

Problem Set #6

Due: Wednesday, Mar. 15

1. Use Lagrange multipliers to find the maximum/minimum and maximizer/minimizer of f subject to the given constraint.

(a) $f(x, y) = xy, 4x^2 + y^2 = 1$

(b) $f(x, y, z) = 2x^2 - 2y + z^2, x^2 + y^2 + z^2 = 1$