

# Cycle Index Series

## Definition

Let,  $F$  be a Combinatorial Species  $Z_F(x_i)_{i \leq n, n \in \mathbb{N}} := \sum_{k \in \mathbb{N}} \frac{1}{n!} \sum_{\sigma \in S_n} \left| F[[n]]^{F[\sigma]} \right|$