max F = x1 + x2

x1 + x2 ≥ 2

x1 ≤ 6

-x1 + 2x2 ≤ 8

x1 + 2x2 ≤ 12

x1, x2 ≥ 0

Симплекс метод:

1.Приведем к основному виду:

min (-F) = -x1 -x2

-2 + x1 + x2 = x3

6 - x1 = x4

8 + x1 - 2x2 = x5

12 - x1 - 2x2 = x6

xi ≥ 0 (i=1..6)

Т.к. свободный член при x3 = -2, возьмем за свободные другие переменные, например x5 x6.

min (-F) = -7 – x5/4 + 3x6/4

x1 = 2 + x5/2 –x6/2

x2 = 5 – x5/4 – x6/4

x3 = 5 + x5/4 – 3x6/4

x4 = 4 – x5/2 + x6/2

|  |  |  |  |
| --- | --- | --- | --- |
|  | Св. чл. | x5 | x6 |
| x1 | 2  4 |  |  |
| x2 |  |  |  |
| x3 |  |  |  |
| x4 |  |  |  |
| -F |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Св. чл. | x5 | x6 |
| x1 |  |  |  |
| x2 |  |  |  |
| x3 |  |  |  |
| x4 |  |  |  |
| -F |  |  |  |