Digital Assignment-2

Optimisation Techniques

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1)

Source	A	B	C	Supply	Penalty
1	2	2	3	10	1
2	4	1	2	15	1
3	1	3	1 [30]	~~40~~ 10	2
Demand	20	15	~~30~~ 0		
Penalty →	1	1	1		

Source	A	B	Supply	Penalty
1	2	2	10	0
2	4	1 [15]	~~15~~ 0	3
3	1	3	10	2
Demand	20	~~15~~ 0		
penalty →	1	1		

	A	Supply
1	2 [10]	~~10~~
3	1 [10]	~~10~~
Demand	~~20~~	

Final Table

	A	B	C	Supply
1	2 [10]	2	3	10
2	4	1 [15]	2	15
3	1 [10]	3	1 [30]	40
Demand	20	15	30	

∴ Total Transportation cost:

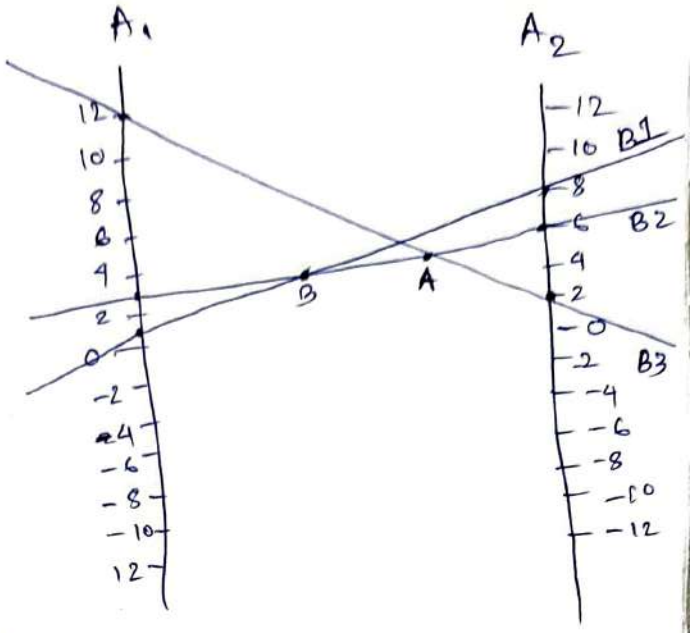
→ 2×10 + 15 + 30 + 10

→ 20 + 15 + 40

→ 75

2)

	B1	B2	B3
A1	1	3	12
A2	8	6	2



A point ~~B~~ is higher than the B point, & A is intersection of B2 & B3, so these are feasible ones.

∴

	B_2	B_3
A_1	3	12
A_2	6	2
	10	3
	↓	↓
	$10/13$	$3/13$

4 → 4/13

9 → 9/13

∴ optimal strategy of A is $(4/13, 9/13)$

" " B is $(0, 10/13, 3/13)$

value of the game is: $\left[\frac{12}{13} + \frac{54}{13}\right]$

$\rightarrow \frac{66}{13}$