Your Name: _____

*Directions*

There are 30 total points possible (distributed as indicated in the questions). You may use a calculator, but not a phone or any other electronic device.

I. Consider the function $f(x) = x^2 + 3x$ on the interval $[a, b] = [2, 4]$.

A. (5) What is the $\Delta x$ for the subdivision with $N = 4$ equal subintervals?

B. (5) What are the intermediate points $x_j$ for $j = 1, 2, 3$?

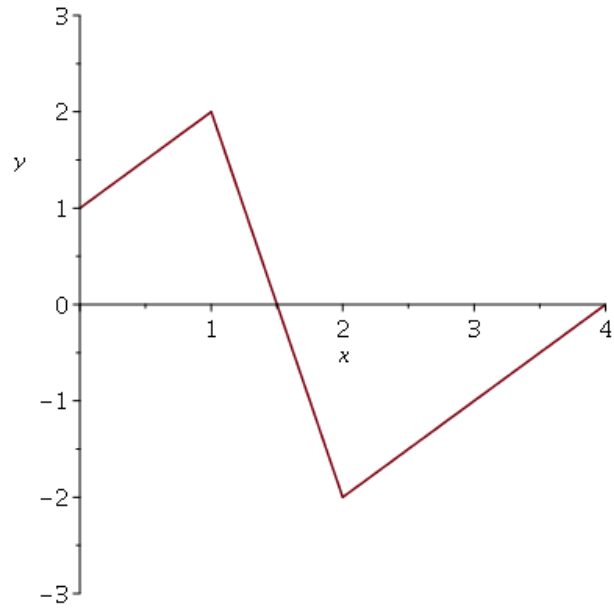C. (5) What is value of the $R_4$ right-hand sum for this function and interval?

Figure 1: The graph $y = f(x)$

II.   A. (7.5) What is the value of the integral $\int_0^1 f(x)\ dx$?

B. (7.5) What is the value of the integral $\int_1^4 f(x)\ dx$?