

name : _____

section : 109

GSI : Charles Wang

(2 pts) Circle True or False. (+1 for correct, 0 for blank, -1 for incorrect)

1. (True False) There is only one way to perform integration by parts correctly for any given integration problem.
2. (True False) Numerical integration may yield the exact answer for the value of a definite integral.

(10 pts) For the following, you must **justify** your answer to receive credit. (Showing your work counts as justification.)

3. (a) Compute $\int x^5 e^{x^3} dx$.

- (b) How many subintervals do we need to make the error of using the trapezoid rule less than $\frac{1}{12*100}$ for the integral $\int_1^2 \ln(x)dx$. (What n makes $|E_T| < \frac{1}{12*100}$?)