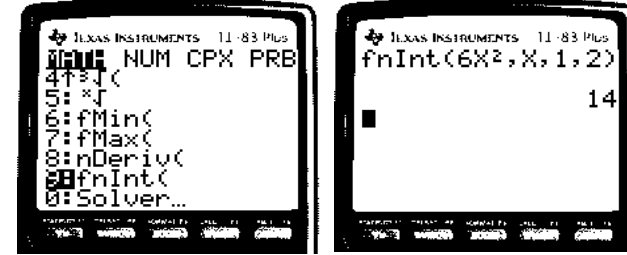# Useful Math functions on TI-83/84

Numerical Derivative

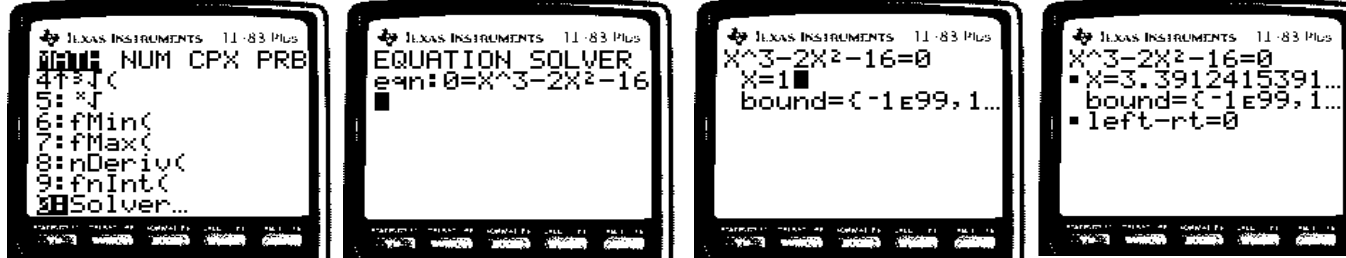[MATH]→[8]→"Type in (function, variable, evaluation point)"→[ENTER]

Numerical Integral

[MATH]→[8]→"Type in (function, variable, lower bound, upper bound)"

Equation Solver

[MATH]→[0]→"Type in equation so that it is set equal to zero"→[ENTER]→Type in arbitrary guess→[ALPHA]→[ENTER]

Solve System of Linear Equations

Arrange the system of equations as shown:

$$Ax_1 + Bx_2 + Cx_3 = \text{Constants}$$
$$Dx_1 + Ex_2 + Fx_3 = \text{Constants}$$
$$Gx_1 + Hx_2 + Ix_3 = \text{Constants}$$

Where A through I are constant coefficients for each variable $x_1, x_2, x_3 \ldots x_n$.

[2ND]→[x^{-1}]→"Choose EDIT"→"Choose any matrix"→[ENTER]→ "Type in matrix dimensions NOTE: Must agree with system of equations"→[2ND]→[QUIT]→[2ND]→[x^{-1}]→"Choose MATH"→"Scroll down to B: rref("→[ENTER]→ [2ND] →[x^{-1}]→"Choose NAME and select the matrix you created"→[ENTER]→[ENTER] ~~~~~~~~~~**The solutions for each variable are listed in the right most column**.

Portland State UNIVERSITY