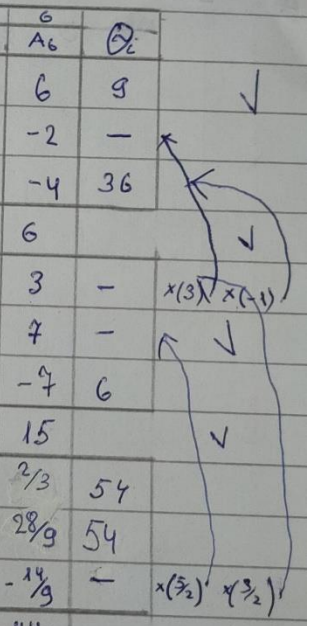
Домашня робота №3

стор. 50-51 №6,4(5)

$Z = 3x_1 + 2x_3 - 6x_6 (max) \Rightarrow L(x) = -Z \Rightarrow L(x) = -3x_1 - 2x_3 + 6x_6 \to min$

$$\begin{cases} 2x_1 + x_2 - 3x_3 + 6x_6 = 18 \\ -3x_1 + 2x_3 + x_4 - 2x_6 = 24 \\ x_1 + 3x_3 + x_5 - 4x_6 = 36 \\ x_j \geq 0,\ j = \overline{1,6} \end{cases}$$

Сб	Хв	c: A0	-3: A1	0: A2	-2: A3	0: A4	0: A5	6: A6	Θi
0	← x_2	18	(2)	1	-3	0	0	6	9
0	x_4	24	-3	0	2	1	0	-2	—
0	x_5	36	1	0	3	0	1	-4	36
Δ_j	$L = 0$		-3↑	0	-2	0	0	6	
-3	x_1	9	1	1/2	-3/2	0	0	3	—
0	x_4	51	0	3/2	-5/2	1	0	7	—
0	← x_5	27	0	-1/2	(9/2)	0	1	-7	6
Δ_j	$L = -27$		0	3/2	-13/2↑	0	0	15	
-3	x_1	18	1	2/6	0	0	1/3	2/3	54
0	← x_4	66	0	(11/9)	0	1	5/9	28/9	54
-2	x_3	6	0	-1/9	1	0	2/9	-14/9	—
Δ_j	$L = -66$		0	-7/9↑	0	0	13/9	44/9	
-3	x_1	36	1	0	0	27/11	1/11	2/11	
0	x_2	54	0	1	0	9/11	5/11	28/11	
-2	x_3	12	0	0	1	1/11	3/11	-98/99	
Δ_j	$L = -132$		0	0	0	83/11	9/11	452/99	



Всі $\Delta_j \geq 0 \Rightarrow$ поточний ДБР оптимальний

КЗЛП: $x^*_{min} = (0; 0; 0; 83/11; 9/11; 452/99)$ $L(x^*) =$

$= -3 \cdot 0 + (-2) \cdot 0 + 6 \cdot 452/99 = \frac{2712}{99} = \frac{904}{33}$

СЗЛП: $X_{max} = (0; 0; 0; 83/11; 9/11; 452/99)$ $Z(x) = -\frac{904}{33}$