

Ans 3 Vogel's approximation method

The North west corner Method (NWCN) generally does not yield optimal solution since it does not take into consideration cell costs. The least cost method (LCM) although provides better solutions by allocation as many units as possible to the lowest and so on but it has drawbacks, sometimes we are forced to use one of the highest cost cells. Towards the end of initial allocation. VAM method overcomes the deficiency of the least cost method by avoiding high penalties as well as high cost cells in the initial allocations.

Basic steps in the VAM method as follows

STEP-1 calculate difference b/w two minimum

elements of each row and each column

Step \rightarrow 2 select the row or the column with largest difference

Step \rightarrow 3 Allocate maximum no. of units to the square with the minimum cost in the selected row/column

Step \rightarrow 4 Cross out the row/column so completed by assignment

Step \rightarrow 5 : To determine row and column difference for each ~~row~~ row and each column except the completed rows and columns ignoring the crossed out "water squares" and "stone square"

Step \rightarrow 6 Repeat Step 2 to 5 ~~units~~ until all assignment.