

Cycle structure statistics of abc -permutations

We investigate the probability $\mathbf{p}_k(n)$ that a random abc -permutation of length n has exactly k cycles.

Theorem

We have

$$\lim_{n \rightarrow \infty} \mathbf{p}_k(n) = \frac{1}{k^2} \frac{6}{\pi^2}.$$