**CS 451**

**Activity 16-2**

**[Simplex Algorithm]** Solve the following LP using Simplex Algorithm

* Decision Variables:
  + x1 = number of desks produced
  + x2 = number of tables produced
  + x3 = number of chairs produced
* The LP is:

max z = 60*x*1 + 30*x*2 + 20*x*3

s.t. 8*x*1 + 6*x*2 + *x*3 ≤ 48 (lumber constraint)

4*x*1 + 2*x*2 + 1.5 *x*3 ≤ 20 (finishing constraint)

2*x*1 + 1.5*x*2 + 0.5*x*3 ≤ 8 (carpentry constraint)

*x*2 ≤ 5 (table demand constraint)

*x*1, *x*2, *x*3 ≥ 0