

Wednesday 13<sup>th</sup> May 2020

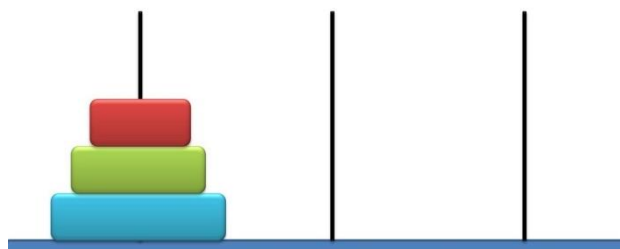
Good morning everyone,

Thank you to those who had a go at yesterday's challenge, it seemed to be a very popular one. It was a tough one but you have done really well! Thanks to those of you who also made up your own challenges for me. I do like these and I promise that I will try to have a go at them. It might take me a while because as you can imagine I have a few other challenges to think about at the moment, the most important one being how we get you all back into school as soon as possible and safely.

I still promise to respond to every email that I get from you but please be patient with me as my responses might take a little longer than previously.

## Mr Dyson's Daily Challenge.

### Tower Of Hanoi



This is one of my favourite maths puzzles. The idea is that you have to move all of the disks from the left peg to the right peg but there are certain rules.

Rule 1: You can only move the disk that is currently at the top of the tower

Rule 2: You cannot put a larger disk on top of a smaller disk.

Rule 3: You can only move one disk at a time.

How many moves does it take to move a tower that has:

- 2 disks
- 3 disks
- 4 disks
- 5 disks

You could then try to carry on if you wish to investigate 6,7 and so on. The ultimate challenge is that the original tower of Hanoi had 64 disks. The only way that you would ever solve this is to find a number pattern and work it out. To actually do it with 64 disks would take you

years. I don't expect anyone to do this! I would be very impressed if you managed to get to 5 disks.

There are a couple of ways that you could do this. You could make different sized disks out of paper or lego (or anything else that you can think of) and use pieces of paper instead of the rods.

Or, you can do this online using various websites. This is quite an easy to use one but it won't let you do 2 disks, the starting point is 3.

<https://www.mathsisfun.com/games/towerofhanoi.html>

Good luck everyone.

Mr Dyson ☺