

Text Section 2.4 Moving Mobile Homes Example

	A	B	C	D	E	F	G
1			Destination				
2	Origin	Center 1	Center 2	Center 3	Supply		
3	Factory 1	70	70	60	15		
4	Factory 2	80	60	80	10		
5	Demand	6	9	10			
6							
7							
8	Model						
9		Min Cost	0				
10							
11			Destination				
12	Origin	Center 1	Center 2	Center 3	Total		
13	Factory 1	0	0	0	0	=	15
14	Factory 2	0	0	0	0	=	10
15	Total	0	0	0			
16		=	=	=			
17		6	9	10			

Cells B13:D14 are for our decision variables.

The formula =SUMPRODUCT(B3:D4,B13:D14) is placed in cell C9 to compute the value of the cost function.

Cells E13:E14 contain the left-hand sides for the supply constraints.

Cells B15:D15 contain the left-hand sides for the demand constraints.

Cell E13 = SUM(B13:D13) Copy to Cell E14

Cell B15 = SUM(B13:B14) Copy to Cells C15 and D15

Cells G13:G14 contain the right-hand sides for the supply constraints.

Cells B17:D17 contain the right-hand sides for the demand constraints.

Cell G13 = E3 Copy to Cell G14

Cell B17 = B5 Copy to Cells C17 and D17

Excel Solution

Select **Solver** from the **Tools** menu, entering the proper values into the **Solver Parameters** dialog box as shown on next page. Specify the option **Assume Non-Negative**. Then click **Solve**.

Solver Parameters

Set Target Cell:

Equal To: Max Min Value of:

By Changing Cells:

Subject to the Constraints:

\$B\$15:\$D\$15 = \$B\$17:\$D\$17

\$E\$13:\$E\$14 = \$G\$13:\$G\$14

Excel produces the solution below.

	A	B	C	D	E	F	G
1			Destination				
2	Origin	Center 1	Center 2	Center 3	Supply		
3	Factory 1	70	70	60	15		
4	Factory 2	80	60	80	10		
5	Demand	6	9	10			
6							
7							
8	Model						
9		Min Cost	1570				
10							
11			Destination				
12	Origin	Center 1	Center 2	Center 3	Total		
13	Factory 1	5	0	10	15	=	15
14	Factory 2	1	9	0	10	=	10
15	Total	6	9	10			
16		=	=	=			
17		6	9	10			