

Petrie symmetric functions

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Abstract

For $k \geq 1$, the homogeneous symmetric functions $r_m^{(k)}$ of degree m defined by

$$\sum_{k \geq 0} r_m^{(k)} z^m = \prod_{i \geq 1} (1 + x_i z + x_i^2 z^2 + \dots + x_i^{k-1} z^{k-1})$$

are called Petrie symmetric functions, studied recently by Grinberg et al. In this talk we present some new results and introduce some problems around them.

Keywords: symmetric functions, Petrie symmetric functions, signed multiplicity free