

Le programme primal (P) est :

$$\begin{array}{rcll}
 \text{Maximiser} & 2x_1 & +x_2 & +x_3 & +3x_4 \\
 \text{Sous} & 6x_1 & +8x_2 & +5x_3 & +9x_4 \leq 6 \\
 & x_1 & +3x_2 & +x_3 & +2x_4 \leq 8 \\
 & x_1 & +0x_2 & +0x_3 & +0x_4 \leq 3 \\
 & x_1, & x_2, & x_3, & x_4 \geq 0
 \end{array}$$

Le dictionnaire initial est :

$$\begin{array}{rcll}
 x_5 & = & 6 & -6x_1 & -8x_2 & -5x_3 & -9x_4 \\
 x_6 & = & 8 & -x_1 & -3x_2 & -x_3 & -2x_4 \\
 x_7 & = & 3 & -x_1 & +0x_2 & +0x_3 & +0x_4 \\
 \hline
 z & = & 0 & +2x_1 & +x_2 & +x_3 & +3x_4
 \end{array}$$

La variable entrante est x_1 .

La variable sortante est x_5 .

$$\begin{array}{rcll}
 x_1 & = & 1 & -\frac{1}{6}x_5 & -\frac{4}{3}x_2 & -\frac{5}{6}x_3 & -\frac{3}{2}x_4 \\
 x_6 & = & 7 & +\frac{1}{6}x_5 & -\frac{5}{3}x_2 & -\frac{1}{6}x_3 & -\frac{1}{2}x_4 \\
 x_7 & = & 2 & +\frac{1}{6}x_5 & +\frac{4}{3}x_2 & +\frac{5}{6}x_3 & +\frac{3}{2}x_4 \\
 \hline
 z & = & 2 & -\frac{1}{3}x_5 & -\frac{5}{3}x_2 & -\frac{2}{3}x_3 & +0x_4
 \end{array}$$