

Assignment-6

1. Solve following minimization problem by Lagrange multiplier.

$$\begin{array}{ll}\text{Min.} & f(x, y) = xy \\ \text{s.t.} & 4x^2 + y^2 = 8\end{array}\quad (1)$$

2. Solve following Maximization problem by Lagrange multiplier.

$$\begin{array}{ll}\text{Max.} & f(x, y) = 4y - 2z \\ \text{s.t.} & \begin{cases} 2x - y - z = 1 \\ x^2 + y^2 = 1 \end{cases}\end{array}\quad (2)$$

- Hints

1. Submission due: 2025/Dec./15
2. Submit to lecwzhao@163.com, email title “assignment6_your-name + your student number”