

Dror Bar-Natan: Classes: 2004-05: Math 1300Y - Topology:

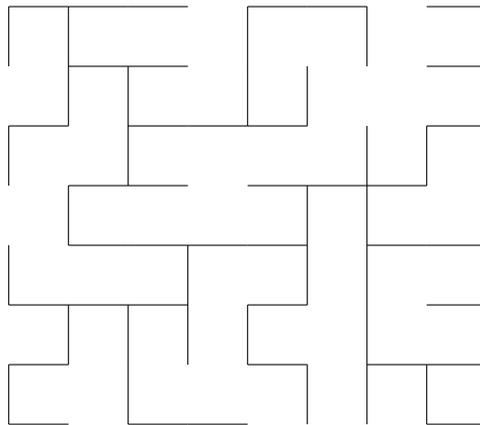
## Homework Assignment 7

Assigned Thursday January 20; due Thursday February 3, 3PM, in class

**Required reading.** Read, reread and reread your notes to this point, and make sure that you really, really really, really really really understand everything in them. Do the same every week! An excellent idea is to re-read Hatcher's section 1.3 with a very active perspective. Which of his theorems are corollaries of our "main theorem of coverings"? Which of his theorems are lemmas used in the proof of the "main theorem of coverings"? Also, read Hatcher's pages 97–128.

**Solve the following problems.** (But submit only the odd-numbered ones). In Hatcher's book, problems 11–18 on page 132.

**Just for fun.** A maximal tree is chosen within the edges of the  $n \times n$  integer lattice. Show that there are two neighboring points on the lattice whose distance from each other, measured only along the tree, is at least  $n$ .



A maximal tree in the  $9 \times 9$  integer lattice