Proposition 1: Basic properties of Petrie functions

Definition 2: Petrie function

Definition 4: MNable symmetric functions

Conjecture 1: (Per Alexandersson, 2020)

1. Notations (skip if you know symmetric functions well) 1

2.1. Petrie functions: definition of

2.3. Petrie functions: basic properties . . . . . . . . . . . . . . . . . . . . . . 1

2.4. Petrie functions and the coproduct of Λ . . . . . . . . . . . . . . . . . . . 1

For any weak composition

Thus, for each

Fix a positive integer

Let WC be the set of all weak compositions.

Thus, for each

k > 0 and each

integer defined by