

Math 213

Sections 9.5

Form yourselves into groups of three to answer the following questions. Turn in one copy for each group with all the group member's names on it. This worksheet is due Thursday 8/20 by 4:30 pm in my box.

1. Determine if the following networks are traversable:
2. An *odd vertex* is a vertex where there are an odd number of arcs meet. Similarly an *even vertex* is a vertex where an even number of arcs meet. For each of vertex in each of the figures above determine if it is an odd or even vertex.
3. For each of the traversable figures in part 1, how many odd vertices were there?
4. Can you create a traversable network with two odd vertices? Explain why or why not. If it can be built, show an example below.

5. Can you create a traversable network with four odd vertices? Explain why or why not. If it can be built, show an example below.

6. Read the Properties of a Network on page 630 and determine which of the following are traversable.

7. Can a network be built with four vertices where 3 arcs meet at the first vertex, 4 at the second, 4 at the third, and 2 at the last? Explain why or why not. If it can be built, show an example below.