Day 1 02/03/2020

Maximize

$$Z = 3X_1 + 5X_2 + 4X_3 - MX_8 - MX_9$$

$$\begin{aligned} 2X_1 + 7X_2 + 8X_3 &\leq 17 \\ 4X_1 - 6X_2 + X_3 &\geq -4 \\ 5X_1 + 3X_2 + 9X_3 &= 10 \end{aligned}$$

$$X_3 = X_4 - X_5$$

$$2X_1 + 7X_2 + 8X_4 - 8X_5 + X_6 = 12$$

$$4X_1 + 6X_2 - X_4 + X_5 - X_7 + X_8 = 4$$

$$5X_1 + 3X_2 + 9X_4 - 9X_5 + X_9 = 10$$

$$A = \begin{bmatrix} 2 & 7 & 8 & -8 & 1 & 0 & 0 & 0 \\ -4 & 6 & -1 & 1 & 0 & -1 & 1 & \\ 5 & 3 & 9 & -9 & 0 & 0 & 0 & 1 \end{bmatrix} \quad B = \begin{bmatrix} 12 \\ 4 \\ 10 \end{bmatrix} \quad X = \begin{bmatrix} X_1 \\ \vdots \\ X_9 \end{bmatrix} \quad C = \begin{bmatrix} 3 \\ 5 \\ 4 \\ -4 \\ 0 \\ 0 \\ -M \\ -M \end{bmatrix}$$

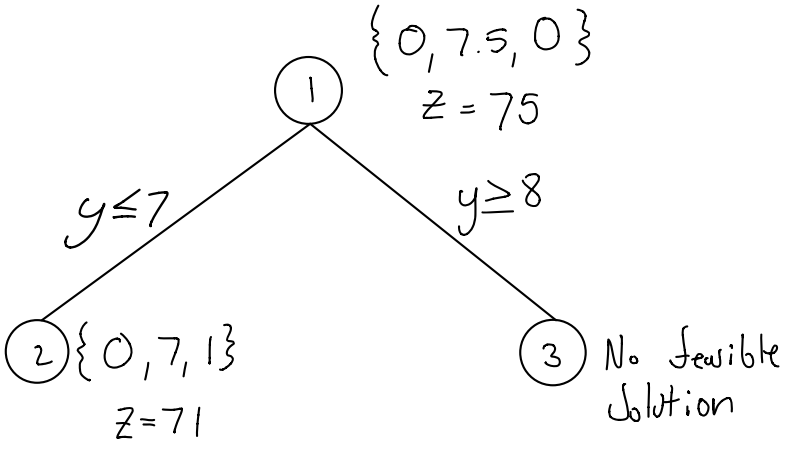
$$X_0 = \begin{bmatrix} X_6 \\ X_8 \\ X_9 \end{bmatrix} \Rightarrow C_0 \begin{bmatrix} 0 \\ -M \\ -M \end{bmatrix}$$

Exercise 6.11 (pg. 131), Integer programming problem Due friday 07th

① Read p. 126 (computational considerations)
② Use technology to solve the individual LPPs
③ Draw a tree diagram, showing the nodes. Each node is a LPP problem
④ Identify the extra constraints for each node

Chapter sequence to be {1, 2, 3, 6, 8}

Chapter 8: transportation problem



Day 2

Snow Day

Day 3

fc-do QUIZ 1