

QUIZ 3

Your name _____

1. [6 pts] Calculate the indefinite integral $\int \frac{x}{2x + 11} dx$.

2. [7 pts] Compute $\int_0^{\sqrt{\ln 5}} xe^{-x^2} dx$. Your final answer should be a simple number, not an ugly decimal or an expression involving ln's or e's.

Problem 3 is on the back side.

3. [7 pts] The water level in a tube in a certain experimental apparatus fluctuates as time passes; its rate of change is given by $r(t) = \sin^3(\frac{1}{8}t) \cos(\frac{1}{8}t)$ cm/sec. Find the change in water level from time $t = 2\pi$ to time $t = 4\pi$.