# Example Downloaded Aplets from the Internet

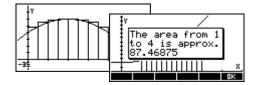
The most powerful feature of the hp 39gs & hp 40gs is that you can download aplets and programs from the internet to help you to learn and to do mathematics. Some quick examples of aplets that are available are shown here. More are listed in the paper "Teaching Calculus using the hp 39gs & hp 40gs" which can be found in the Help screen of <a href="www.hphomeview.com">www.hphomeview.com</a>. In each case the aplet is controlled by a menu. This menu is created by the programmer and 'attached' to the VIEWS button so that it displays in place of the normal menu.

## **Curve Areas**

This aplet allows the user to find approximations to the area under a curve by finding either the lower rectangular area, the upper rectangular area, or the trapezoidal area.

a Upper rect.
Trapezoidal
See sketches V

The user can choose the end points of the interval, the type of calculation and the number of rectangles to be used. The rectangles are drawn on the screen. A worksheet introduces the idea of integration to find areas.



# Linear Programming

This aplet visually solves linear programming problems, finding the vertices of the feasible region and the max/min of an objective function. It even performs sensitivity analysis on the collected vertices.

Constraints
Objective fn
Analyse
View plot
Sensitivity

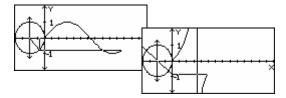
Analysis on

Min value of
15X+12Y is 510
at (10,30)

OK

#### Sine Define

This is an aplet to illustrate the process of obtaining the sine, cosine & tangent graphs from the unit circle.



## Periodic Table

This is a library that can be added to the calculator which allows the user to display a periodic table with information on each element.

