

Math 102-37-Term162-Quiz.2

Name: _____ ID: _____

Serial#: _____

1. Find

$$\lim_{t \rightarrow 3} \frac{\int_{t-1}^2 \ln x dx}{3t - 9}.$$

2. Find the linearization of the function g defined by

$$g(x) = 3 + \int_1^{x^2} \sec(t - 1) dt$$

at $x = -1$.

3. Evaluate

$$\int \frac{(1-x)(1-2x)}{x^2} dx.$$

4. The position function of a particle moving on a straight line is

$s(t) = \frac{t^2}{2} - t, \geq 0$. Find the total distance traveled over the time interval $[0, 2]$.
