

(DEF7)

$$\phi(q) = -1 + \left\{ \frac{1}{1-q} + \frac{q^5}{(1-q)(1-q^4)(1-q^6)} \right. \\ \left. + \frac{q^{20}}{(1-q)(1-q^4)(1-q^6)(1-q^9)(1-q^{11})} + \dots \right\},$$

(DEF8)

$$\psi(q) = -1 + \left\{ \frac{1}{1-q^2} + \frac{q^5}{(1-q^2)(1-q^3)(1-q^7)} \right. \\ \left. + \frac{q^{20}}{(1-q^2)(1-q^3)(1-q^7)(1-q^8)(1-q^{12})} + \dots \right\},$$

(MOCK1)

$$\frac{q}{1-q} + \frac{q^3}{(1-q^2)(1-q^3)} + \frac{q^5}{(1-q^3)(1-q^4)(1-q^5)} + \dots = 3\phi(q) + 1 - A(q),$$

(MOCK2)

$$\frac{q}{1-q} + \frac{q^2}{(1-q^2)(1-q^3)} + \frac{q^3}{(1-q^3)(1-q^4)(1-q^5)} + \dots = 3\psi(q) + qD(q),$$

(MOCK3)

$$\frac{q^2}{1-q} + \frac{q^8}{(1-q)(1-q^3)} + \frac{q^{18}}{(1-q)(1-q^3)(1-q^5)} + \dots \\ = \phi(q) - q \frac{1 + q^5 + q^{15} + \dots}{(1-q^4)(1-q^6)(1-q^{14}) \dots},$$

(MOCK4)

$$\frac{q}{1-q} + \frac{q^5}{(1-q)(1-q^3)} + \frac{q^{13}}{(1-q)(1-q^3)(1-q^5)} + \dots \\ = \psi(q) + q \frac{1 + q^5 + q^{15} + \dots}{(1-q^2)(1-q^8)(1-q^{12}) \dots}.$$