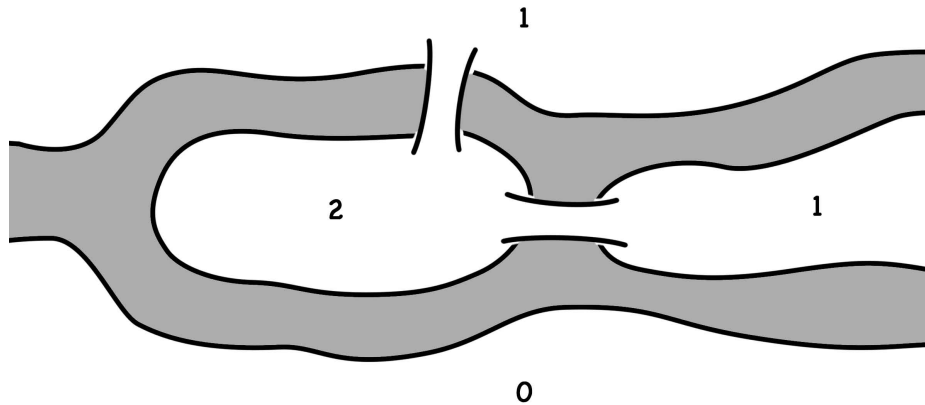


### Third Handout:

- 1) With ONE bridge, how many bridges touch each district?
- 2) With TWO bridges, how many bridges touch each district? For example:



In each case, make a list of the number of bridges touching each district, eg 2,0,1,1.

- 3) Which cases in (2) give situations where all the bridges can be crossed in one path?
- 4) Do you notice anything special about the lists for the situations that work in (3)?
- 5) Try (2) to (4) with THREE bridges.
- 6) Try (2) to (4) with FOUR bridges.
- 7) How many bridges can touch a district that you start or finish in? Use your above examples to check.
- 8) How many bridges can touch a district that you DON'T start or finish in? Use your above examples to check.

If you've got time,

- 9) Try (2) to (4) with FIVE or SIX bridges!