

quiz 03.1

(1) You flipped a fair coin 71 times in a row, out of which there were 28 heads and 43 tails. What is the probability that the next flip will be a head?

(2) As in double anagramming: How many *simultaneous* permutations of the two strings 'HQGY' and 'GHYQ' do *not* have 'H' adjacent to 'Q' and do *not* have 'G' adjacent to 'Y' in either rearranged string?

(3) Compute P^4 , where P is the permutation

$$P = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12 & 13 & 14 \\ 9 & 4 & 14 & 1 & 13 & 10 & 8 & 5 & 11 & 7 & 2 & 6 & 12 & 3 \end{pmatrix}$$

(4) Determine the order of the permutation

$$\begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 & 11 & 12 & 13 & 14 \\ 7 & 11 & 5 & 8 & 13 & 1 & 2 & 4 & 10 & 6 & 9 & 3 & 14 & 12 \end{pmatrix}$$