



Chapel Hill Math Circle

*Beginners' Group*

## **Tower of Brahma** (or Tower of Hanoi)

November 12, 2016

1. Consider three disks placed on top of each other. Your task is to move all of the disks from the first pole to the last, one disk at a time. You may use the second pole to place disks, but a bigger disk can never be placed atop a smaller disk.
  - a. Find a strategy to do it.
  - b. What is the minimum number of moves it takes to do it?
  - c. What if we now have two disks?
  - d. What if we now have four disks?
  - e. Can you find a pattern?

