**Quiz Questions**

1. Consider the following optimization problem:

s.t.

1. Solve the problem using the Lagrange method, and find .
2. Find the value of .
3. What is the derivative of with respect to
4. Why is your answer in part (c) is identical to .
5. Assume that
6. Calculate the Jacobian of .
7. Find the Hessian of .
8. Determine whether is concave or not.
9. Suppose that
10. Is concave?
11. Solve