A variation of the Königsberg Bridge Problem



The 8th bridge

The blue prince would like to add an 8th bridge to Königsberg, in such a way that he can take a walk starting at his castle, passing exactly once over each of the bridges and ending at the tavern. Where is he going to build the 8th bridge?

The 9th bridge

The red prince now decides to add a 9th bridge, such that he can take a walk that starts at his castle, passes each bridge exactly once and ends at the tavern. At the same time, he wants that the blue prince does not anymore have the possibility to take such a walk. Where is he going to build the 9th bridge?

The 10th bridge

The priest, being unhappy about the dispute between the two princes, finally decides to build a 10th bridge in Königsberg with the goal that all people have the possibility to take a walk starting at their home, passing exactly once over each bridge end finishing again at their home. Where is he going to build the 10th bridge?



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