

3/8/21

VAM METHOD

	A	B	C	
D	5	4	3	100
E	8	7	3	300
F	9	7	3	300
	300	200	200	700

Step 1. Find the difference between second lowest & lowest in the row & column

1 st Row $\rightarrow 4 - 3 = 1$	1 st Column $8 - 5 = 3$
2 nd Row $\rightarrow 4 - 3 = 1$	2 nd $4 - 4 = 0$
3 rd Row $\rightarrow 7 - 5 = 2$	3 rd $3 - 3 = 0$

Step 2. Select that row or column which has highest difference

Step 3. Allocate as many units to the least cost cell of chosen column

Step 4. Recalculate the differences by eliminating the exhausted row

Special Cases

1. Unbalanced transportation problem - If demand is greater than supply then add dummy column with 200 demand

900

700

If demand is less than supply then add dummy factory row

2. Normally all transportation is minimisation but if there is maximisation problem in that case, select largest cost value from the matrix & subtract all the cost values from largest.
 3. Prohibited Route $\rightarrow$ Replace the cost value with ~~capital~~ (M) for prohibited cell where M is large number.
 4. Degeneracy $\rightarrow$ If the number of occupied cells are less than $R+C-1$ then it is case of degeneracy.
- How to resolve degeneracy $\rightarrow$ To resolve degeneracy by allocating 0 quantity to any of the vacant cell & treating it occupied cell.

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