

**Math 225: Calculus III**

**Quiz 5** *October 9, 2003*

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

Section: \_\_\_\_\_

1. Find the local maximum and minimum values and saddle point(s) of the function  $f(x, y) = x^3y + y^2 - 12xy$ .

2. Use Lagrange multipliers to find the maximum and minimum values of the function  $f(x, y) = x + 2y$  subject to the constraint  $x^2 + y^2 = 1$ .