

Advanced Placement Human Geography

NAME:

Applying Weber's Industrial Location Theory

In this activity you will apply the basic principles of Weber's Location Theory to determine the best location for an industrial processing plant. The activity focuses on the transportation costs involved in delivering raw materials to the factory and the finished product to the market. Factors other than transportation may also be taken into account, but only after the basic cost analysis has been performed.

Use the diagram and the information below to complete the location cost charts.

- a) Complete Chart 1 by calculating the transport cost at each *isotim* (circular lines drawn at one-mile intervals) for Resource 1, Resource 2, and the Market.
- b) Complete Chart 2 by calculating the total transport cost at each of the twelve potential plant locations.
- c) Based on your transport cost calculations, which site is most cost effective for locating an industrial processing plant?
- d) Is the industry bulk gaining or bulk reducing? Explain
- e) Identify and briefly justify 4 additional factors that might result in the developer's decision to locate the new processing plant at site 8 instead.

Material Quantities and Transport Rates

Location	Symbol	Amount Shipped	Transport Rate
Raw Material #1	R1	6 Tons	\$5/ton-mile
Raw Material #2	R2	7 Tons	\$5/ton-mile
Market	M	10 Tons	\$7/ton-mile

Adapted from: <http://geog.tamu.edu/bednarz/WeberArabic.pdf>

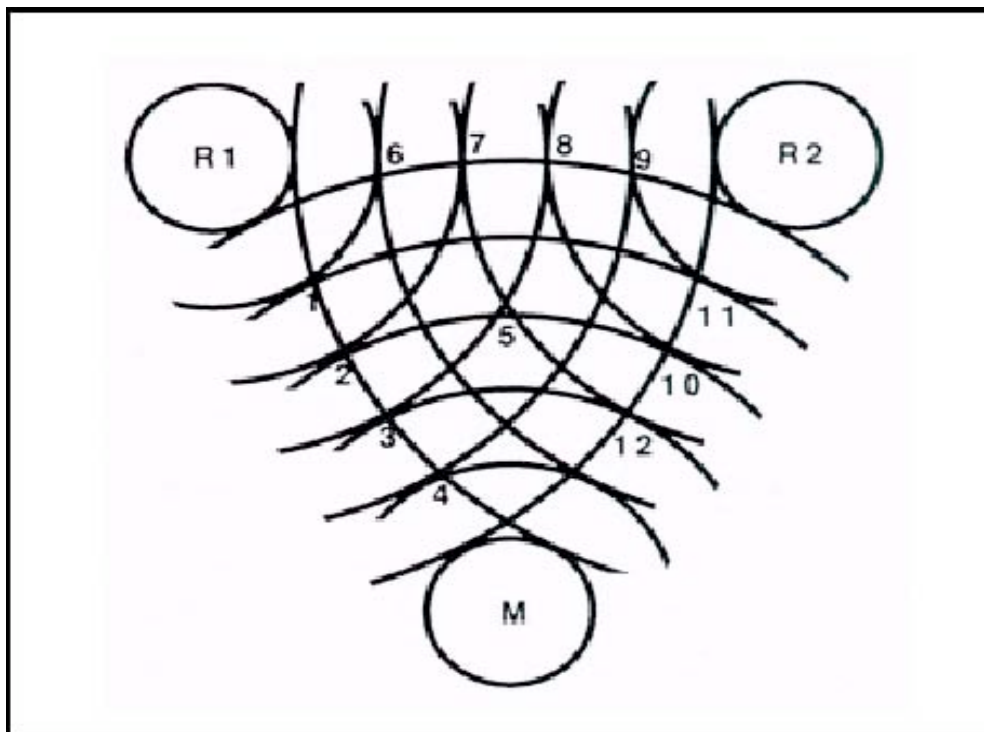


CHART 1: Transport Costs for Raw Materials or Finished Product/Mile

	Mile 1	Mile 2	Mile 3	Mile 4	Mile 5
R1					
R2					
M					

CHART 2: Total Transport Costs for Each Proposed Plant Site

Site	R1	R2	M	Total Cost
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				