ЛПР Семинар 2 ***Симплекс-метод*** **Пример 4** 2019 - 2020

Z(X) = 3x + 4y + z → max

x + 2y + z ≤	**10**	**+ s_1**
2x + y + 2z ≤	**8**	**+ s_2**
x, y, z ≥ 0		

$Z_1(X) = 3x + 4y + z + 0*s_1 + 0*s_2 \rightarrow \max$

$x + 2y + z + s_1 = 10$

$2x + y + 2z + s_2 = 4$

$x, y, z, s_1, s_2 \geq 0$

		3	4	1	0	0						
b.c.	b.v.	x	y↓	z	s_1	s_2	BFS	Θ_{1x}	Θ_{1y}	Θ_{1z}		
0	←s_1	1	2	1	1	0	10	10	5	10	ΔZ_{1x}=-(-3)·4 =	**12**
0	s_2	2	1	2	0	1	8	4	8	4	ΔZ_{1y}=-(-3)·5 =	**20**
	Δ_j	***-3***	***-4***	***-1***	***0***	***0***	***0***	Θ_{1x}			ΔZ_{1z}=-(-1)·4 =	4
4	y	0,5	1	0,5	0,5	0	**5**	10				
0	s_2	1,5	0	1,5	-0,5	1	**3**	2			ΔZ_{1x}=-(-1)·2 =	**2**
	Δ_j	-1	0	1	2	0	***20***					
4	y	0	1	0	2/3	- 1/3	4					
3	x	1	0	1	- 1/3	2/3	2					
	Δ_j	0	0	2	1 2/3	2/3	***22***					

BFS $_1$ **(0; 0; 0; 10; 8)**

BFS $_2$ **(0; 5; 0; 3; 0)**

BFS $_3$ **(2; 4; 0; 0; 0)**

X_1^* = (2; 4; 0; 0; 0)

X* = **(2; 4; 0)** **Z* =** **Z_1^* =** **22**