import pulp

import matplotlib.pyplot as plt

lp\_problem = pulp.LpProblem("LPP", pulp.LpMaximize)

x = pulp.LpVariable("x", lowBound=0)

y = pulp.LpVariable("y", lowBound=0)

lp\_problem += 3 \* x + 2 \* y

lp\_problem += x <= 4

lp\_problem += y <= 6

lp\_problem += 2 \* x + y <= 12

lp\_problem.solve()

print("Status:", pulp.LpStatus[lp\_problem.status])

print("x =", x.varValue)

print("y =", y.varValue)

print("Optimal Value =", pulp.value(lp\_problem.objective))

plt.plot(x.varValue, y.varValue, 'ro', label="Optimal Value")

plt.fill([0, 4, 4, 3, 0], [0, 0, 4, 6, 6], 'b', alpha=0.2)

plt.xlabel("x")

plt.ylabel("y")

plt.title("Graphical Solution of LPP")

#plt.legend(loc ="upper right")

plt.legend(bbox\_to\_anchor=(0.25,1.15), ncol=7)

plt.grid(True)