2. Introduce slack variables to convert the constraint inequalities to equations. Rewrite the objective function. Put the information into a tableau. Find the 1st pivot element. STOP! **DO NOT PIVOT!**

[4pts] Maximize $P = x + 3y$

subject to

$$2x + y \leq 5$$
$$x + 3y \leq 6$$
$$x \geq 0, y \geq 0$$

$$2x + y + u = 5$$
$$x + 3y + v = 6$$
$$-x - 3y + P = 0$$

$$\begin{array}{c|cccc|c} x & y & u & v & P & \\ \hline 2 & 1 & 1 & 0 & 0 & 5 \\ 1 & \boxed{3} & 0 & 1 & 0 & 6 \\ -1 & -3 & 0 & 0 & 1 & 0 \end{array}$$