Exercice 1

		x_1	x_2	x_3	x_4	x_5	x_B
C_B	C	50	60	0	0	0	0
0	$x_?$	1	2	1	0	0	8
0	x_4	1	1	0	1	0	5
0	x_5	9	4	0	0	1	36

⇐ fact objective

$$\Delta_i = C_i - Z_i$$

↗ pivot

		x_1	x_2	x_3	x_4	x_5	x_B
C_B	C	50	60	0	0	0	0
0	$x_?$	1	2	1	0	0	8/2 = 4 ⇐ min
0	x_4	1	1	0	1	0	5/1 = 5
0	x_5	9	4	0	0	1	36/4 = 9

$$50 - \left(\tfrac{1}{2}\cdot 60 + 0\cdot\tfrac{1}{2} + 0\cdot\tfrac{1}{2}\right)$$

		x_1	x_2	x_3	x_4	x_5	x_B
C_B	C	50	60	0	0	0	0
0	$x_?$	$\tfrac{1}{2}$	1	$\tfrac{1}{2}$	0	0	8/2 = 4 ⇐ min
0	x_4	$\tfrac{1}{2}$	0	$-\tfrac{1}{2}$	1	0	1
0	x_5	7	0	-2	0	1	20

$$⇐ L = L - 60 L_2$$
$$⇐ L = L - L_1$$
$$L = L - 4 L_1$$

$$36 - 4\cdot 4 = 20$$

$$9 - 4\cdot\tfrac{1}{2}$$

		x_1	x_2	x_3	x_4	x_5	x_B
C_B	C	20	0	-30	0	0	-240
0	x_2	$\tfrac{1}{2}$	1	$\tfrac{1}{2}$	0	0	4
0	x_4	$\tfrac{1}{2}$	0	$-\tfrac{1}{2}$	1	0	1
0	x_5	7	0	-2	0	1	20

$$Sol = (0, 4, 0, 1, 20)$$
$$z \cdot Sol = 240$$

Exercice 2

c_B		x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	x_9	x_{13}
c_B	c	3 0	2 -1	3	0	3 0	0	0 -3 0	0	0	0 -3
	x_6	2 0	0 -2	1	2 4	2 0	1	0 -2 0	0	0	2 5
	x_9	1	1	0	-1	1	0	1	0	0	1
	x_8	0	-1	2	2	0	0	0	1	0	2
	x_9	-1	1 2	-2	0 -2	1 0	0	0	0 -1	1	5 3

c_B		x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	x_9	x_{13}
c_B	c	3 0	2 -1	3	0	3 0	0	0 -3 0	0	0	0 -3
	x_6	2 0	0 -2	1	2 4	2 0	1	0 -2 0	0	0	2 5
	x_5	1	1	0	-1	1	0	1	0	0	1
	x_8	0	-1	2	2	0	0	0	1	0	2
	x_9	-1	1 2	-2	0 -2	1 0	0	0	0 -1	1	5 3

0   0   1   1   1

$3 = \# sol$

c_B		x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	x_9	x_{13}
c_B	c	3 0	2 -1 $\frac{3}{2}$	3 0	0 -3	3 0	0	0 -3 0 $-\frac{3}{2}$	0	0 -3 -6
	x_6	2 0	0 -2 $-\frac{3}{2}$	1 0	2 43	2 0	1	0 -2 0 $-\frac{1}{2}$ 0	0	2 54
	x_5	1	1	0	-1	1	0	1	0	0	1
	x_8	0	-1 $-\frac{1}{2}$	2 1	2 1	0	0	0	1 $\frac{1}{2}$	0	2 1
	x_9	-1	1 0	-2 -4 0	0 -2 2	1 0	0	0	0 -1 1	1	5 3 7