

Second Handout:

Try making little changes to the problem and see what happens:

- 1) What happens if you ADD ONE bridge? Can you now find a path that touches all bridges?

If so, does it matter where you start?

- 2) Try (1) but REMOVE ONE bridge.
- 3) Try (1) but ADD ONE bridge, AND REMOVE ANOTHER bridge.
- 4) Try (1) but ADD TWO bridges.
- 5) Try (1) but REMOVE TWO bridges.

Look at the simplest case:

- 6) What if there was just ONE bridge?
- 7) What if there were just TWO bridges?
- 8) List all the possibilities TWO bridges?
- 9) In (8), for which possibilities can you cross both bridges? What do you notice about those possibilities?
- 10) Try (8) and (9) with THREE bridges!

Open Question:

- 11) Is there a way to tell if you can or can't cross all the bridges?