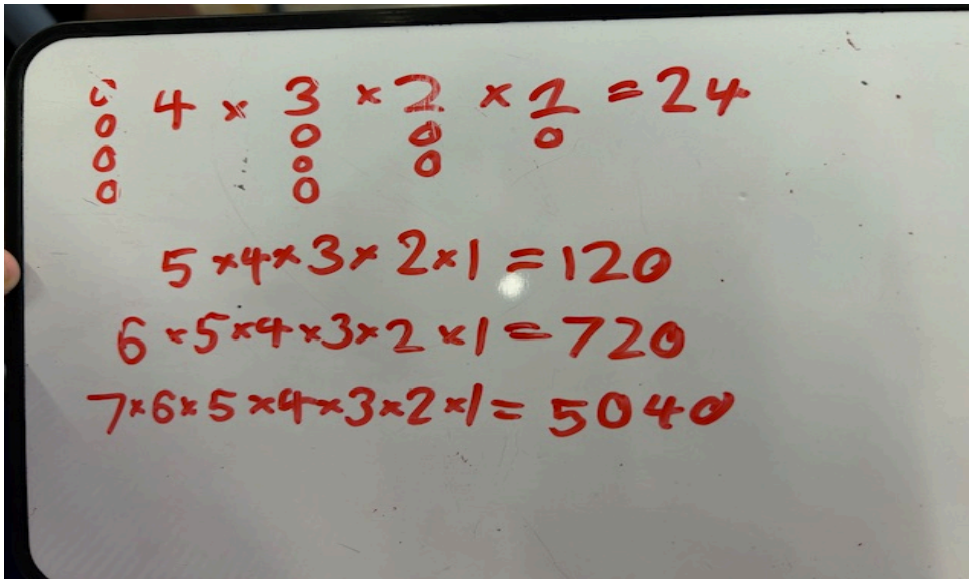


Nrich Solution



1. It would be obvious that if I button one button, there would be 3 buttons left. If this was so, there would be 4 possible buttons you could button in the first place, followed by 3 possible buttons left to button, and so on. This would mean: 4 multiplied by 3 multiplied by 2 multiplied by 1, with the result of 24.
2. This would apply to all of the solutions, meaning that 5 buttons would mean 120 possibilities, 6 buttons meaning 720, and 7, 5040. The sequence would be infinite and there would be no end to that.