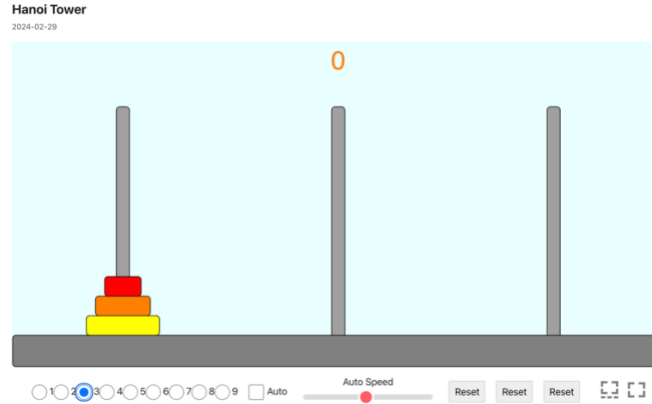


Towers of Hanoi

Play Towers of Hanoi here [towers of hanoi](https://javalab.org/en/hanoi_tower_en/) (https://javalab.org/en/hanoi_tower_en/)



The objective is to move all the disks from one peg to another (here we're going to move from peg 1 to peg 2). You can only move one disk at a time and you can only put a disk on top of a larger disk. Start with 3 but see if you can solve 4,5,... in as few moves as possible.

(time passes...)

Questions

1. What is the best score you can personally get for 3 _____ 4 _____ 5 _____
6 _____ (I don't actually think you'll do ALL of these...)
2. Can you determine a formula for the optimal number of moves for each size?
3. Once you think you have a good solution do this. Name the disks in the puzzle A, B, C, D, E, etc. from smallest to largest. Write down a string indicating **which** disk you move to solve the puzzle. For example **AABACBAA** would be an 8 move solution starting with moving A twice then B then A, etc. (This isn't really a solution just an example).

Write down your shortest string for size 2: _____

Write down your shortest string for size 3: _____

Write down your shortest string for size 4: _____

Do you see a pattern? Describe it if so

4. Revisit question #2 using you answer to #3