## Bridges of Königsberg

An Euler path is a route in a graph that visits every edge exactly once. Try to find an Euler path in each of the following graphs.

## Graph 1

Graph 2
Graph 3
Graph 4


Graph 7


For each graph above, record whether you were able to find an Euler path. Then list the degrees of all the vertices. (List them all, repeating numbers, if necessary.) See if you can find a pattern. If so, make a conjecture and try to justify it logically.

| Graph | Euler Path? | List the degrees of all vertices. |
| :---: | :---: | :--- |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |

