

$N = 8$ q -polynomials for admissible partitions with $c_\lambda(1) = 0$

There are eight admissible partitions for $N = 8$ whose S -functions occur in expansion of the square of the Vandermonde with zero coefficient. They occur as pairs of partitions related by Dunne's reversal symmetry as

$$\{13\ 11985^241\}, \quad \{13\ 10\ 9^26531\} \quad (Q1)$$

$$\{13\ 11\ 9854^22\}, \quad \{13\ 10\ 987531\} \quad (Q2)$$

$$\{13\ 11\ 976541\}, \quad \{12\ 10^2\ 96531\} \quad (Q3)$$

$$\{12\ 11\ 97^24^22\}, \quad \{12\ 10^2\ 7^2532\} \quad (Q4)$$

There corresponding q -polynomials are

$$(Q1) \quad -q^{17}(q^2 - q + 1)^2(q^2 + 1)^2(q - 1)^4(q^2 + q + 1)^5$$

$$(Q2) \quad q^{16}(q^2 + 1)(q^2 - q + 1)^3(q - 1)^4(q^2 + q + 1)^6$$

$$(Q3) \quad q^{16}(q^2 - q + 1)^2(q^2 + 1)^3(q - 1)^4(q^2 + q + 1)^5$$

$$(Q4) \quad q^{14}(q^{10} + q^9 + 3q^8 + 4q^6 + q^5 + 4q^4 + 3q^2 + q + 1)(q^2 - q + 1)^2(q - 1)^4(q^2 + q + 1)^5$$