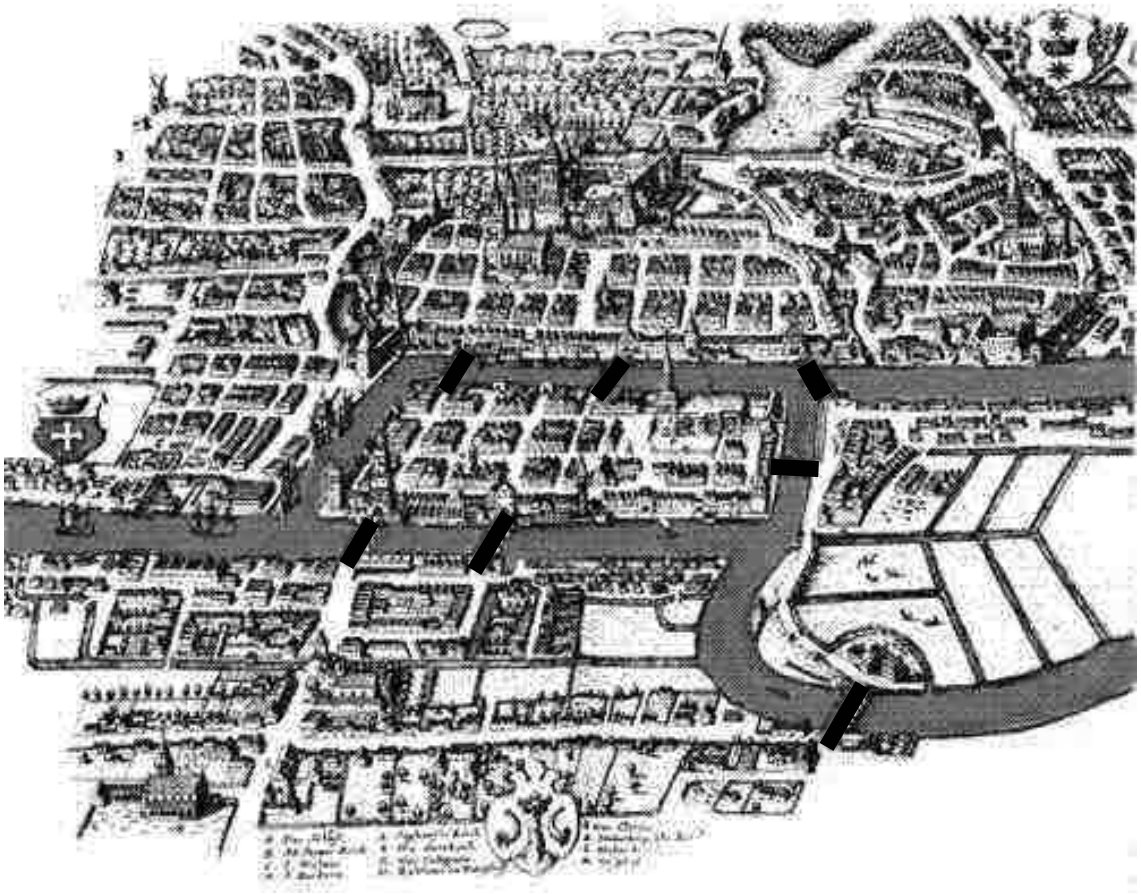
The Bridges of Königsberg

This is a picture of the town of Königsberg.
(It is now called Kalliningrad and is in the Russian Federation – can you find it on a map?).
There is a famous mathematical problem about the town of Königsberg.

This is the problem:
Show how you can walk over all of the bridges.
You must cross each one only once.
Can it be done ?
Draw your route with a white board marker.
If it doesn't work rub it out and try again!

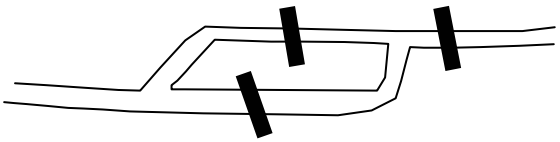


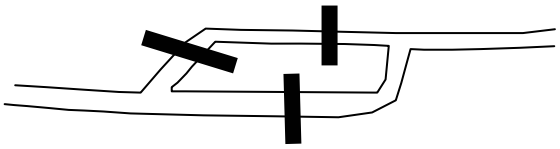
A mathematician called Leonhard Euler first solved the problem mathematically. His ideas led to the development of a branch of mathematics called topology.

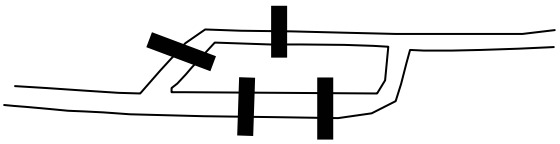
The Maths Zone
© 2012 Chris Olley
Visit: www.themathszone.co.uk

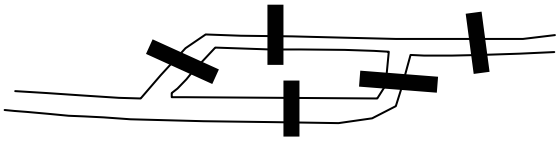
The Bridges of Königsberg: Practice

Try these different sets of bridges.
Can you work out why it is possible to walk over some sets of bridges and impossible to walk over others ?

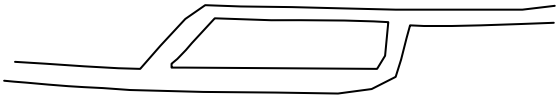


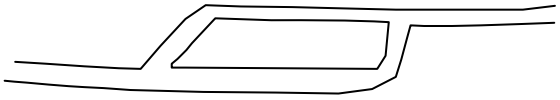




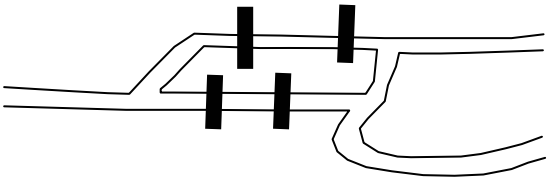


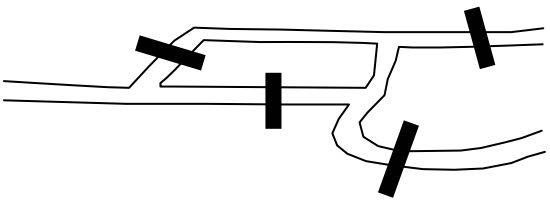
Make up one possible and one impossible set of bridges of your own

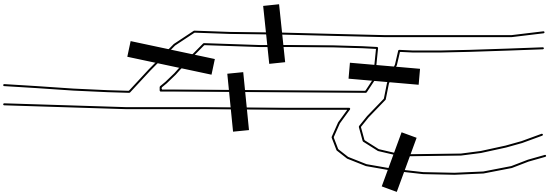


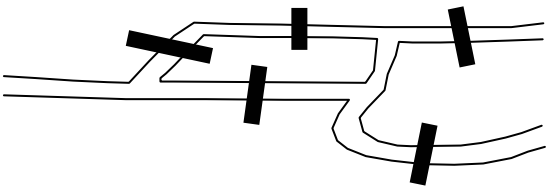
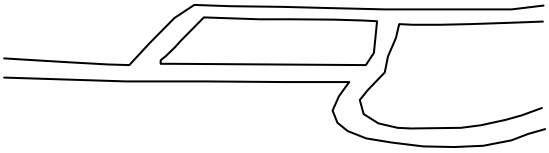
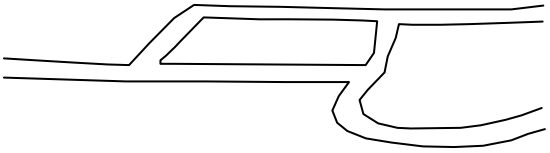


Now try these sets of bridges at Konigsberg









Make up one possible and one impossible set of bridges of your own