

General Mathematics and CPS II

Exercise 17

April 9, 2014

1. On the last homework, you wrote the following linear programming problem in its standard form.

Maximize

$$z = 2x_1 - x_2 + x_3$$

subject to

$$x_1 - x_2 \leq 1,$$

$$x_2 - x_3 \geq 1,$$

$$x_3 - x_1 \leq 3,$$

$$x_1 \geq -2,$$

$$x_2 \leq 1,$$

$$x_3 \leq 0.$$

Now solve this LPP using the simplex method.

2. Show that the leaving variable in one iteration of the simplex method can never be the entering variable in the next iteration.