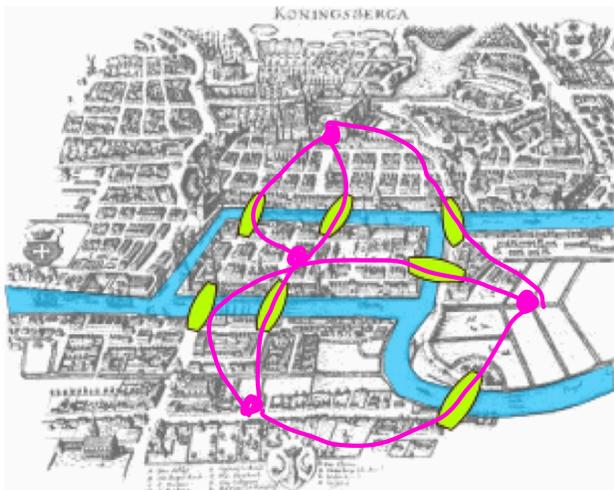


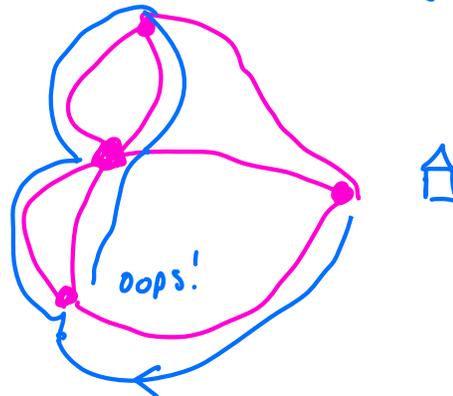
# MATH F113X: Euler Paths and Circuits

**Terminology:** Euler Path (a.k.a Eulerian Path), Euler Circuit (a.k.a. Eulerian circuit)

Konigsberg and Leonhard Euler ["oiler"]



Can we cross each bridge exactly once and get home?

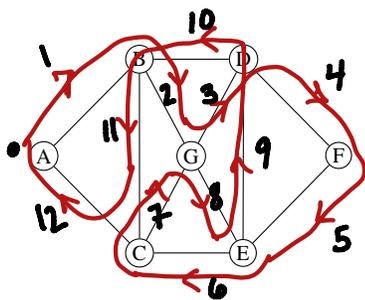


## Euler Path

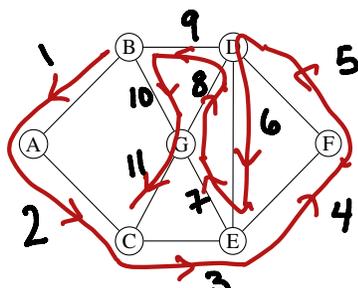
A path in a graph that travels along every edge exactly once

## Euler Circuit

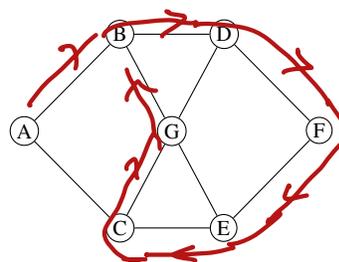
An Euler path that begins and ends at the same vertex



ABGDFEC  
GEDBCA  
Circuit!



oops! No way to get home?  
PATH BACEFDEGDBG-C



oops! Missed edges!  
(This has neither...)

## Applications

Snow plowing, mail delivery...