**North West Method**

**Transportation Problem**

Destination

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **D1** | **D2** | **D3** | **D4** | **Supply** |
| **S1** | 3 | 1 | 7 | 4 | **300** |
| S2 | 2 | 6 | 5 | 9 | **400** |
| S3 | 8 | 3 | 3 | 2 | **500** |
| **Demand** | **250** | **350** | **400** | **200** | **1200** |

Sources

: - Balanced Transportation Problem: Demand == Supply

Destination

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **D1** | **D2** | **D3** | **D4** | **Supply** |
| **S1** | 250 3 | 50  1 | 7 | 4 | **~~300~~ ~~50~~**  **0** |
| S2 | 2 | 300  6 | 100  5 | 9 | **~~400~~**  **~~100~~**  **0** |
| S3 | 8 | 3 | 300  3 | 200  2 | **~~500~~**  **~~200~~**  **0** |
| **Demand** | **~~250~~**  **0** | **~~350~~**  **~~300~~**  **0** | **~~400~~**  **~~300~~**  **0** | **~~200~~**  **0** | **1200** |

Sources

Initial Basic Feasible Solution of given transportation problem is:

X11 = 250, X12 =50, X22= 300, X23= 100, X33= 300, X34= 200

And the minimum transportation cost is equal

= (250\*3)+ (50\*1)+ (300\* 6)+ (100\*5)+ (300\*3) + (200\*2)

=4400 Rs

**Least Cost Method**

**Transportation Problem**

Destination

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **D1** | **D2** | **D3** | **D4** | **Supply** |
| **S1** | 3 | 1 | 7 | 4 | **300** |
| S2 | 2 | 6 | 5 | 9 | **400** |
| S3 | 8 | 3 | 3 | 2 | **500** |
| **Demand** | **250** | **350** | **400** | **200** | **1200** |

Sources

: - Balanced Transportation Problem: Demand == Supply

Destination

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **D1** | **D2** | **D3** | **D4** | **Supply** |
| **S1** | 3 | 300  1 | 7 | 4 | **~~300~~**  **0** |
| **S2** | 250  2 | 50  6 | 100  5 | 9 | **~~400~~**  **~~150~~**  **~~50~~**  **0** |
| **S3** | 8 | 3 | 300  3 | 200  2 | **~~500~~**  **~~300~~**  **0** |
| **Demand** | **~~250~~**  **0** | **~~350~~**  **~~50~~**  **0** | **~~400~~**  **~~100~~**  **0** | **~~200~~**  **0** | **1200** |

Sources

Initial Basic Feasible Solution of given transportation problem is:

X12 = 300, X21 =250, X22= 50, X23= 100, X33= 300, X34= 200

And the minimum transportation cost is equal

= (300\*1)+ (250\*2)+ (50\* 6)+ (100\*5)+ (300\*3) + (200\*2)

=2900 Rs