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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pager Distribution Transportation Model** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **Solver Parameters**Set Target Cell: **B19**Equal To: **Min**By Changing Cells : **B13:F15**Subject to the Constraints:**B13:F15 >= 0****B16:F16 = B17:F17****G13:G15 <= H13:H15**Options: **Assume Linear Model** |
| **Costs (in $100 per 1,000 units)** |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | **Warehouse** |  |  |  |  |  |  |  |  |  |  |
| Plant | CA | TX | MI | NC | PA |  |  |  |  |  |  |  |  |  |
| SW | 10 | 8 | 13 | 16 | 18 |  |  |  |  |  |  |  |  |  |
| MW | 12 | 7 | 6 | 9 | 9 |  |  |  |  |  |  |  |  |  |
| SE | 17 | 12 | 10 | 5 | 9 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Shipments** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | **Warehouse** |  |  |  |  |  |  |  |  |  |  |
| Plant | CA | TX | MI | NC | PA | **Shipped** | **Available** |  |  |  |  |  |  |
| SW | 0 | 0 | 0 | 0 | 0 | 0 | 100 |  |  |  |  |  |  |  |
| MW | 0 | 0 | 0 | 0 | 0 | 0 | 150 |  |  |  |  |  |  |  |
| SE | 0 | 0 | 0 | 0 | 0 | 0 | 150 |  |  |  |  |  |  |  |  |  |  |  |
| **Shipped:** | 0 | 0 | 0 | 0 | 0 | 0 | 400 |  |  |  |  |  |  |  |  |  |  |  |
| **Required:** | 70 | 40 | 50 | 70 | 90 | 320 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Total Cost:** | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| The company produces pagers at three plants in the Southwest (SW), Midwest (MW), and Southeast (SE). The SW plant has a capacity of 100,000 units per month, while each of the other two plants has a capacity of 150,000 units per month.The products are distributed nationally through warehouses in California, which has a monthly demand of 70,000 units,Texas (40,000), Michigan (50,000), North Carolina (70,000), and Pennsylvania (90,000). The cost (in $100) of shipping 1,000 units from each plant to each warehouse is shown in the spreadsheet. Use Solver to determine the optimal distribution pattern for pagers at the company.

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