WRITE YOUR NAME:

MAC 2313 B51 Spring 2024

Written homework #9

Due Tuesday March 19th, in Canvas

Question 1. Evaluate the integral

$$\iint_R xy\,dA$$

where R is the region bounded by the lines $x = 0$, $y = 2x+1$, and $y = -2x+5$.

Question 2. Evaluate the integral

$$\iint_R (x^2 + y^2)\, dA$$

where R is the disk of radius 4 centered at the origin.

Question 3. Evaluate the integral

$$\iint_R 2xy\, dA$$

where R is the portion of the disk $x^2 + y^2 \leq 9$ lying in the first quadrant.

Question 4. Evaluate the integral

$$\iint_R \frac{1}{1+x^2+y^2}\, dA$$

where R is the disk of radius 2 centered at the origin.