

NAME (print): \_\_\_\_\_

**No credit for unsupported answers will be given. Clearly indicate your final answer**

1. [3 pts.] Evaluate the double integral

$$\iint_R x e^{xy} dA$$

if  $R = [0, 1] \times [0, 1]$

2. [3 pts.] Sketch the region of integration and change the order of integration for

$$\int_0^1 \int_{y^2-1}^{1-y} f(x, y) dx dy$$

3. [4 pts.] Find the volume of the solid bounded by elliptic paraboloid  $z = 2x^2 + y^2 + 1$  and the planes  $x + 2y = 1$ ,  $x = 0$ ,  $y = 0$ , and  $z = 0$ .