"QUIZ" for Lecture 13

NAME: (print!) _____ **Section:** _____

E-MAIL SCANNED .pdf OF COMPLETED QUIZ to DrZcalc3@gmail.com (Attachment: q13FirstLast.pdf) ASAP BUT NO LATER THAN Oct. 22, 8:00pm

1. Change the order of integration in

$$\int_1^4 \int_0^{\ln y} f(x,y)\,dx\,dy \quad .$$

$\int_0^{\ln y} x\,dy$

$\int_2^4 \ln y\,dy$

$= y\ln y - y\Big|_1^4$

$= 2.545$

2. Evaluate

$$\int_0^2 \int_{y/2}^1 \frac{1}{(x^2+1)^2}\,dx\,dy \quad ,$$

by inverting the order of integration and evaluating the new iterated integral.

$\int_{1/2}^1 \frac{1}{(x^2+1)^2} = .5\tan^{-1}(x) + \frac{.5x}{x^2+1}$

$= .6423 - .5\tan^{-1}(.5y) + \frac{y}{y+4}$

$= 1.22391$