Class Activities

# Module B: The Transportation Models

**Activity 1:** **Activity for Small Groups**

Learning objective: Formulate and solve the transportation problems using both manual methods and the Excel Solver and interpret the solutions

Provide students with a problem similar to Example B.1. Have students work in pairs and assign each pair either the northwest corner rule or the matrix least cost method. Have each pair set up a transportation table (similar to Figure B.2) and use the assigned rule/method to obtain an initial basic feasible solution. Compute the total transportation costs of the initial solution. Select several students to resent the work of the pair to the rest of the class. Come back together as a whole class to find an optimal solution and its costs using the stepping stone method.

**Activity 2: Individual Exercise**

Learning objective: Formulate and solve the transportation problems using both manual methods and the Excel Solver and interpret the solutions

Provide students with a problem similar to Example B.1. Have students solve the problem on excel. Keep track of the steps used in solving the problem either in writing or as a video recording. Turn in the writing or video at the beginning of class. Select several students’ work to present to the whole class.

**Activity 3:** **Individual Exercise**

Learning objective: Apply transportation modeling to other situations

Have students find a real life situation that can be modeled as a transportation problem. Describe the situation and how it should be modeled and solved. Discuss the assumptions and limitations of the transportation modeling. Be prepared to share the work with the rest of the class.