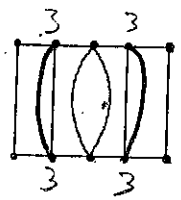
Name _____

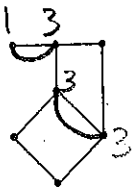
Date _____

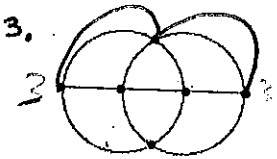
Discrete
WU DAY 5

Use the following to answer questions 1 - 3 .

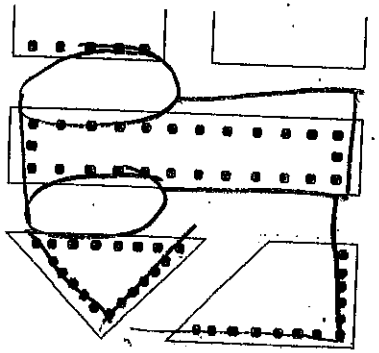
edges to find an efficient Eulerization of the following graphs.

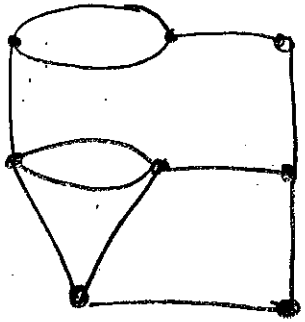
1. 

2. 

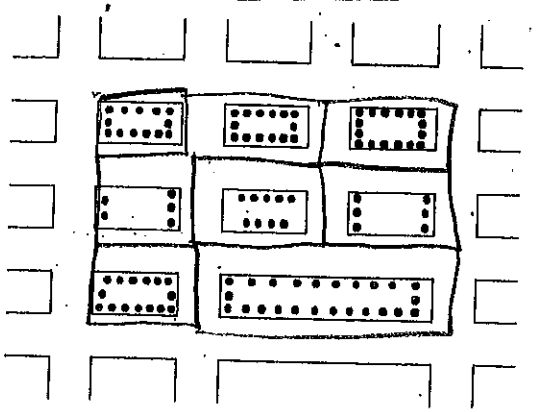
3. 

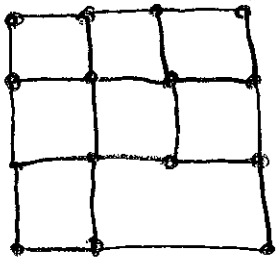
4. The map below gives the territory of a parking control officer. The dots represent meters that must be checked. Draw the graph that would be useful for finding an efficient route.



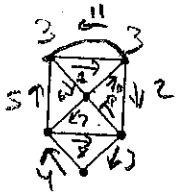


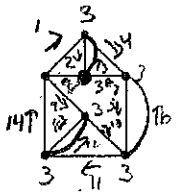
5. For the street network shown below, draw a graph that would be useful for routing a garbage truck. Assume all streets are two-way and that passing once down the street is sufficient for collecting trash from both sides.





Eulerize each graph and then trace the Eulerization.

6. 

7. 

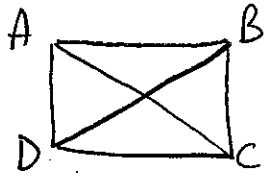
Name _____ Period _____

Date _____ Day _____

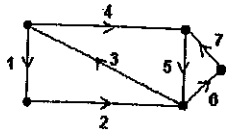
1. On a graph that represents six cities and the roads between them, the valence of vertex A is 4. What does this mean in real-world terms?

Only four cities have a path to to city A.

2. Draw a graph with vertices A, B, C, and D in which the valence of each vertex is 3.



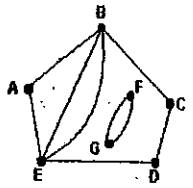
3. Consider the path represented by the sequence of numbered edges on the graph below. Explain why the path is *not* an Euler circuit.



- It doesn't start and Stop at the same vertex

- It has odd valances

4. Explain why the graph shown below does *not* have an Euler circuit.

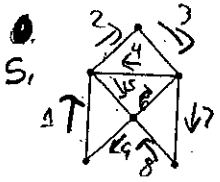


The graph is not connected.

Use the following to answer questions 5 & 6.

Identify an Euler circuit on the following graphs by numbering the sequence of edges in the order traveled.

5.



6.