- I eliminatoria

Non soddisfatta

- Cambio di base

$h = 2 \rightarrow x_2$ entrante

- Scelgo anche k

$$\min\left\{\frac{B_2^{-1}b}{(\Pi_6)_i}\right\} = \min\left\{\frac{2}{1}\ \cancel{\frac{10}{0}}\ \frac{6}{1}\ \frac{6}{2}\right\}$$

$k = 1 \rightarrow x_3$ uscente

$$A_3 = \begin{pmatrix} x_4 & x_3 & x_2 & x_1 & x_5 & x_6 \\ 0 & 1 & 1 & 1 & 0 & 0 \\ 1 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 & 1 & 0 \\ 0 & 0 & 2 & 1 & 0 & 1 \end{pmatrix} \qquad C_3^T = \begin{pmatrix} x_4 & x_3 & x_2 & x_1 & x_5 & x_6 \\ 0 & 0 & -5 & -3 & 0 & 0 \end{pmatrix}$$

N_3 | B_3 | N_3 | B_3

$$k=1 \rightarrow \quad M = \begin{pmatrix} \Pi_h & \Pi_1 & e_k & B_2^{-1}b \\ 1 & -1 & 1 & 2 \\ 0 & 1 & 0 & 10 \\ 1 & 0 & 0 & 6 \\ 2 & -1 & 0 & 6 \end{pmatrix} = \begin{pmatrix} 1 & -1 & 1 & 2 \\ 0 & 1 & 0 & 10 \\ 0 & 1 & -1 & 4 \\ 0 & 1 & -2 & 2 \end{pmatrix}$$

$B_3^{-1}N_3$ | $B_3^{-1}b$

- Costi ridotti

$$\gamma_3 = C_N^T - C_B^T B_3^{-1} N_3 = (0\ 0) - (-5\ -3\ 0\ 0)\begin{pmatrix} -1 & 1 \\ 1 & 0 \\ 1 & -1 \\ 1 & -2 \end{pmatrix} =$$

$$= (0\ 0) - (2\ \ -5) = (-2\ \ 5)$$

- I eliminatoria non soddisfatta

- Cambio base

$h = 1 \rightarrow x_4$ entrante

- Scelgo k

$$\min\left\{\frac{(B_3^{-1}b)_i}{(\Pi_h)_i}\right\} = \min\left\{\frac{\cancel{2}}{\cancel{1}}\ \frac{10}{1}\ \frac{4}{1}\ \frac{2}{1}\right\} \rightarrow k = 4 \rightarrow x_6 \text{ uscente}$$

$$A = (\underbrace{x_6\ x_3}_{N} \mid \underbrace{x_2\ x_1\ x_5\ x_4}_{B})$$

$$k=4 \rightarrow \quad M = \begin{pmatrix} \Pi_h & e_k & \Pi_2 & B_3^{-1}b \\ -1 & 0 & 1 & 2 \\ 1 & 0 & 0 & 10 \\ 1 & 0 & -1 & 4 \\ 1 & 1 & -2 & 2 \end{pmatrix} = \begin{pmatrix} 0 & -1 & -1 & 4 \\ 0 & -1 & 2 & 8 \\ 0 & -1 & -1 & 2 \\ 1 & -1 & -2 & 2 \end{pmatrix}$$

$B_4^{-1}N_4$ | $B_4^{-1}b$

- Costi ridotti

$$\gamma_4 = C_N^T - C_B^T B_4^{-1} N_4 = (0\ 0) - (-5\ -3\ 0\ 0)\begin{pmatrix} 1 & -1 \\ -1 & 2 \\ -1 & 1 \\ 1 & -2 \end{pmatrix} =$$

$$= (0\ 0) - (-2\ -1) = (2\ \ 1)$$

Ok, ottimalità soddisfatta

$$x^* = \begin{pmatrix} x_1 & x_2 & x_3 & x_4 & x_5 & x_6 \\ 8 & 4 & 0 & 2 & 2 & 0 \end{pmatrix}$$