

Exercise 08 (no need to hand in)

1. Text book questions:

Page #	Exercise #	Question #
355	12.2	1a, 1b
355	12.2	3a*
* : determine whether the stationary points are local maximum (minimum)		

2. Use the Lagrange multiplier method to find the stationary points of the following problem

$$\max(\min) \{x_2x_3 + x_1x_3\} \quad \text{subject to } x_2^2 + x_3^2 = 1 \text{ and } x_1x_3 = 3$$

and use the bordered Hessian to determine whether the stationary points are local maximum or local minimum

3. Use the Kuhn-Tucker Theorem to solve the problem:

$$\max \{x_1x_2\} \quad \text{subject to } x_1^2 + x_2^2 \leq 1$$

and use the bordered Hessian or Hessian to determine whether the stationary points are local maximum