

**Problem Set 3, due Friday, January 30**

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Write a matlab program that steps through one cycle of the simplex method for solving

$$\min c^T x$$

subject to

$$Ax = b$$

and

$$x \geq 0.$$

The program should take as inputs  $A$ ,  $b$ ,  $c$  and  $x$ ; you may assume that  $x$  is non-degenerate basic feasible solution,  $b \geq 0$ , and that  $A$  has full row rank. The program should output the new value of  $x$  after the simplex cycle.