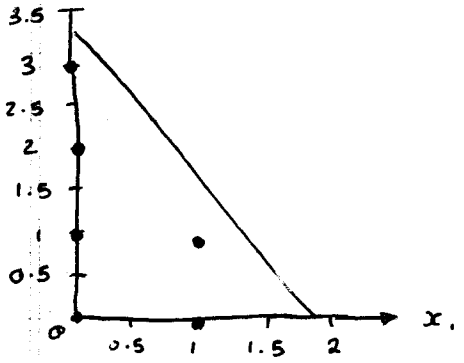

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$S_{IP} = \{ (0,0), (1,0), (0,1), (0,2) \ldots$ Linear Prog.

$\ldots (0,3)(1,1) \}$

CS_{LPr}

$Z_{LPr} = 39$

$Z_1 * 13/7 + 11 * 0$

$Z_1 * 0 + 11 * 3$

$\rightarrow Z^*_{LP} = 33$

$$\begin{bmatrix} x_1^* \\ x_2^* \end{bmatrix}_{LPr} = \begin{bmatrix} 13/7 \\ 0 \end{bmatrix} \quad \Big| \quad \begin{bmatrix} x_1^* \\ x_2^* \end{bmatrix}_{LP} = \begin{bmatrix} 0 \\ 3 \end{bmatrix}$$

$$\text{Max } Z = 8x_1 + 5x_2$$

$$x_1 + x_2 \leq 6$$

$$9x_1 + 5x_2 \leq 45$$

$$x_1 \geq 4$$

$$x_1, x_2 \geq 0$$