Use Lagrange multipliers to solve the following problems of constrained optimization:

(1a) Find the maximum of \( f(x, y) = x + y \) subject to the constraint \( x^2 + y^2 = 1 \).

(1b) Solve [1a] using graphical approach.

(2) Find the maximum and minimum of \( f(x, y, z) = x + 2y - z \) subject to the constraint \( x^2 + y^2 + z^2 = 4 \).

(3) Find the minimum of the function \( f(x, y, z) = 5y - z \) subject to the constraints \( x + y + z = 1 \) and \( x^2 + y^2 = 1 \).

(4) [for MATH 620 only] What is the largest volume of a box with the total surface area of 64 cm\(^2\).