

**CS 451**  
**Activity 32**

**Name:**

1. Game Theory: In Information Warfare, we want to maximize a propagation delay of the enemy's communication path by blocking some communication links. Unfortunately, due to our limited capability at this moment, we can block only one road leading out of City A and one road leading out of City N. They will not know which roads have been blocked until they try to use the blocked link at City A or City N. Which links should we block to maximize the propagation delay of the communication from City Y to City D? Propagation delay will increase in proportion to the distance. (Note: This problem is based on the problem 3 in page 807 of the textbook.)

| Communication Link | Length of Communication Link (Miles) |
|--------------------|--------------------------------------|
| City Y – City A    | 800                                  |
| City Y – City N    | 900                                  |
| City N – City S    | 400                                  |
| City N – City O    | 200                                  |
| City A – City S    | 300                                  |
| City A – City O    | 600                                  |
| City S – City D    | 500                                  |
| City O – City D    | 300                                  |