GLOBAL EXTREMA HANDOUT

MAY 20, 2019

Exercise 1. Let $f(x,y) = 1 + 4x - 5y$ and let D be the closed triangular region with vertices $(0,0)$, $(2,0)$, and $(0,3)$. Find the global extrema of f on D.

Exercise 2. Let $f(x,y) = x^2 + y^2 + x^2 y + 4$ and let $D = \{(x,y) : |x| \le 1, |y| \le 1\}$. Find the global extrema of f on D.

Exercise 3. Find the three positive numbers whose sum is 100 and whose product is as large as possible.