ITEC451
Activity 7-1
(As a group of two)

[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 $z = 60x_1 + 30x_2 + 20x_3$

s.t.

$8x_1 + 6x_2 + x_3 \leq 48$ (lumber constraint)

$4x_1 + 2x_2 + 1.5\ x_3 \leq 20$ (finishing constraint)

$2x_1 + 1.5x_2 + 0.5x_3 \leq 8$ (carpentry constraint)

$x_2 \leq 5$ (table demand constraint)

$x_1, x_2, x_3 \geq 0$