## Homework

1. Once, flood destroyed one of the bridges between river bank $A$ and island B; the new map (with the destroyed bridge crossed out) is shown here. Is it now possible to complete a walk in this city so that you walk on each of the seven bridges exactly once?
2. Which of the figures below can be drawn without lifting your pencil from the paper and drawing very line exactly once, without retracing?

3. Which of the figures below can be drawn without lifting your pencil from the paper starting at point $A$ and drawing very line exactly once, without retracing? What if you start at some other point?

4. The figure below shows a plan of a house.


Is it possible to enter this house, walk through it going through every door exactly once, and then exit again through the other door? If not, could it be done if you are allowed to miss one door, not going through it? [Hint: it may be easier if instead of this picture, you make a new one, replacing each room (and also the outside of the house) by a point, and drawing a line connecting two points for every door. ]

