

MURNAGHAN-NAKAYAMA RULE FOR JACK POLYNOMIALS

Ayşın Erkan Gürsoy¹, Kürşat Aker²

¹*Istanbul Technical University, Istanbul, Turkey*

²*Middle East Technical University, Northern Cyprus Campus, KKTC via
Mersin 10, Turkey*

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Abstract

For λ is a partition and n is a nonnegative integer, Murnaghan-Nakayama rule for Schur functions calculates the product of a Schur function s_λ and a power symmetric function p_n :

$$s_\lambda p_n = \sum_{\nu} (-1)^{ht(\nu/\lambda)} s_\nu,$$

where all partitions $\lambda \subseteq \nu$ for which ν/λ is a border strip with n boxes and the height $ht(\nu/\lambda)$ of the border strip is the number of rows, minus 1. This is the theorem in [3]. In this work, we investigate Murnaghan Nakayama rule for Jack polynomials. We obtain some combinatorial results and interpretations for some conditions.

Keywords: Jack polynomials, symmetric functions, young diagram

References

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¹aysinerkan@itu.edu.tr

²kaker@metu.edu.tr