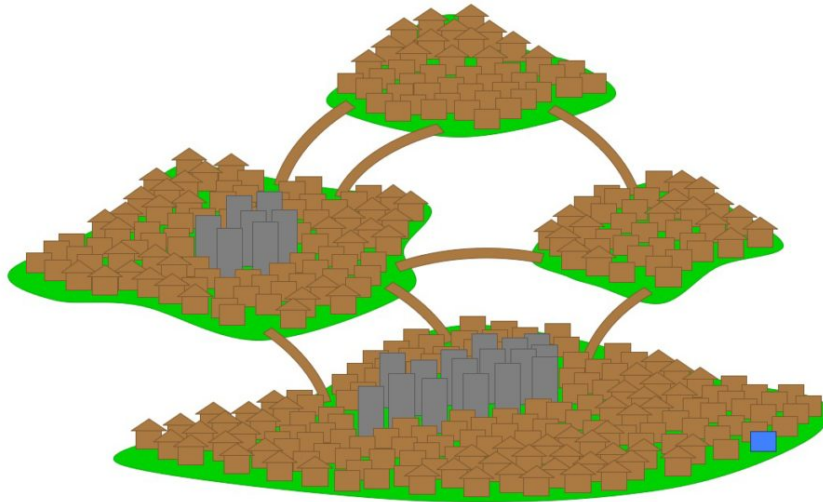


# Bridging the Gap go figure

The town of Isleton, renowned for its widespread decorative woodwork and fine cheeses, spans a cluster of four islands:



(a) Morton is a tour guide for the town, based on the east side of the south island (in the blue building). He advertises to tourists that his walking tour crosses every bridge in the city. To minimize the amount of walking on the tour, Morton decides he'd like to plan the tour's path so it crosses each bridge exactly once, ideally starting and ending at the same location. Can he do it? If so, how?

(b) Two months later, the northwesternmost bridge is torn down due to disrepair. Now can Morton's tour cross each bridge exactly once? What about starting and ending in the same location?

(c) The city planners hold a town hall meeting to determine whether a replacement bridge should be built in the same or a different location. Morton wants to suggest at the meeting that a strategic bridge choice could improve the tourism industry in the town, and is deciding what solution to propose. What bridge location(s) will allow Morton's tour to cross each bridge exactly once, starting and ending in the same location?