The 5-dissection of a q-series

$$\sum_{n=0}^{\infty} a(n) q^n = A(q)$$

$$= a(0) + a(1) q + a(2) q^2 + a(3) q^3 + a(4) q^4 \ldots$$

$$= (a(0) + a(5) q^5 + a(10) q^{10} + \cdots)$$

$$+ (a(1) q + a(6) q^6 + a(11) q^{11} + \cdots)$$

$$+ (a(2) q^2 + a(7) q^7 + a(12) q^{12} + \cdots)$$

$$+ (a(3) q^3 + a(8) q^8 + a(13) q^{13} + \cdots)$$

$$+ (a(4) q^4 + a(9) q^9 + a(14) q^{14} + \cdots)$$

$$= A_0(q^5) + q A_1(q^5) + q^2 A_2(q^5) + q^3 A_3(q^5) + q^4 A_4(q^5)$$

where

$$A_j(q) = \sum_{n=0}^{\infty} a(5n+j) q^n$$