

## Exploring Archimedes Principle Teacher

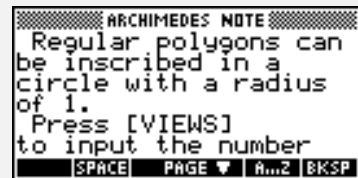
For the

### Objectives:

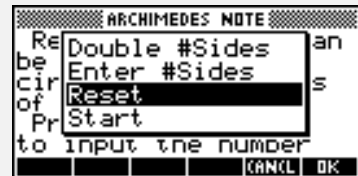
Using the **ARCHIMEDES** applet, the student will explore Archimedes' method for approximating the value of  $\pi$  by comparing the area of a regular polygon to the area of the corresponding circumscribed circle.

### Functionality:

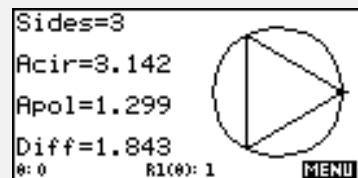
When the student selects **START**, the **ARCHIMEDES NOTE** will be displayed.



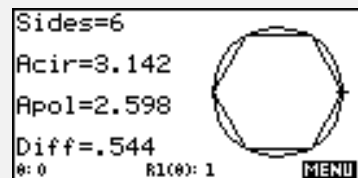
The student should then press **VIEWS** to enter the number of sides of the regular polygon to be investigated. Choose **RESET** to begin with a triangle.



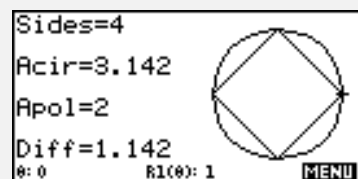
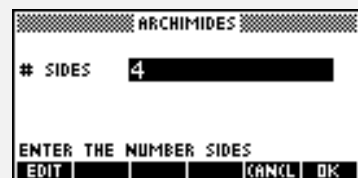
The applet then shows the regular polygon inscribed within a circle along with the number of sides of the polygon, the area of the circle, the area of the polygon, and the difference in the two areas.



**Double #Sides** will double the number of sides of the regular polygon and automatically return to the display.



**Enter #Sides** will prompt the student for the number of sides of the regular polygon and then return to the display.



Ideas can be applied to:

7th and 8th Grade Math, Prealgebra, Geometry

Programs associated with this applet:

.A.D, .A.I, .A.R, .A.S, .A.P, .A.SV