Transportation Problem
DSA/ISE 5113

A mobile-home manufacturer in Indiana channels its mobile-home units through distribution centers located in Elkhart, Ind., Albany, N.Y., Camden, N.J., and Petersburg, Va.

An examination of their shipping department records indicates that, in the upcoming quarter, the distribution centers will have in inventory 30, 75, 60, and 35 mobile homes, respectively.

Quarterly orders submitted by dealerships serviced by the distribution centers require the following mobile home units for the next quarter:

Dealer	A	B	C	D	E	F
Units	25	40	15	25	50	45

Transportation costs (in dollars per unit) between each distribution center and the dealerships are provided in the following table:

	A	B	C	D	E	F
Elkhart	75	65	175	90	110	150
Albany	90	30	45	50	105	130
Camden	40	55	35	80	70	75
Petersburg	95	150	100	115	55	55

Determine the most cost effective way in how the manufacturing should its inventory to meet the demand at the dealerships.