Math 203: HW 11

Due on Thursday, June 27

Summer '12

John "*Curlee*" **Robertson**

Problem 1

Let $f(x,y) = e^{xy} + \ln(xy) + y^3 + x^3$. What is $\frac{\partial f}{\partial x}$ and $\frac{\partial f}{\partial y}$? What is $\frac{\partial^2 f}{\partial x \partial y}$?

Problem 2

Let $f(x,y) = x^2 + y^2 + 15x + 15y + 16$, give all the points that are candidates for a local min/max.

Hint: These are points (x_0, y_0) such that both partial derivatives are zero, you should get $(-15/2, -15/2)$.

Problem 3

Show that in a Cobb-Douglas production function, $f(3a, 3b) = 3f(a,b)$.

Problem 4

let $f(x,y) = \frac{x}{y-2}$. Compute $\frac{\partial f}{\partial y}(2,-1)$.