Assignment 2

1. The shadow price of the constraint corresponding to the maximum capacity of a resource is $3 per unit.
   
   a. Is the constraint binding or non-binding? Binding.
   
   b. If the maximum capacity of the resource is increased to 15 units, what is the new maximum capacity? 15 units.
   
   c. What is the new shadow price of the constraint? 0 per unit.

2. The shadow price of the constraint corresponding to the minimum production requirement is $2 per unit.
   
   a. Is the constraint binding or non-binding? Non-binding.
   
   b. If the minimum production requirement is increased to 10 units, what is the new minimum production requirement? 10 units.
   
   c. What is the new shadow price of the constraint? 0 per unit.

3. The shadow price of the constraint corresponding to the maximum supply of a resource is $4 per unit.
   
   a. Is the constraint binding or non-binding? Binding.
   
   b. If the maximum supply of the resource is decreased to 5 units, what is the new maximum supply? 5 units.
   
   c. What is the new shadow price of the constraint? 0 per unit.

4. The shadow price of the constraint corresponding to the minimum demand is $1 per unit.
   
   a. Is the constraint binding or non-binding? Non-binding.
   
   b. If the minimum demand is increased to 8 units, what is the new minimum demand? 8 units.
   
   c. What is the new shadow price of the constraint? 0 per unit.