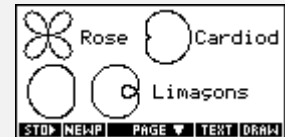***Objectives:***

Using the **POLAR EQUATION PLOT** aplet, the student will graph polar equations and will be able to analyze these symbolically and graphically.
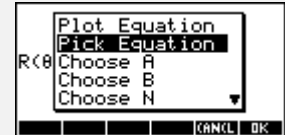
***Functionality:***

When the student presses **START** , the **POLAR EQUATIONS PLOT NOTE** will be displayed.

After reading the note, the student should look at the **SKETCH** for further explanation.

**VIEWS**  allows the student to pick an equation to be explored, adjust the parameters A, B, and N, and to plot the equation.
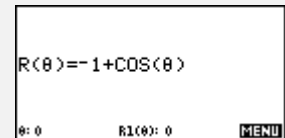
**Pick Equation**  will prompt the student to select from the equations **y = A + B cos(Nθ)** or **y = A + B sin(Nθ)**.
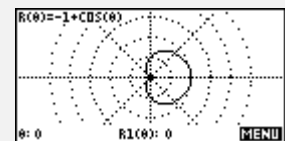
**Choose A** ,  **Choose B** ,  **Choose N** , will prompt the student to adjust a parameter.

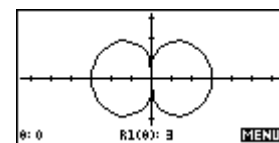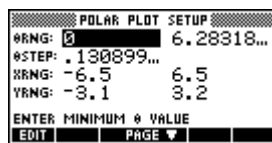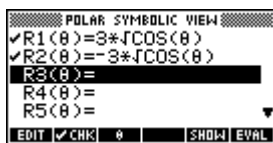When a parameter has been adjusted, the equation will automatically be updated and displayed.

**Plot Equation**  will graph the adjusted polar equation on a polar grid.  The updated equation will be displayed in the top left corner of the screen.

***Additional Exploration:***

Use the **Polar** aplet to graph a lemniscate.  An example would be:
$$\text{Plot the polar equation } r^2 = 9 \cos \theta.$$

Programs associated with this aplet:
     .PEP.PP, .PEP.CE, .PEP.CA, .PEP.CB, .PEP.CN, .PEP.ST, .PEP.SV