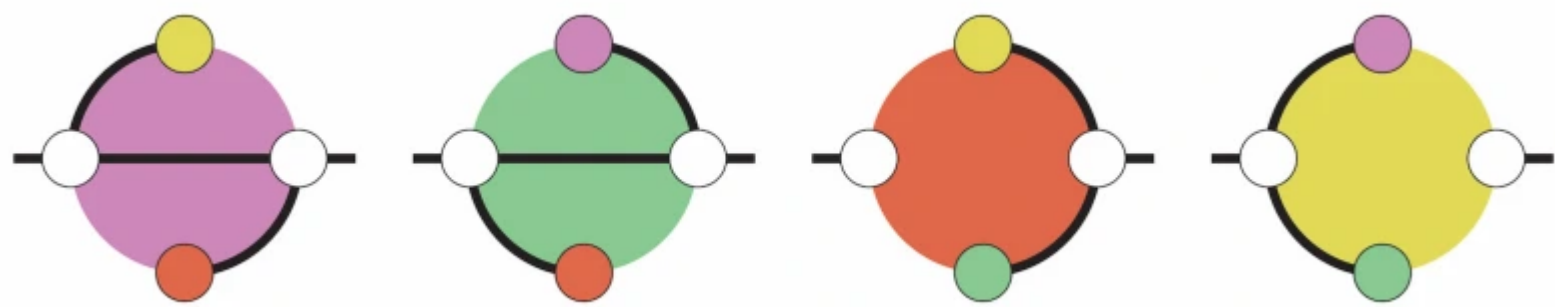# Fractal Maze

A maze usually consists of a few rooms with options to move to other rooms, and the goal is to find a way from one given room to another one. In a fractal maze, some rooms might be copies of another maze, that itself contains rooms that are copies of other mazes, again and again. Here is a simple example:


We have four mazes, each consisting of two regular rooms (in white) and two substitution rooms (colored). The thick black lines tell you where you may move. When you enter a colored room, you enter the maze with that color, like so:
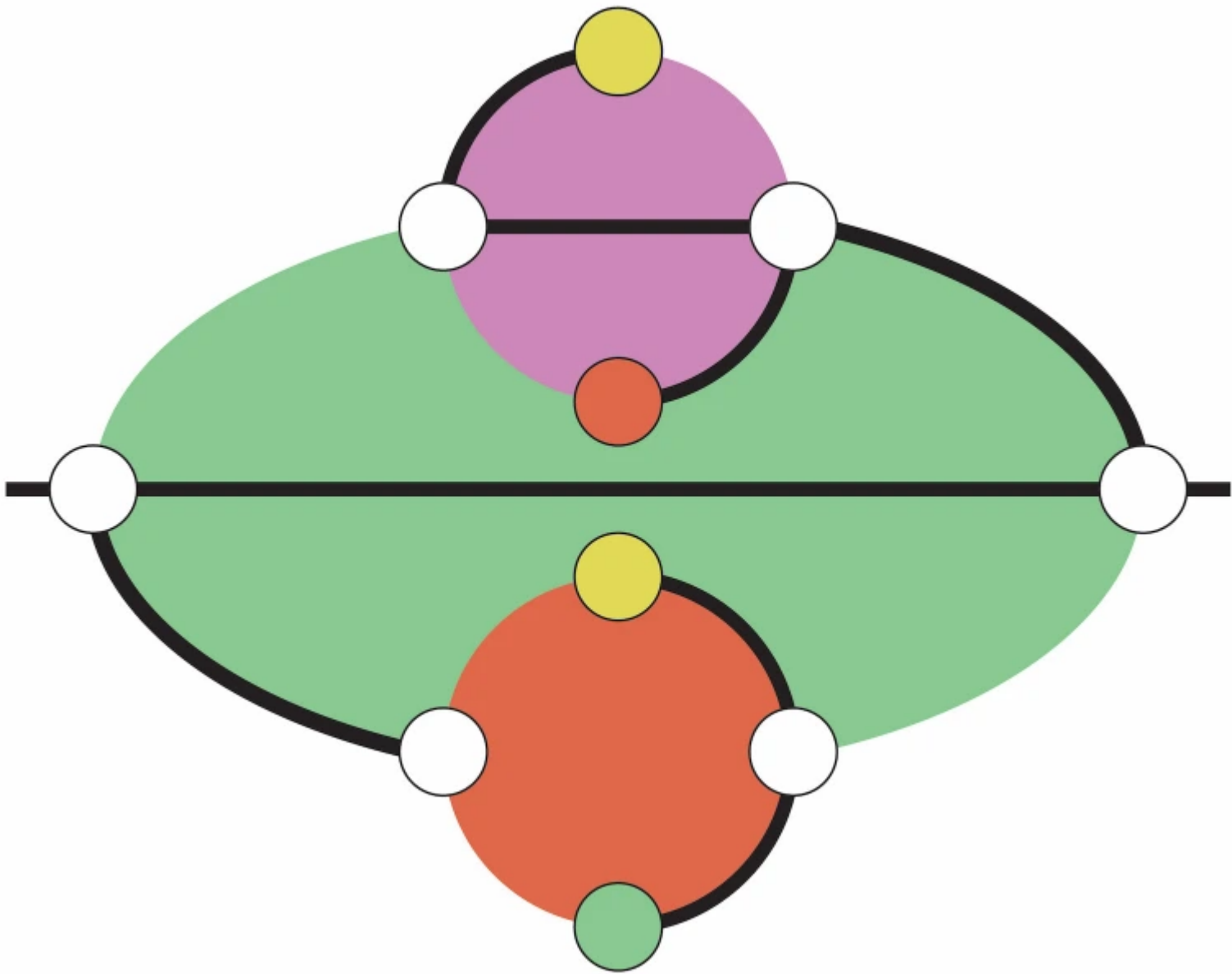
You can think about it like a dungeon where you descend to a lower level each time you enter one of these rooms. When you leave a maze to the left or right, you accordingly ascend one level back up (unless you have been eaten by a grue). Here is a sequence of rooms you can visit. The roman numerals indicate the level you are on, and the room you are in is indicated by a number.
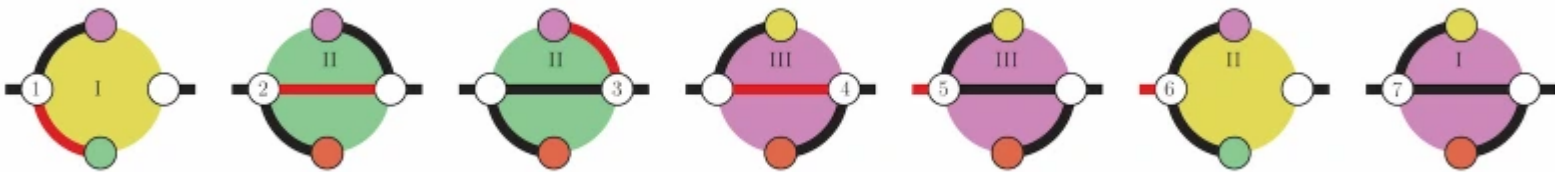
In this example, it took 6 steps to get from the left room in the yellow maze to the left room in the purple maze, starting and ending at level I. Today's puzzle is to get from the left room in purple to the left room in green. Below is a very simple solution, but this requires to go from level I up one level.
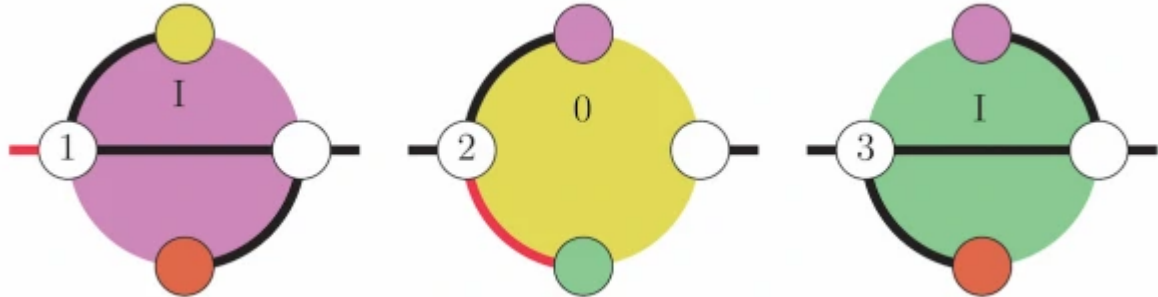
But alas, level 0 hasn't been built. Can you nevertheless find a way?