max

$z = 2x_1 + x_2$

S/C $\begin{cases} \cancel{x_1 + 2x_2 =} \\ y_1 = 5 - x_1 - 2x_2 - x_3 \\ y_2 = 2 - 3x_1 + 2x_2 - 3x_3 \end{cases}$ A

$(0,0)$ est irréalisable car $x_3 = 5 = \frac{2}{3}$?

Lang

min $w = y_1 + y_2$

S/C

même contraintes

min

$w = 7 - 4x_1 - 4x_3$

S/C

A $\begin{cases} y_1 = 5 - x_1 - 2x_2 - x_3 \\ y_2 = 2 - 3x_1 + 2x_2 - 3x_3 \end{cases}$

$y_i \geq 0$.

max $-w = -7 + 4x_1 + 4x_3$

S/C $\{ A \}$

max $z = \frac{41}{8} - 2x_3$ op

S/C $\begin{cases} x_1 = \frac{7}{4} - x_3 \\ x_2 = \frac{13}{8} \end{cases}$

méthode des tableaux

(1)

		$-x_1$	$-x_2$	$-x_3$
w	-7	-4	0	-4
z	0	-2	-1	0
y_1	5	1	2	1
y_2	2	$\boxed{3}$	-2	3

$e = \min(1,3) = 1$ x_1

$l = \min(\frac{5}{1}, \frac{2}{3}) = \frac{2}{3} \Rightarrow y_2$

(2)

		$-y_2$	$-x_2$	$-x_3$
w	$-\frac{13}{3}$	$-$	$-\frac{8}{3}$	0
z	$-\frac{4}{3}$	$-$	$-\frac{7}{3}$	2
y_1	$\frac{13}{3}$	$-$	$\boxed{\frac{8}{3}}$	0
x_1	$\frac{2}{3}$	$-$	$-\frac{2}{3}$	1

$e = 2$, $l = 1$ y_1 x_2

(3)

		$-y_2$	$-y_1$	$-x_3$
w	0	$-$	$-$	0
z	$\frac{41}{8}$		$-$	2
x_2	$\frac{13}{8}$		$-$	0
x_1	$\cancel{\frac{11}{4}} = \frac{7}{4}$		$-$	1

Fin de la phase I

$\boxed{w^* = 0}$ La valeur opt de de Lang

Fin Phase 1

Phase 2

max $z = 2x_1 + x_2$

$= 2\left(\frac{11}{4} - x_3\right) + \frac{13}{8}$

$z = \left(\frac{11}{2} + \frac{13}{8}\right) - 2x_3$ $= \frac{41}{8}$

$= \frac{44 + 39}{24} = \frac{83}{24}$ (2)

$z^* = \frac{83}{24}$

$= \frac{\ }{8 \times 3}$

max $z = \frac{41}{8} - 2x_3$

S/C $\begin{cases} x_1 = \frac{11}{4} - x_3 \\ x_2 = \frac{13}{8} \end{cases}$