

Digest 1, Homework 1

(A compilation of emailed homework questions, answered around Wednesday.)

Question. [Exercise 8, Homework 1] Sketch the region of integration, reverse the order of integration, and then evaluate the integral.

$$\int_{x=0}^{x=3} \int_{y=x/3}^1 e^{y^2} dy dx.$$

(From a student:) I reversed the order of integration with $0 < y < 1$ and $0 < x < 3y$ and then I integrated $e^{y^2} dx$ which gives $3ye^{y^2}$ after substitution. Could you tell me how to integrate this in terms of dy ? Otherwise, did I make a mistake?

Answer. To integrate $3ye^{y^2}$ with respect to y , try using a u -substitution.

Question. (From a student:) I am worried I might arrive after 2PM on Friday to turn in the homework. What should I do?

Answer. If you anticipate some scheduling problem like this, then you can turn in the homework early. For example, turn it in Wednesday to me, or turn it in Thursday to the TA, or slide it under my door Friday morning (MS 7370). However, remember that email submission is not acceptable.

Question. (From a student:) I am trying to enroll in the class but the class is full. What should I do?

Answer. You have two options. Lecture 1 is still open. If you don't like this, and if no spots open up in this lecture, we are going to over-enroll the class a bit starting in Week 3. You will most likely need to fill out a form from MS 6356 and then I will have to sign it. This procedure begins in Week 3.