

Test case #1:

$$S = \begin{bmatrix} 2 \\ 6 \\ 7 \end{bmatrix}, D = \begin{bmatrix} 3 \\ 3 \\ 4 \\ 5 \end{bmatrix}, C = \begin{bmatrix} 13 & 11 & 15 & 40 \\ 17 & 14 & 12 & 13 \\ 18 & 18 & 15 & 12 \end{bmatrix}$$

Output:

===== INPUT TABLE =====						
*	1	2	3	4	Supply	
1	13	11	15	40	2	
2	17	14	12	13	6	
3	18	18	15	12	7	
Demand	3	3	4	5	*	

North West Corner Method result:

[2, 0, 0, 0]

[1, 3, 2, 0]

[0, 0, 2, 5]

North West Corner Method | Initial Feasible Solution: 199

Russell's Method result:

[0, 2, 0, 0]

[1, 1, 4, 0]

[2, 0, 0, 5]

Russell's Method | Initial Feasible Solution: 197

Vogel's Method result:

[2, 0, 0, 0]

[0, 3, 3, 0]

[1, 0, 1, 5]

Vogel's Method | Initial Feasible Solution: 197

Test case #2:

$$S = \begin{bmatrix} 80 \\ 40 \\ 20 \\ 50 \end{bmatrix}, D = \begin{bmatrix} 50 \\ 70 \\ 70 \end{bmatrix}, C = \begin{bmatrix} 9 & 6 & 1 \\ 9 & 8 & 2 \\ 4 & 7 & 3 \\ 7 & 8 & 8 \end{bmatrix}$$

Output:

```
===== INPUT TABLE =====
*   | 1   | 2   | 3   | Supply |
-----
1   | 9   | 6   | 1   | 80   |
-----
2   | 9   | 8   | 2   | 40   |
-----
3   | 4   | 7   | 3   | 20   |
-----
4   | 7   | 8   | 8   | 50   |
-----
Demand | 50  | 70  | 70  | *   |
-----

North West Corner Method result:
[50, 30, 0]
[0, 40, 0]
[0, 0, 20]
[0, 0, 50]
North West Corner Method | Initial Feasible Solution: 1410

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Russell's Method result:
[0, 10, 70]
[0, 40, 0]
[20, 0, 0]
[30, 20, 0]
Russell's Method | Initial Feasible Solution: 900

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Vogel's Method result:
[0, 50, 30]
[0, 0, 40]
[20, 0, 0]
[30, 20, 0]
Vogel's Method | Initial Feasible Solution: 860

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Process finished with exit code 0
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Test case #3:

$$S = \begin{bmatrix} 20 \\ 40 \\ 30 \\ 20 \end{bmatrix}, D = \begin{bmatrix} 30 \\ 30 \\ 40 \\ 10 \end{bmatrix}, C = \begin{bmatrix} 4 & 2 & 8 & 6 \\ 6 & 7 & 9 & 2 \\ 7 & 1 & 4 & 1 \\ 8 & 9 & 3 & 5 \end{bmatrix}$$

Output:

```
===== INPUT TABLE =====
* | 1 | 2 | 3 | 4 | Supply |
-----
1 | 4 | 2 | 8 | 6 | 20 |
-----
2 | 6 | 7 | 9 | 2 | 40 |
-----
3 | 7 | 1 | 4 | 1 | 30 |
-----
4 | 8 | 9 | 3 | 5 | 20 |
-----
Demand | 30 | 30 | 40 | 10 | * |
-----

North West Corner Method result:
[20, 0, 0, 0]
[10, 30, 0, 0]
[0, 0, 30, 0]
[0, 0, 10, 10]
North West Corner Method | Initial Feasible Solution: 550

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Russell's Method result:
[0, 20, 0, 0]
[30, 0, 0, 10]
[0, 10, 20, 0]
[0, 0, 20, 0]
Russell's Method | Initial Feasible Solution: 390

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Vogel's Method result:
[0, 20, 0, 0]
[30, 0, 0, 10]
[0, 10, 20, 0]
[0, 0, 20, 0]
Vogel's Method | Initial Feasible Solution: 390

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