TP4

gar

- Find the optimal solution of the following transportation problem

	D_1	D_2	D_3	D_4	Supply
S_1	1	5	3	3	34
S_2	3	3	1	2	15
S_3	0	2	2	3	12
S_4	2	7	2	4	19
Demand	21	25	17	17	

Iteration 0

- Find the initial BFS
- Fill in u_i, v_j and $c_{ij} - u_i - v_j$

	D_1		D_2		D_3		D_4		Supply	u_i
S_1	1	(21)	5	(13)	3	0	3	-2	34	0
S_2	3	4	3	(12)	1	(3)	2	-1	15	-2
S_3	0	0	2	-2	2	(12)	3	-1	12	-1
S_4	2	2	7	3	2	(2)	4	(17)	19	-1
Demand	21		25		17		17			
v_j	1		5		3		5			

Iteration 0

	D_1		D_2		D_3		D_4		Supply	u_i
S_1	1	(21)	5	(13)	3	0	3	-2	34	0
S_2	3	4	3	- (12)	1	+ (3)	2	-1	15	-2
S_3	0	0	2	[+] −2	2	- (12)	3	-1	12	-1
S_4	2	2	7	3	2	(2)	4	(17)	19	-1
Demand	21		25		17		17			
v_j	1		5		3		5			

Iteration 1

	D_1		D_2		D_3		D_4		Supply	u_i
S_1	1	(21)	5	(13)	3	0	3	-2	34	0
S_2	3	4	3	(0)	1	(15)	2	-1	15	-2
S_3	0	2	2	(12)	2	2	3	1	12	-3
S_4	2	2	7	3	2	(2)	4	(17)	19	-1
Demand	21		25		17		17			
v_j	1		5		3		5			

Iteration 1

	D_1		D_2		D_3		D_4		Supply	u_i
S_1	1	(21)	5	(13)	3	0	3	−2	34	0
S_2	3	4	3	(0)	1	(15)	2	-1	15	-2
S_3	0	2	2	(12)	2	2	3	1	12	-3
S_4	2	2	7	3	2	(2)	4	(17)	19	-1
Demand	21		25		17		17			
v_j	1		5		3		5			

Iteration 2

	D_1		D_2		D_3		D_4		Supply	u_i
S_1	1	(21)	5	2	3	2	3	(13)	34	0
S_2	3	2	3	(13)	1	(2)	2	-1	15	0
S_3	0	0	2	(12)	2	2	3	1	12	-1
S_4	2	0	7	3	2	(15)	4	(4)	19	1
Demand	21		25		17		17			
v_j	1		3		1		3			

Iteration 2

	D_1	D_2	D_3	D_4	Supply	u_i
S_1	1 (21)	5 2	3 2	3 (13)	34	0
S_2	3 2	3 (13)	1 (2)	2 $\boxplus$ -1	15	0
S_3	0 0	2 (12)	2 2	3 1	12	-1
S_4	2 0	7 3	2 (15)	4 (4)	19	1
Demand	21	25	17	17		
v_j	1	3	1	3		

Iteration 3

	D_1	D_2	D_3	D_4	Supply	u_i
S_1	1 (21)	5 1	3 2	3 (13)	34	0
S_2	3 3	3 (13)	1 1	2 (2)	15	-1
S_3	0 1	2 (12)	2 3	3 2	12	-2
S_4	2 0	7 2	2 (17)	4 (2)	19	1
Demand	21	25	17	17		
v_j	1	4	1	3		