QUIZ 11 - MATH 251 YOUR NAME:

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Compute the integral

 $\int_0^4 \int_0^9 \sqrt{x+4y} \, dx dy.$

2. (a) Draw the domain $\mathcal{D} = \{(x, y) \in \mathbb{R}^2 : 0 \le x \le 1, x \le y \le 1\}.$

(b) Consider the integral $\int_0^1 \int_x^1 x e^{y^3} dy dx$. Change the order of integration and evaluate. (**Hint**: Changing the order should not change the domain.)