

# MATH 2263 SECTION 10 QUIZ 5

Name: \_\_\_\_\_

Time limit: 15 minutes

**1.** (7 points) Find the absolute minimum and maximum values of the function  $f(x, y) = x + y - xy$  on the closed triangular region with vertices  $(0, 0)$ ,  $(0, 2)$ , and  $(4, 0)$ .

**2.** (8 points) Using Lagrange multipliers, find the extreme values of the function  $g(x, y, z) = x + 2y$  subject to the constraints  $x + y + 2z = 3$  and  $y^2 + z^2 = 9$ .