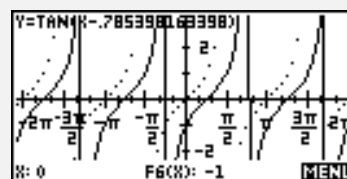
When the student presses **OK**, a graph of the selected function, where C is defaulted to 1, will be plotted over the interval $[-2\pi, 2\pi]$.



Selecting **Enter C** prompts the student for a value.



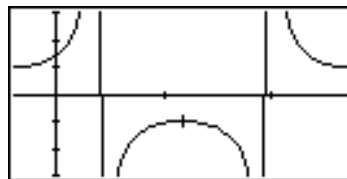
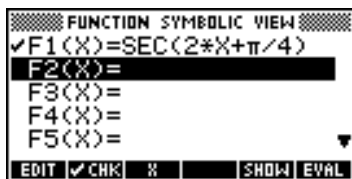
When this value is entered, the new function will automatically be plotted over the original function plot.



Additional Exploration:

Using the **Function** applet, have the student adjust the **PLOT SETUP** so that exactly one period of the function fits into the window. An example would be:

Graph one period of $y = \sec(2x + \frac{\pi}{4})$.



Ideas can be applied to:

Trigonometry, Precalculus

Programs associated with this applet:

.PS.C, .PS.TF, .PS.SV