MA 224 - Quiz 10

Please write your name and section number, and put your final answers in a box. Since this is a take home quiz, the whole point is that you take the time to figure things out—you can look at the book and your notes (or even ask someone else to explain something to you). But once you figure out how to do each problem, I encourage you to write up your solutions without any help at all, not even looking at your notes.

To get credit, you have to have the correct answer, and you have to have correct work supporting that answer. Let me know if you have any questions!

1 (2 points) Evaluate $\displaystyle\int_0^1 \int_{\ln 2}^{\ln 3} x e^{y-x} \, dx \, dy$

2 (3 points) Evaluate $\displaystyle\int_{-1}^1 \int_{x^{2/3}}^{x^2} x\sqrt{y} \, dy \, dx$

3.1 (3 points) Set up the iterated integral for the following double integral:

$$\iint_R 12xy \, dA$$

where R is the region bounded by the curves $x = y + 5$ and $x = y^2 - 1$.

3.2 (2 points) Evaluate the iterated integral that you set up in part 3.1.