Q6

$$x_{Final} = \begin{bmatrix} 4/5 \\ 0 \\ 0 \\ 0 \\ 6/5 \end{bmatrix} \begin{matrix} x_1 \\ x_2 \\ x_3 \\ x_4 \\ x_5 \end{matrix}$$

check constraints

$$2(4/5) + 2(6/5) = 20/5 = 4$$

$$-2(4/5) + 3(6/5) = 10/5 = 2$$

minimize $C(x)$

$$C(x) = 4x_1^{\flat} + 2x_2^{\flat} + x_3^{\flat} + 4x_4^{\flat} - 2x_5^{\flat}$$

$$\min C(x) = 4(4/5) + 2(0) + (0) + 4(0) - 2(6/5)$$

$$\min C(x) = 16/5 - 12/5$$

$$\boxed{\min c(x) = 4/5}$$