MATH F113X: Eulerization

Goals: how to Eulerize a graph; why you would Eulerize a graph; how to put Dijkstra's algorithm together with Euler circuits (worksheet)

1. Given a graph, when can you find:

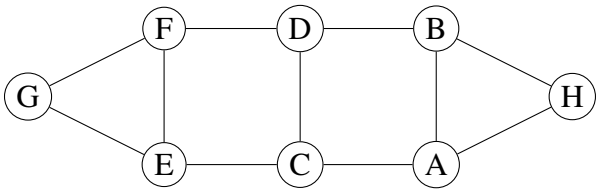
   (a) An Euler circuit?

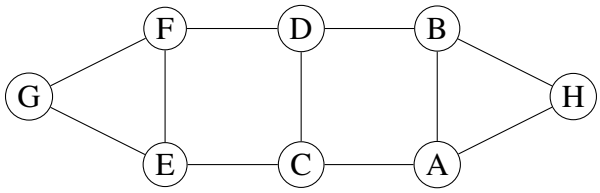
   (b) An Euler path?

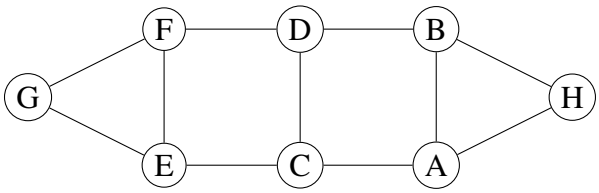
   (c) Neither?

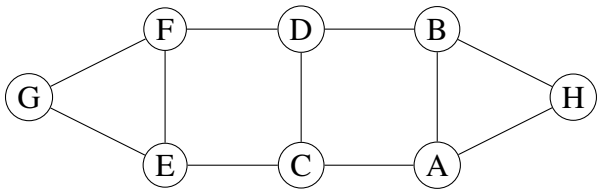
2. Recall problem 5 from Worksheet 12:

   Double some of the edges so that every vertex is even degree. Using your additional edges, find an Euler circuit.

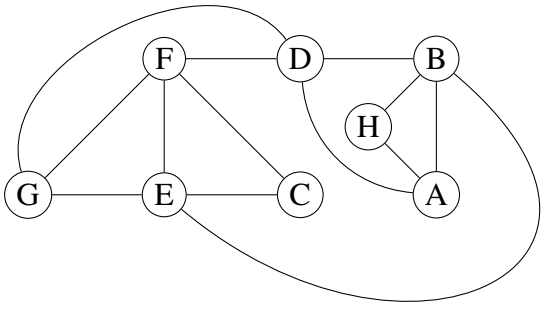


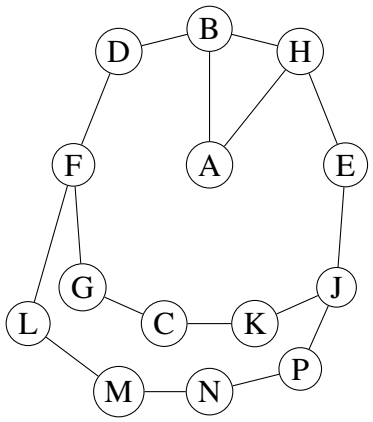






3. Some other examples





4. **Definition:** To **eulerize** a graph G means

5. **Definition:** An **optimal eulerization** means

6. Under what conditions do you think it is *easy* to obtain an optimal eulerization?