

Math 210 Quiz 6 / Wednesday, October 22, 2008 / David Dumas

- (1) Find the maximum and minimum values of  $f(x, y) = x^2 - y$  on the unit circle. Also list the point or points on the unit circle where the function takes these values.

*Hint: The unit circle can be described as the set of points satisfying the constraint  $g(x, y) = 0$ , where  $g(x, y) = x^2 + y^2 - 1$ .*