

Cycle structure of abc -permutations

We fully characterize the cycle structure of abc -permutations.

Theorem

Let $k = \gcd(a + b, b + c)$. Then σ_{abc} is composed of k cycles of lengths $\lfloor \frac{n}{k} \rfloor$ and $\lceil \frac{n}{k} \rceil$. These cycles correspond to the residue classes of n modulo k .