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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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