# Numerical Integration on the TI-83 and TI-84 calculators

**Example:** We want to find the area under $y = 1+.5x^2$, above the x axis, and between a = -1 and b = 2

$$\int_{-1}^{2} f(x)dx = \int_{-1}^{2} (1+.5x^2)dx$$

## If your TI-84 calculator is in CLASSIC mode or if you have a TI-83:

Put the function in Y1 in the Y= editor

Use 2nd Quit to exit the Y= editor

Press Math key, arrow down to fnInt

Calculator pastes fnInt( in your calculator home screen

You need to paste Y1 into the command.
Press the VARS key, go to YVARS, go to FUNCTION, and then highlight Y1 and press enter.

Your screen shows fnInt(Y1

You need to give it some more information to complete the command.
The syntax is fnInt(Y1,X,value of a, value of b), then press enter

For our example, the commands look like

Y1= $1+.5x^2$

fnInt(Y1,X,-1, 2)

## If your TI-84 calculator is in MATHPRINT mode:

Put the function in Y1 in the Y= editor

Use 2nd Quit to exit the Y= editor

Press Math key, arrow down to fnInt

Calculator pastes the following in your calculator home screen: $\int_{\square}^{\square}(\square)d\square$

Use the right and left arrows to move to the boxes and fill in the integrand, limits of integration and X for the dX, just as you have written the integral on your page.

When you need to paste Y1 into the command:
Press the VARS key, go to YVARS, go to FUNCTION, and then highlight Y1 and press enter.

For our example, the commands look like

Y1= $1+.5x^2$

$\int_{-1}^{2}(Y1)\,d\,X$