Homework: Section 4.11

1. From the text, 1, 4*, 6.

2. Extra Questions (start with what we'll call 4.11.7):

4.11.7. Construct your own system like we did in class- By first constructing an LP with a unique solution, then add constraints that will cause us to have degenerate solutions. Show what happens when you run the Simplex Method. You may use Maple, but you should summarize your work by writing down the key tableaux.

4.11.8. Show that the value of z (in the maximization problem) is strictly increasing (under certain conditions that you should examine).

4.11.9.* In Exercise 3, p. 172, we showed that cycling occurs (See the handout of tableaux entitled "Example 2: Cycling"). Show that, if we change the right hand side of the first constraint from 0 to something like 1/100, we will stop cycling and indeed, find a completely different solution (what is that solution?). As usual, if you use Maple to assist you, summarize your work by writing down the appropriate tableaux[1].

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[1]Some practioners advocate performing this "nudge" by ϵ if you have zeros in the RHS.