Koganov, L. M.

Number of cyclically irreducible words in the alphabet of a free group of finite rank. (English. Russian original) Zbl 1142.68056

Cybern. Syst. Anal. 43, No. 4, 499-506 (2007); translation from Kibern. Sist. Anal. 2007, No. 4, 39-48 (2007).

Summary: It is shown that a formula that was independently obtained earlier for the number of cyclically irreducible words of length n in a symmetric alphabet of a finitely generated free group of rank k and the Whitney formula for a chromatic polynomial of a simple nonself-intersecting cycle of length n with a variable λ are mutually deducible from one another when $\lambda = 2k$. The necessary bijections differ for even and odd values of n.

MSC:

68R15 Combinatorics on words
05C15 Coloring of graphs and hypergraphs
20E05 Free nonabelian groups

Keywords:

cyclically irreducible word; proper word; chromatic polynomial of a graph; Whitney formula for the chromatic polynomial of a simple cycle

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