

Розв'язати першим методом відсікання задачу за умов

$$x_4 \rightarrow \min$$

$$x_1 + x_2 \leq x_4;$$

$$x_3 \leq x_4;$$

$$x_1 \leq x_2;$$

$$(x_1, x_2, x_3) \in E_3(G)$$

$$\text{де } G = \{1, 3, 5\}$$

$$\begin{cases} x_1 \leq 5; \\ x_2 \leq 5; \\ x_3 \leq 5; \\ x_1 + x_2 \leq 8; \\ x_1 + x_3 \leq 8; \\ x_2 + x_3 \leq 8; \\ x_1 + x_2 + x_3 = 9. \\ x_1 + x_2 - x_4 \leq 0 \\ x_3 - x_4 \leq 0 \\ x_1 - x_2 \leq 0 \end{cases}$$

Зводимо до канонічної форми

$$\begin{cases} x_1 + x_5 = 5; \\ x_2 + x_6 = 5; \\ x_3 + x_7 = 5; \\ x_1 + x_2 + x_8 = 8; \\ x_1 + x_3 + x_9 = 8; \\ x_2 + x_3 + x_{10} = 8; \\ x_1 + x_2 + x_3 = 9. \\ x_1 + x_2 - x_4 + x_{11} = 0,02 = 2\varepsilon \\ x_3 - x_4 + x_{12} = 0,01 = \varepsilon \\ x_1 - x_2 + x_{12} = 0,03 = 3\varepsilon \end{cases}$$

				0	0	0	-1	0
№	Базис	Сб	P0	P1	P2	P3	P4	P5
1	P5	0	5	1	0	0	0	1
2	P6	0	5	0	1	0	0	0
3	P7	0	5	0	0	1	0	0
4	P8	0	8	1	1	0	0	0
5	P9	0	8	1	0	1	0	0
6	P10	0	8	0	1	1	0	0
7	P14	-M	9	1	1	1	0	0
8	P11	0,02	0	1	1	0	-1	0

9	P12	0,01	0	0	0	1	-1	0
10	P13	0,03	0	1	-1	0	0	0
11			0	0	0	0	1	0
12			-9	-1	-1	-1	0	0

				0	0	0	-1	0
№	Базис	Сб	P0	P1	P2	P3	P4	P5
1	P5	0	5	1	0	0	0	1
2	P6	0	5	0	1	0	0	0
3	P7	0	5	0	0	0	1	0
4	P8	0	8	1	1	0	0	0
5	P9	0	8	1	0	0	1	0
6	P10	0	8	0	1	0	1	0
7	P14	-M	9	1	1	0	1	0
8	P11	0,02	0	1	1	0	-1	0
9	P3	0	0	0	0	1	-1	0
10	P13	0,03	0	1	-1	0	0	0
11			0	0	0	0	1	0
12			-9	-1	-1	0	-1	0

				0	0	0	-1	0
№	Базис	Сб	P0	P1	P2	P3	P4	P5
1	P5	0	5	1	0	0	0	1
2	P6	0	5	-1	0	0	1	0
3	P7	0	5	0	0	0	1	0
4	P8	0	8	0	0	0	1	0
5	P9	0	8	1	0	0	1	0
6	P10	0	8	-1	0	0	2	0
7	P14	-M	9	0	0	0	2	0
8	P2	0	0	1	1	0	-1	0
9	P3	0	0	0	0	1	-1	0
10	P13	0,03	0	2	0	0	-1	0
11			0	0	0	0	1	0
12			-9	0	0	0	-2	0

				0	0	0	-1	0
№	Базис	Сб	P0	P1	P2	P3	P4	P5
1	P5	0	5	1	0	0	0	1
2	P6	0	1	- 1/2	0	0	0	0
3	P7	0	1	1/2	0	0	0	0
4	P8	0	4	1/2	0	0	0	0
5	P9	0	4	1*1/2	0	0	0	0
6	P4	-1	4	- 1/2	0	0	1	0
7	P14	-M	1	1	0	0	0	0
8	P2	0	4	1/2	1	0	0	0
9	P3	0	4	- 1/2	0	1	0	0
10	P13	0,03	4	1	0	0	0	0
11			-4	1/2	0	0	0	0
12			-1	-1	0	0	0	0

				0	0	0	-1	0
№	Базис	Сб	P0	P1	P2	P3	P4	P5
1	P5	0	4	0	0	0	0	1
2	P6	0	1*1/2	0	0	0	0	0
3	P7	0	1/2	0	0	0	0	0
4	P8	0	3*1/2	0	0	0	0	0
5	P9	0	2*1/2	0	0	0	0	0
6	P4	-1	4*1/2	0	0	0	1	0
7	P1	-M	1	1	0	0	0	0
8	P2	0	3*1/2	0	1	0	0	0
9	P3	0	4*1/2	0	0	1	0	0
10	P13	0,03	2*1/2	0	0	0	0	0
11			-4*1/2	0	0	0	0	0
12			0	0	0	0	0	0

$$x_1=1$$

$$x_2=3*1/2$$

$$x_3=4*1/2$$

$$x_4=4*1/2$$

$$F_0=0*1-0*3*1/2-4*1/2-1*4*1/2=-4*1/2$$

$$\Theta_{10}=0,5; \Theta_{11}=1; \Theta_{12}=1.$$

Відсікання

$$\frac{x_{10}}{0.5} + \frac{x_{11}}{1} + \frac{x_{12}}{1} \geq 1$$

$$-\frac{x_{10}}{0.5} - \frac{x_{11}}{1} - \frac{x_{12}}{1} + x_{15} = -1$$

0	0	0	0	0	0	0	0	-M
P6	P7	P8	P9	P10	P11	P12	P13	P14
0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0
0	0	0	1	0	0	0	0	0
0	0	0	0	1	0	0	0	0
0	0	0	0	0	0	0	0	1
0	0	0	0	0	1	0	0	0

0	0	0	0	0	0	1	0	0
0	0	0	0	0	0	0	1	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

0	0	0	0	0	0	0	0	-M
P6	P7	P8	P9	P10	P11	P12	P13	P14
0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
0	1	0	0	0	0	-1	0	0
0	0	1	0	0	0	0	0	0
0	0	0	1	0	0	-1	0	0
0	0	0	0	1	0	-1	0	0
0	0	0	0	0	0	-1	0	1
0	0	0	0	0	1	0	0	0
0	0	0	0	0	0	1	0	0
0	0	0	0	0	0	0	1	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	0	0

0	0	0	0	0	0	0	0	-M
P6	P7	P8	P9	P10	P11	P12	P13	P14
0	0	0	0	0	0	0	0	0
1	0	0	0	0	-1	0	0	0
0	1	0	0	0	0	-1	0	0
0	0	1	0	0	-1	0	0	0
0	0	0	1	0	0	-1	0	0
0	0	0	0	1	-1	-1	0	0
0	0	0	0	0	-1	-1	0	1
0	0	0	0	0	1	0	0	0
0	0	0	0	0	0	1	0	0
0	0	0	0	0	1	0	1	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	1	1	0	0

0	0	0	0	0	0	0	0	-M
P6	P7	P8	P9	P10	P11	P12	P13	P14
0	0	0	0	0	0	0	0	0
1	0	0	0	- 1/2	- 1/2	1/2	0	0
0	1	0	0	- 1/2	1/2	- 1/2	0	0
0	0	1	0	- 1/2	- 1/2	1/2	0	0
0	0	0	1	- 1/2	1/2	- 1/2	0	0
0	0	0	0	1/2	- 1/2	- 1/2	0	0
0	0	0	0	-1	0	0	0	1
0	0	0	0	1/2	1/2	- 1/2	0	0
0	0	0	0	1/2	- 1/2	1/2	0	0
0	0	0	0	1/2	1/2	- 1/2	1	0
0	0	0	0	- 1/2	1/2	1/2	0	0
0	0	0	0	1	0	0	0	0

Min
-
-
5
-
8
8
9
-

0
-

Min
-
5
-
8
-
8
9
0
-
-

Min
-
5
5
8
8
4
4½
-
-
-
0

Min
5
-
2
8
2*2/3
-
1
8
-
2*2/3

j=10	j=11	j=12
4	-	-
-	-	1
-	1	-
-	-	3
1	2	-
-	-	-
-	-	-
1,50	3	-
-	-	4
0,50	2	-