

Complete the following as instructed.

1. Consider the linear programming problem to maximize $z = 2x_1 + 5x_2$ subject to

$$2x_1 + 3x_2 \leq 6$$

$$x_1 + x_2 \geq 4$$

$$x_1 \geq 0, x_2 \geq 0$$

- (a) Convert the problem into canonical form and add artificial variable(s) so that the system of constraints has an “obvious” basic solution.

- (b) Complete Phase I of the two-phase method for your answer to part (a).

- (c) Draw the set of feasible solutions in the plane to the original linear programming problem. There should be something about your answer to part (b) that predicted your answer. What is it?