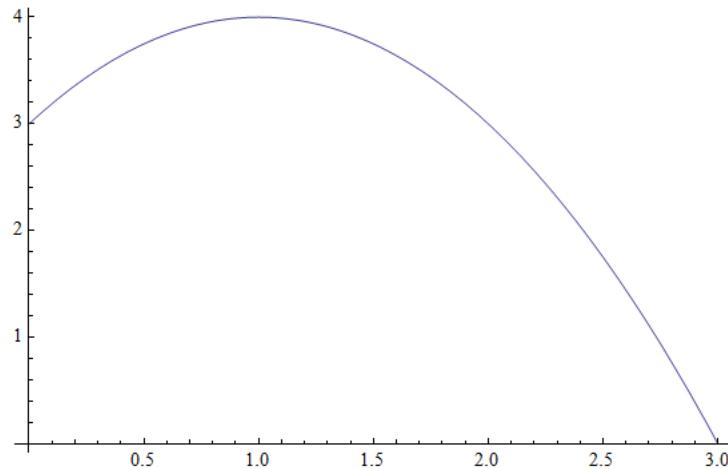


Calculus I (MAT 221)
Homework 8

Complete the following problems on a separate sheet of paper. Write as much as possible for full credit, including calculator work. This assignment is due on Thursday, May 4th.

1) Estimate the area between the curve and the x -axis from $x = 0$ to $x = 3$ for the following function by using a Riemann Sum with 6 subdivisions.



2) a) If $F(t) = t(\ln t) - t$, find $F'(t)$.
b) Find $\int_{10}^{12} \ln t \, dt$

3) Approximate the area under the curve $f(x) = 4x^2 - 10x + 8$ for $0 \leq x \leq 2$ using 8 subdivisions.

4) Compute the following definite integrals:

a) $\int_1^2 x^{-2} \, dx$ b) $\int_{-1}^1 t(1-t)^2 \, dt$