

1. Problem 4.3 in Ignizio and Cavalier, parts (a) and (c) only.
  - (a) Label all extreme points and give their exact coordinates.
  - (c) At each iteration, indicate which variable enters and which variable leaves the basis. Also give the basic feasible solution  $\mathbf{x} = (x_1, \dots, x_6)$ , the objective function value, and the corresponding geometric extreme point in part (a).
  
2. Problem 4.6 in Ignizio and Cavalier.
  - (a) Label all extreme points and give their exact coordinates.
  - (b) At each iteration, indicate which variable enters and which variable leaves the basis. Also give the corresponding basic feasible solution and the objective function value.

In addition to describing all alternative optimal solutions, give a numerical example of an optimal solution for this problem that is not a basic feasible solution.
  
3. Problem 4.18 in Ignizio and Cavalier.
  - (a) Label all extreme points and give their exact coordinates.
  - (b) At each iteration, indicate which variable enters and which variable leaves the basis. Also give the corresponding basic feasible solution and the objective function value.
  
4. Problem 4.19 in Ignizio and Cavalier.