Assignment Instructions: Module 6 - The Transportation Model

Purpose

The purpose of this assignment is to formulate and solve a transportation / transhipment problem. In addition, this will help you master the following module outcomes:

- Formulate a transportation problem.
- Solve a transportation problem.

Directions

Heart Start produces automated external defibrillators (AEDs) in each of two different plants (A and B). The unit production costs and monthly production capacity of the two plants are indicated in the table below. The AEDs are sold through three wholesalers. The shipping cost from each plant to the warehouse of each wholesaler along with the monthly demand from each wholesaler are also indicated in the table. How many AEDs should be produced in each plant, and how should they be distributed to each of the three wholesaler warehouses so as to minimize the combined cost of production and shipping?

	Unit Shipping Cost			*Unit*	*Monthly*
	Warehouse 1	*Warehouse 2*	*Warehouse 3*	*Production Cost*	*Production Capacity*
Plant A	*$22*	*$14*	*$30*	*$600*	*100*
Plant B	*$16*	*$20*	*$24*	*$625*	*120*
Monthly Demand	*80*	*60*	*70*		

Formulate and solve this transportation problem.

Requirements

All due dates are included in the Assignment Schedule.

General Submission Instructions

All work must be your own. Copying other people's work or from the Internet is a form of plagiarism and will be prosecuted as such.

1. Upload an R markdown file, along with any required .lp files to your git repository. Name your file Username_#.ext, where Username is your Kent State User ID (the part before @), and # is the Assignment number.
2. Note that the R markdown file allows you to add text, comments, and output as part of the file. So, all documentation should be part of the file. You can read about the R markdown file syntax here, or download the cheat sheet directly.

Provide the link to your git repository for the assignment.