TP - Initial solution

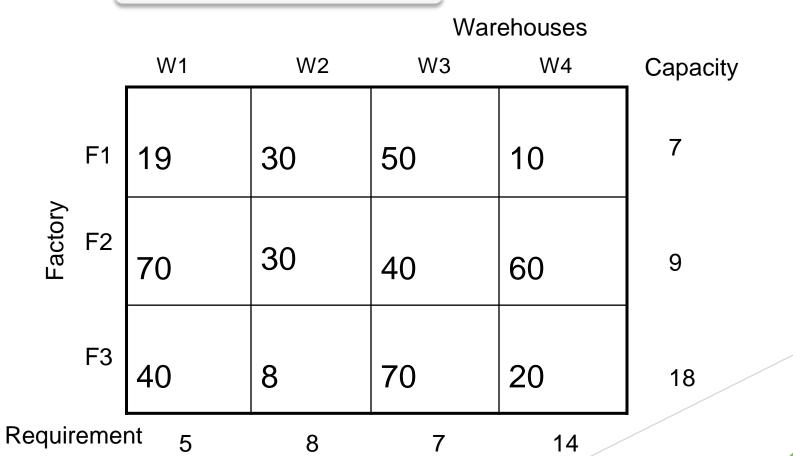
Methods to determine Initial Basic Feasible Solution (IBFS)

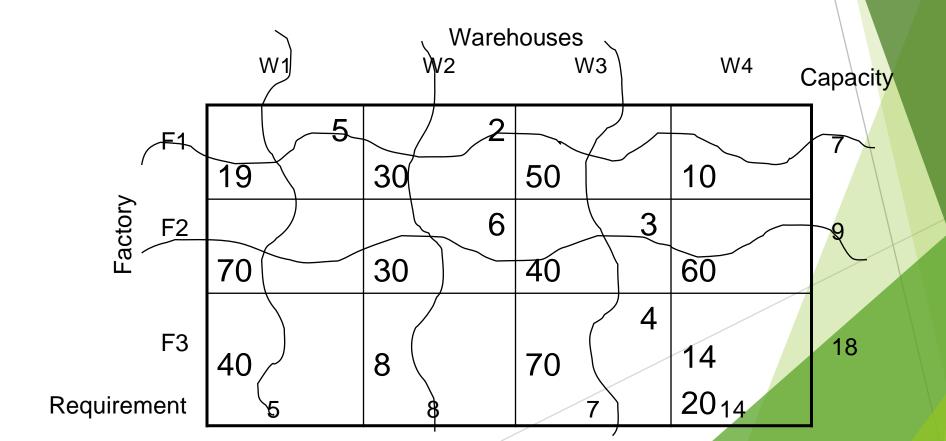
- North West corner rule (NWC)
- Row minima method
- Column minima method
- Matrix minima method (Least Cost Method LCM)
- Vogel's approximation method (VAM)

NORTH - WEST CORNER RULE

- Step1:Identify the cell at North-West corner of the transportation matrix.
- Step2:Allocate as many units as possible to that cell without exceeding supply or demand; then cross out the row or column that is exhausted by this assignment
- Step3:Reduce the amount of corresponding supply or demand which is more by allocated amount.
- Step4:Again identify the North-West corner cell of reduced transportation matrix.
- Step5:Repeat Step2 and Step3 until all the rim requirements are satisfied.

North West corner rule



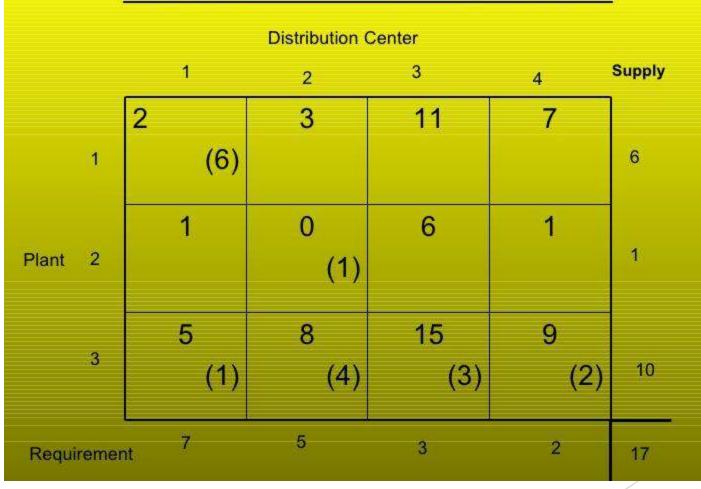


19*5 + 30*2 + 30*6 + 40*3 + 70*4 + 20*14 = 1015

Row Minima Method

 Row minima method consists in allocation as much as possible in the lowest cost cell of the first row so that either the capacity of the first plant is exhausted or the requirement at distribution centre is satisfied or both.

ROW MINIMA METHOD



2*6 + 0*1 + 5*1 + 8*4 + 15*3 + 9*2 = 112

Column Minima Method

 Column Minima Method consist in allocating as much as possible in the lowest cost cell of the first column so that either the demand of the first distribution centre is satisfied or the capacity of the plant is exhausted or both.

Column Minima

Requirement Method
Soll: Init Method

10/	13	5(10)	100
16	7(m)	13(1)	12 X0
8(6)	22	3(2)	820
C	14	12	

Requirement & It 13

8*6 + 7*11 + 6*10 + 13*1 + 2*2 = 202

Least Cost Method or Matrix Minima Method

Step 1. select the cell with the lowest transportation cost among all the rows or columns of the transportation table. If the minimum cost is not unique then select arbitrarily any cell with the lowest cost.

Step2. Allocate as many units as possible to the cell determined in step1 and eliminate that row in which either capacity or requirement is exhausted.

Least Cost Method or Matrix Minima Method

To Source	D	E	F	Supply
Α	5	8 50	4	50
В	6	6 5	35	40
С	3 20	940	6	60
Demand	20	95	35	150

3*20 + 8*50 + 6*5 + 9*40 + 3*35 = 955