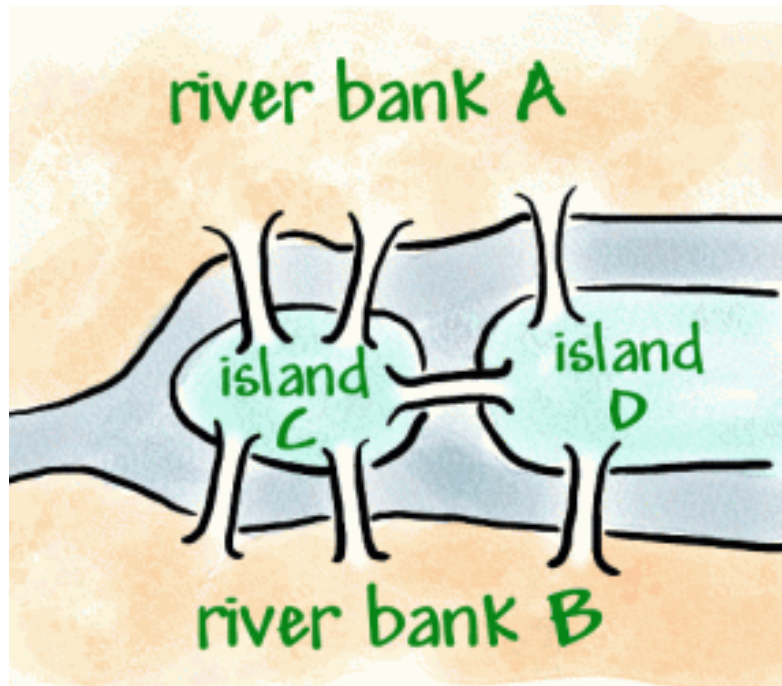


Königsberg Bridge Problem

Task 1

In 1800s, citizens of Königsberg, Prussia, spent Sunday afternoon walking around the town, and trying to cross every bridge *exactly once* before returning home.

- Choose a location for your home on the map.
- Using a pencil (and eraser), try to draw such a walk on the map.



Task 2

Draw the *network* for the Königsberg bridge problem.

Task 3

Suppose the easternmost bridge between A and D, and the middle bridge between B and C, were destroyed.

- Draw the network now.
- Can the citizens now cross every remaining bridge on their walk from home back to home?
- Does it matter where their home is situated?

Task 4

- Draw your *own* network such that it *is* possible to go along every edge exactly once and return to where you started.
- ★ Is there a way to look at a network and *quickly* identify whether this is possible?