

Lab 10: Linear Programming

In this lab you are to find a geometric solution to a simple LP problem with two variables x_1 and x_2 :

$$\max x_1 + x_2$$

S.t.

$$4x_1 - x_2 \leq 8$$

$$2x_1 + x_2 \leq 10$$

$$5x_1 - 2x_2 \geq -2$$

$$x_1, x_2 \geq 0.$$

Q1: [10pts]: Plot the feasible region

Q2:[10pts] Find the optimum solution

Q3: [10pts] Find an additional constrain that makes this an in feasible problem