

Modeling Activity Transportation Problem (2019)

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Suppose there are bakeries which can supply breads to stores that are part of a supermarket chain. There are three bakeries I, II, and III and three stores 1, 2, 3. The bakeries can produce 8, 1, and 2 breads respectively, while the stores require 3, 7, and 1 bread respectively. (The numbers are given in dozens of breads available for sale per day but shipments must be in whole numbers of dozens of breads.)

There is a different cost (costs are given in cents per dozen breads) for shipping from each bakery to each store as shown in the table below:

	Stores	1	2	3
Bakeries				
I		8	9	3
II		15	1	12
III		1	3	5

How can the supplies at the bakeries be used to meet the demands so that the breads that are supplied can be shipped in a way such that total shipping cost is as small as possible?

Where might you use this example in one of your classes?