

Introduction to Optimization

University of California Davis

Fall 2021

Prof. Stefan C. Schonsheck

Homework 4

Due Nov. 28

1 Problem Set

1. Use the general form simplex method to solve the following (30 pts):

$$\begin{aligned} \max \quad & -x_1 + x_2 \\ \text{s.t.} \quad & -x_1 + x_2 \leq 5 \\ & x_1 - 2x_2 \leq 9 \\ & 0 \leq x_1 \leq 6 \\ & 0 \leq x_2 \leq 8 \end{aligned}$$

2. Find the dual of the previous problem and use complimentary slackness to compute the dual solution. (20 pts)

2 Collaboration

Please use this space to recognize any and all collaborations that assisted you in the completion of this assignment.

3 Academic Integrity

Please copy and sign the following statement of academic integrity:

On my personal integrity as a student and member of the UCD community, I have not given, nor received any unauthorized assistance on this assignment.