

October 6,2019

QUIZ#2 Math102-sec 10.

Net Time Allowed: 25 minutes

Name:

ID # :

Serial #:

(Justify clearly your answer!)

Exercise1:(08 points)

Evaluate the following integrals:

$$1- I = \int_1^e \frac{\ln x}{x} e^{(\ln x)^2} dx .$$

$$2^{**}- J = \int \frac{dx}{3 + (x - 1)^2} .$$

Exercise2:(06 points)

The base of a solid is bounded by the curves  $y = e^x$ ,  $y = 0$ ,  $x = 0$  and  $x = 1$ . If the cross sections of the solid, perpendicular to the x-axis, are **semicircles**, then find the **volume** of the solid. ( **sketch a graph and the cross section !**)