

OR-1 Homework-3

Due : 2018/3/27 (Tue.), in class

1. Formulate the following problem as an LP.

$$\text{Minimize } f(x) = -3x_1 - 4x_2 + 5x_3 + 3|x_2| + 2|x_3| + 9| -13 - 12x_1 + 5x_2 - 7x_3 |$$

$$\begin{aligned} \text{Subject to } \quad & 3x_1 - 2x_2 + 13x_3 = -9 \\ & -8x_1 + 3x_2 + 3x_3 = 10 \end{aligned}$$

2. Formulate the following problem as an LP.

$$\text{Minimize } f(x) = 6x_1 + 5x_2 - 3x_3$$

$$\text{Subject to } \quad x_1 + 2x_2 - 7x_3 \leq 1$$

$$|3x_1 - 5x_2 - 20| + x_3 \leq 4$$

$$x_j \geq 0 \quad \text{for all } j$$

3. Text p.9, #1.6
4. Text p.9, #1.7
5. Text p.9, #1.8