KFUPM/ Department of Mathematics & Statistics MATH 201/ Quiz 3/ 101-13/

ID # Name

1. [5pts] Find the local extrema and saddle points (if they exist) of

 $f(x,y) = xy - x^{2} - y^{2} - 2x - 2y + 4$

2. [5pts] Use Lagrange multipliers to find the maximum and minimum of f(x, y) = xy on the circle $x^2 + y^2 = 8$.