

对偶问题没考过, 背定义

$$\min \quad z = C^T X$$

$$\max \quad z = B^T W$$

$$AX \geq B \quad \rightarrow \quad A^T W \leq C$$

$$X \geq 0$$

$$W \geq 0$$

灵敏度分析, Simplex 没考过, 背定义

initial max

$$X^T$$

$$C_0 = 0$$

$$X_0 \quad A^* \quad I_n$$

$$B$$

$$-C^{*T} \quad 0$$

$$0$$

final

$$X^T$$

$$X_B \quad SA^* \quad S$$

$$SB$$

$$y^T A^* - C^{*T} \quad y^T$$

$$y^T B$$

① change in B

$$B \rightarrow B_c = [a \quad b \quad c]$$

$$\Rightarrow S B_c \text{ 每个数} \geq 0 \Rightarrow \Delta \text{ 范围}$$

$$\textcircled{2} C_1^* = a + \Delta \quad \text{non basic value}$$

$$y^T A^* - C_{c1}^{*T} \geq 0 \Rightarrow \Delta \text{ 范围}$$

$$\textcircled{3} A_1^* \rightarrow A_{c1}^* \quad C_1^* \rightarrow C_{c1}^*$$

$$S A_{c1}^* \geq 0 \quad y^T A_{c1}^* - C_{c1}^* > 0$$

$$\textcircled{4} \text{ change basic variable}$$

$$C_2^* \rightarrow C_{c2}^* \quad A_2^* \rightarrow A_{c2}^*$$

重新求