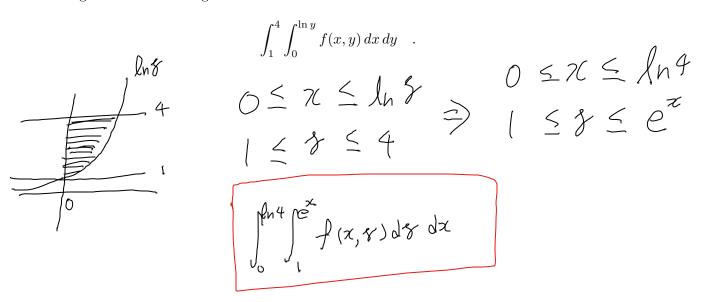
"QUIZ" for Lecture 13

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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



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.

$$\int_{0}^{1} \int_{0}^{2x} \frac{1}{(x^{2}+1)^{2}} dx dx \Rightarrow \int_{0}^{1} \frac{2}{(x^{2}+1)^{2}} = \frac{2x}{(x^{2}+1)^{2}}$$

$$\int_{0}^{1} \frac{2x}{(x^{2}+1)^{2}} dx = \int_{0}^{1} \frac{1}{u^{2}} du = \left[-\frac{1}{2^{2}+1} \right]$$

$$u = x^{2}+1$$

$$dx = 2x du$$

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