FOURIER COEFFICIENTS OF A CLASS OF ETA QUOTIENTS OF WEIGHT 12

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Recently, Williams[18] and then Yao, Xia and Jin[15] discovered explicit formulas for the coefficients of the Fourier series expansions of a class of eta quotients. Williams expressed all coefficients of 126 eta quotients in terms of $\sigma(n), \sigma(\frac{n}{2}), \sigma(\frac{n}{3})$ and $\sigma(\frac{n}{6})$ and Yao, Xia and Jin, following the method of proof of Williams, expressed only even coefficients of 104 eta quotients in terms of $\sigma_3(n), \sigma_3(\frac{n}{2}), \sigma_3(\frac{n}{3})$ and $\sigma_3(\frac{n}{6})$.Here, we will express the odd Fourier coefficients of 334 eta quotients in terms of $\sigma_{11}(2n-1)$ and $\sigma_{11}\left(\frac{2n-1}{3}\right)$, i.e., the Fourier coefficients of the difference, f(q)-f(-q), of 334 eta quotients and we will express the

even Fourier coefficients of 198 eta quotients i.e., the Fourier coefficients of the sum, f(q)+f(-q), of 198 eta quotients in terms of $\sigma_{11}(n), \sigma_{11}\left(\frac{n}{2}\right), \sigma_{11}\left(\frac{n}{3}\right), \sigma_{11}\left(\frac{n}{4}\right), \sigma_{11}\left(\frac{n}{6}\right)$ and $\sigma_{11}\left(\frac{n}{12}\right)$.

Keywords: Dedekind eta function; eta quotients; Fourier series.

1 Introduction

The divisor function $\sigma_i(n)$ is defined for a positive integer i by

$$\begin{aligned} \sigma_i(n) &:= \sum_{d \text{ positive integer}, d|n} d^i, \text{if } n \text{ is a positive integer, and} \qquad (1) \\ \sigma_i(n) &:= 0 \text{ if n is not a positive integer.} \end{aligned}$$

The Dedekind eta function is defined by

$$\eta(z) := q^{1/24} \prod_{n=1}^{\infty} (1 - q^n), \qquad (2)$$

where

$$q := e^{2\pi i z}, z \in H = \{x + iy : y > 0\} \qquad (3)$$

and an eta quotient of level n is defined by

$$f(z) := \prod_{m|n} \eta(mz)^{a_m}, n \in \mathbb{N}, a_m \in Z, a_n \neq 0. \qquad (4)$$

It is interesting and important to determine explicit formulas of the Fourier coefficients of an eta quotients since they are the building blocks of modular forms of level n and weight k. The book of Köhler [13] (Chapter 3, pg.39) describes such expansions by means of Hecke Theta series and develop algorithms for the determination of suitable eta quotients. One can find more information in [3], [6], [14], [16], [17]. I have determined the Fourier coefficients of the theta series associated to some quadratic forms, see [10], [11], [12], [7], [8] and [9].

Recently, Williams, see [18] discovered explicit formulas for the coefficients of Fourier series expansions of a class of 126 eta quotients in terms of $\sigma(n), \sigma(\frac{n}{2}), \sigma(\frac{n}{3})$ and $\sigma(\frac{n}{6})$. One example is as follows:

$$\frac{\eta^2(2z)\,\eta^4(4z)\,\eta^6(6z)}{\eta^2(z)\,\eta^2(3z)\,\eta^4(12z)}$$

give the expansion found by Williams.

Then Yao, Xia and Jin [15] expressed the even Fourier coefficients of 104 eta quotients in terms of $\sigma_3(n), \sigma_3(\frac{n}{2}), \sigma_3(\frac{n}{3})$ and $\sigma_3(\frac{n}{6})$.One example is as follows:

$$\frac{\eta^{25}(2z)\,\eta^4(3z)}{\eta^{12}(z)\,\eta^5(4z)\,\eta^3(6z)\,\eta(12z)},$$

where the even coefficients are obtained. Motivated by these two results, we find that we can express the odd Fourier coefficients of 198 eta quotients in terms of $\sigma_{11}(2n+1)$ and $\sigma_{11}(\frac{2n+1}{3})$, see Table_1. One example is as follows:

$$\eta^5(2z)\,\eta^4(4z)\,\eta^{13}(6z)\,\eta(12z),$$

where the odd coefficients of this eta quotient are obtained. We can also express the even Fourier coefficients of 334 eta quotients in terms of $\sigma_{11}(n), \sigma_{11}\left(\frac{n}{2}\right), \sigma_{11}\left(\frac{n}{3}\right), \sigma_{11}\left(\frac{n}{4}\right), \sigma_{11}\left(\frac{n}{6}\right)$ and $\sigma_{11}\left(\frac{n}{12}\right)$,seeTable_2. One example is as follows:

$$\frac{\eta^{14}(6z)\,\eta^{14}(12z)}{\eta^2(2z)\,\eta^2(4z)}.$$

Let

$$f_1 := \sum_{n=0}^{\infty} f_1(n)\,q^n = \frac{\eta^{20}(4z)\,\eta^{10}(6z)\,\eta^4(12z)}{\eta^{10}(2z)}$$

$$f_2 := \sum_{n=0}^{\infty} f_2(n)\,q^n = \frac{\eta^{15}(4z)\,\eta^{15}(6z)\,\eta^3(12z)}{\eta^9(2z)}$$

$$f_3 := \sum_{n=0}^{\infty} f_3(n)\,q^n = \frac{\eta^{10}(4z)\,\eta^{20}(6z)\,\eta^2(12z)}{\eta^8(2z)}$$

$$f_4 := \sum_{n=0}^{\infty} f_4(n)\, q^n = \eta^5(2z)\,\eta^5(4z)\,\eta^{13}(6z)\,\eta(12z)$$

$$f_5 := \sum_{n=0}^{\infty} f_5(n)\, q^n = \frac{\eta^{16}(4z)\,\eta^2(6z)\,\eta^8(12z)}{\eta^2(2z)}$$

$$f_6 := \sum_{n=0}^{\infty} f_6(n)\, q^n = \frac{\eta^9(2z)\,\eta^9(6z)\,\eta^9(12z)}{\eta^3(4z)}$$

$$f_7 := \sum_{n=0}^{\infty} f_7(n)\, q^n = \frac{\eta^{11}(2z)\,\eta^{11}(4z)\,\eta^7(12z)}{\eta^5(6z)}$$

$$f_8 := \sum_{n=0}^{\infty} f_8(n)\, q^n = \frac{\eta^{12}(6z)\,\eta^{18}(12z)}{\eta^6(4z)}$$

$$f_9 := \sum_{n=0}^{\infty} f_9(n)\, q^n = \frac{\eta^{14}(2z)\,\eta^8(4z)\,\eta^{16}(12z)}{\eta^{14}(6z)}$$

$$f_{10} := \sum_{n=0}^{\infty} f_{10}(n)\, q^n = \frac{\eta^6(2z)\,\eta^{12}(4z)\,\eta^{18}(6z)}{\eta^{12}(12z)}$$

$$f_{11} := \sum_{n=0}^{\infty} f_{11}(n)\, q^n = \frac{\eta^{20}(2z)\,\eta^4(6z)\,\eta^4(12z)}{\eta^4(4z)}$$

$$f_{12} := \sum_{n=0}^{\infty} f_{12}(n)\, q^n = \frac{\eta^{19}(2z)\,\eta(4z)\,\eta^5(12z)}{\eta(6z)}$$

$$f_{13} := \sum_{n=0}^{\infty} f_{13}(n)\, q^n = \frac{\eta^{20}(4z)\,\eta^4(6z)\,\eta^4(12z)}{\eta^4(2z)}$$

$$f_{14} := \sum_{n=0}^{\infty} f_{14}(n)\, q^n = \frac{\eta^{14}(6z)\,\eta^{14}(12z)}{\eta^2(2z)\,\eta^2(4z)}$$

$$f_{15} := \sum_{n=0}^{\infty} f_{15}(n)\, q^n = \frac{\eta^{19}(4z)\,\eta^{17}(6z)}{\eta^{11}(2z)\,\eta(12z)}$$

$$f_{16} := \sum_{n=0}^{\infty} f_{16}(n) = \frac{\eta^{18}(4z)\,\eta^{18}(6z)}{\eta^6(2z)\,\eta^6(12z)}$$

$$f_{17} := \sum_{n=0}^{\infty} f_{17}(n)\, q^n = \frac{\eta^{16}(4z)\,\eta^8(6z)\,\eta^8(12z)}{\eta^8(2z)}$$

$$f_{18} := \sum_{n=0}^{\infty} f_{18}(n)\, q^n = \frac{\eta^{12}(2z)\,\eta^{12}(4z)\,\eta^{12}(12z)}{\eta^{12}(6z)}$$

$$f_{19} := \sum_{n=0}^{\infty} f_{19}(n)\, q^n = \frac{\eta^{20}(4z)\,\eta^{16}(6z)\,\eta^{4}(12z)}{\eta^{16}(2z)}.$$

Now we can state our main Theorem:

Theorem 1 *Let $b_1, b_2, \cdots, b_5$ be non-negative integers satisfying*

$$b_1 + b_2 + \cdots + b_5 \leq 24. \tag{5}$$

Define the integers $a_1, a_2, a_3, a_4, a_6, a_{12}$ by

$$a_1 := -b_1 + 2b_2 - 2b_3 - 4b_4 - b_5 + 24, \tag{6}$$

$$a_2 := 3b_1 + b_2 + 3b_3 + 10b_4 + b_5 - 60, \tag{7}$$

$$a_3 := 3b_1 + 2b_2 + 6b_3 + 4b_4 + 3b_5 - 72, \tag{8}$$

$$a_4 := -2b_1 - b_2 - b_3 - 4b_4 + 2b_5 + 24, \tag{9}$$

$$a_6 := -9b_1 - 7b_2 - 9b_3 - 10b_4 - 7b_5 + 180, \tag{10}$$

$$a_{12} := 6b_1 + 3b_2 + 3b_3 + 4b_4 + 2b_5 - 72. \tag{11}$$

The functions $f_1, \ldots, f_{19}$ which are defined before, are functions of q by (3) and contained in $M_{12}(\Gamma_0(12))$. In fact, except f_9, f_{18}, and f_{19}, they are also cusp forms. Now define rational numbers

$$k_0, k_1, k_2, k_3, k_4, k_5, k_6, k_7, k_8, k_9, k_{10}, k_{11}, k_{12},$$
$$k_{13}, k_{14}, k_{15}, k_{16}, k_{17}, k_{18}, k_{19}, k_{20}, k_{21}, k_{22}, k_{23}, k_{24}$$

by

$$\frac{1}{2^{b_1+b_5}} x^{b_1}(1-x)^{b_2}(1+x)^{b_3}(1+2x)^{b_4}(2+x)^{b_5} \tag{12}$$

$$\begin{aligned} = \quad & (k_0 + k_1 x + k_2 x^2 + k_3 x^3 + k_4 x^4 + k_5 x^5 + k_6 x^6 + k_7 x^7 + k_8 x^8 + k_9 x^9 \\ & + k_{10} x^{10} + k_{11} x^{11} + k_{12} x^{12} + k_{13} x^{13} + k_{14} x^{14} + k_{15} x^{15} + k_{16} x^{16} + k_{17} x^{17} \\ & + k_{18} x^{18} + k_{19} x^{19} + k_{20} x^{20} + k_{21} x^{21} + k_{22} x^{22} + k_{23} x^{23} + k_{24} x^{24}) k^{12}. \end{aligned}$$

Define the rational numbers $c_1, c_2, c_3, c_4, c_6, c_{12}, r_1, r_2, r_3, r_4, r_5, r_6, r_7, r_8, r_9, r_{10}, r_{11}, r_{12}, r_{13}, r_{14}, r_{15}, r_{16}, r_{17}, r_{18}$

and r_{19} as in Appendix. Then the Fourier coefficients of the following eta quotients

$$\eta^{a_1}(z)\,\eta^{a_2}(2z)\,\eta^{a_3}(3z)\,\eta^{a_4}(4z)\,\eta^{a_6}(6z)\,\eta^{a_{12}}(12z) = \delta(b_1) + \sum_{n=1}^{\infty} c(n) q^n,$$

can be given by the formula

$$c(n) = c_1\sigma_{11}(n) + c_2\sigma_{11}\left(\frac{n}{2}\right) + \quad c_3\sigma_{11}\left(\frac{n}{3}\right) + c_4\sigma_{11}\left(\frac{n}{4}\right) + c_6\sigma_{11}\left(\frac{n}{6}\right) + c_{12}\sigma_{11}\left(\frac{n}{12}\right)$$
$$+r_1 f_1(n) + ... + r_{19} f_{19}(n), n \in \mathbb{N}.$$

In particular, for $n \in \mathbb{N}$, we have

$$c(2n) = c_1\sigma_{11}(2n) + c_2\sigma_{11}(n) + \quad c_3\sigma_{11}\left(\frac{2n}{3}\right) + c_4\sigma_{11}\left(\frac{n}{2}\right) + c_6\sigma_{11}\left(\frac{n}{3}\right) + c_{12}\sigma_{11}\left(\frac{n}{6}\right)$$
$$+r_{11} f_{11}(2n) + ... + r_{19} f_{19}(2n),$$

$$\begin{aligned} c(2n-1) &= c_1\sigma_{11}(2n-1) \\ &\quad +c_3\sigma_{11}\left(\frac{2n-1}{3}\right) + r_1 f_1(2n-1) + r_2 f_2(2n-1) + ... + r_{10} f_{10}(2n-1), \end{aligned}$$

and

$$f_{11}(2n-1) = f_{12}(2n-1) = ...f_{19}(2n-1) = 0,$$
$$f_1(2n) = f_2(2n) = ... = f_{10}(2n) = 0.$$

Proof. It follows from (6-11) that

$$a_1 + 2a_2 + 3a_3 + 4a_4 + 6a_6 + 12a_{12} = 24b_1 \tag{13}$$

$$a_1 + a_2 + a_3 + a_4 + a_6 + a_{12} = 24, \tag{14}$$
$$-\frac{a_1}{6} - \frac{a_2}{3} - \frac{a_3}{6} - 2\frac{a_4}{3} - \frac{a_6}{3} - 2\frac{a_{12}}{3} = -b_1 - b_5.$$

Now we will use p-k parametrization of Alaca, Alaca and Williams, see [1]:

$$p(q) := \frac{\varphi^2(q) - \varphi^2(q^3)}{2\varphi^2(q^3)}, k(q) := \frac{\varphi^3(q^3)}{\varphi(q)}, \tag{15}$$

where the theta function $\varphi(q)$ is defined by

$$\varphi(q) = \sum_{-\infty}^{\infty} q^{n^2}.$$

Setting x=p in (12), and multiplying both sides by k^{12},we obtain

$$\frac{k^{12}}{2^{b_1+b_5}} p^{b_1}(1-p)^{b_2}(1+p)^{b_3}(1+2p)^{b_4}(2+p)^{b_5}$$

$$
\begin{aligned}
= \quad & (k_0 + k_1 p + k_2 p^2 + k_3 p^3 + k_4 p^4 + k_5 p^5 + k_6 p^6 + k_7 p^7 + k_8 p^8 + k_9 p^9 \\
& + k_{10} p^{10} + k_{11} p^{11} + k_{12} p^{12} + k_{13} p^{13} + k_{14} p^{14} + k_{15} p^{15} + k_{16} p^{16} + k_{17} p^{17} \\
& + k_{18} p^{18} + k_{19} p^{19} + k_{20} p^{20} + k_{21} p^{21} + k_{22} p^{22} + k_{23} p^{23} + k_{24} p^{24}) k^{12}.
\end{aligned}
$$

Alaca, Alaca and Williams [2] have established the following representations in terms of p and k:

$$\eta(q) = 2^{-1/6} p^{1/24} (1-p)^{1/2} (1+p)^{1/6} (1+2p)^{1/8} (2+p)^{1/8} k^{1/2}, \tag{16}$$

$$\eta(q^2) = 2^{-1/3} p^{1/12} (1-p)^{1/4} (1+p)^{1/12} (1+2p)^{1/4} (2+p)^{1/4} k^{1/2}, \tag{17}$$

$$\eta(q^3) = 2^{-1/6} p^{1/8} (1-p)^{1/6} (1+p)^{1/2} (1+2p)^{1/24} (2+p)^{1/24} k^{1/2}, \tag{18}$$

$$\eta(q^4) = 2^{-2/3} p^{1/6} (1-p)^{1/8} (1+p)^{1/24} (1+2p)^{1/8} (2+p)^{1/2} k^{1/2}, \tag{19}$$

$$\eta(q^6) = 2^{-1/3} p^{1/4} (1-p)^{1/12} (1+p)^{1/4} (1+2p)^{1/12} (2+p)^{1/12} k^{1/2}, \tag{20}$$

$$\eta(q^{12}) = 2^{-2/3} p^{1/2} (1-p)^{1/24} (1+p)^{1/8} (1+2p)^{1/24} (2+p)^{1/6} k^{1/2}. \tag{21}$$

Moreover, they have obtained similar formulas for E_4 and E_6. Now, the formulas in the Appendix for E_{12} can be obtained from the well-known formula

$$691 E_{12} = 441 E_4^3 + 250 E_6^2.$$

Obviously, $f_1, \ldots f_{19}$ are functions of q , see (3),(15), contained in $M_{12}(\Gamma_0(12))$.

In fact, except f_9, f_{18}, and f_{19}, they are also cusp forms and

$$ord_{1/3} f_9 = ord_{1/6} f_9 = ord_{1/3} f_{18} = ord_{1/6} f_{18} = ord_{1/1} f_{19} = ord_{1/2} f_{19} = 0,$$

by [4]. Now

$$
\begin{aligned}
& \eta^{a_1}(z)\, \eta^{a_2}(2z)\, \eta^{a_3}(3z)\, \eta^{a_4}(4z)\, \eta^{a_6}(6z)\, \eta^{a_{12}}(12z) \\
= \quad & q^{b_1} \prod_{n=1}^{\infty} (1-q^n)^{a_1} \left(1-q^{2n}\right)^{a_2} \left(1-q^{3n}\right)^{a_3} \left(1-q^{4n}\right)^{a_4} \left(1-q^{6n}\right)^{a_6} \left(1-q^{12n}\right)^{a_{12}} \\
= \quad & 2^{-\frac{a_1}{6} - \frac{a_2}{3} - \frac{a_3}{6} - 2\frac{a_4}{3} - \frac{a_6}{3} - 2\frac{a_{12}}{3}} p^{\frac{a_1}{24} + \frac{a_2}{12} + \frac{a_3}{8} + \frac{a_4}{6} + \frac{a_6}{4} + \frac{a_{12}}{2}} (1-p)^{\frac{a_1}{2} + \frac{a_2}{4} + \frac{a_3}{6} + \frac{a_4}{8} + \frac{a_6}{12} + \frac{a_{12}}{24}} \\
& (1+p)^{\frac{a_1}{6} + \frac{a_2}{12} + \frac{a_3}{2} + \frac{a_4}{24} + \frac{a_6}{4} + \frac{a_{12}}{8}} (1+2p)^{\frac{a_1}{8} + \frac{a_2}{4} + \frac{a_3}{24} + \frac{a_4}{8} + \frac{a_6}{12} + \frac{a_{12}}{24}} (2+p)^{\frac{a_1}{8} + \frac{a_2}{4} + \frac{a_3}{24} + \frac{a_4}{2} + \frac{a_6}{12} + \frac{a_{12}}{6}} \\
& k^{\frac{a_1 + a_2 + a_3 + a_4 + a_6 + a_{12}}{2}} = \frac{k^{12}}{2^{b_1 + b_5}} p^{b_1} (1-p)^{b_2} (1+p)^{b_3} (1+2p)^{b_4} (2+p)^{b_5}
\end{aligned}
$$

$$
\begin{aligned}
= \quad & k^{12} (k_0 + k_1 p + k_2 p^2 + k_3 p^3 + k_4 p^4 + k_5 p^5 + k_6 p^6 \\
& + k_7 p^7 + k_8 p^8 + k_9 p^9 + k_{10} p^{10} + k_{11} p^{11} + k_{12} \\
& p^{12} + k_{13} p^{13} + k_{14} p^{14} + k_{15} p^{15} + k_{16} p^{16} + k_{17} p^{17} + k_{18} \\
& p^{18} + k_{19} p^{19} + k_{20} p^{20} + k_{21} p^{21} + k_{22} p^{22} + k_{23} p^{23} + k_{24} p^{24})
\end{aligned}
$$

$$
\begin{aligned}
= \quad & \frac{691c_1}{65520}(1+\frac{65\,520}{691}\sum_{n=1}^{\infty}\sigma_{11}(n)\,q^{n}) \\
& +\frac{691c_2}{65520}(1+\frac{65\,520}{691}\sum_{n=1}^{\infty}\sigma_{11}(n)\,q^{2n}) \\
& +\frac{691c_3}{65520}(1+\frac{65\,520}{691}\sum_{n=1}^{\infty}\sigma_{11}(n)\,q^{3n}) \\
& +\frac{691c_4}{65520}(1+\frac{65\,520}{691}\sum_{n=1}^{\infty}\sigma_{11}(n)\,q^{4n}) \\
& +\frac{691c_6}{65520}(1+\frac{65\,520}{691}\sum_{n=1}^{\infty}\sigma_{11}(n)\,q^{6n}) \\
& +\frac{691c_{12}}{65520}(1+\frac{65\,520}{691}\sum_{n=1}^{\infty}\sigma_{11}(n)\,q^{12n}) \\
& +r_1q^7\prod_{n=1}^{\infty}\frac{\left(1-q^{4n}\right)^{20}\left(1-q^{6n}\right)^{10}\left(1-q^{12n}\right)^{4}}{\left(1-q^{2n}\right)^{10}} \\
& +r_2q^7\prod_{n=1}^{\infty}\frac{\left(1-q^{4n}\right)^{15}\left(1-q^{6n}\right)^{15}\left(1-q^{12n}\right)^{3}}{\left(1-q^{2n}\right)^{9}} \\
& +r_3q^7\prod_{n=1}^{\infty}\frac{\left(1-q^{4n}\right)^{10}\left(1-q^{6n}\right)^{20}\left(1-q^{12n}\right)^{2}}{\left(1-q^{2n}\right)^{8}} \\
& +r_4q^5\prod_{n=1}^{\infty}\left(1-q^{2n}\right)^{5}\left(1-q^{4n}\right)^{5}\left(1-q^{6n}\right)^{13}\left(1-q^{12n}\right) \\
& +r_5q^7\prod_{n=1}^{\infty}\frac{\left(1-q^{4n}\right)^{16}\left(1-q^{6n}\right)^{2}\left(1-q^{12n}\right)^{8}}{\left(1-q^{2n}\right)^{2}} \\
& +r_6q^7\prod_{n=1}^{\infty}\frac{\left(1-q^{2n}\right)^{9}\left(1-q^{6n}\right)^{9}\left(1-q^{12n}\right)^{9}}{\left(1-q^{4n}\right)^{3}} \\
& +r_7q^5\prod_{n=1}^{\infty}\frac{\left(1-q^{2n}\right)^{11}\left(1-q^{4n}\right)^{11}\left(1-q^{12n}\right)^{7}}{\left(1-q^{6n}\right)^{5}} \\
& +r_8q^{11}\prod_{n=1}^{\infty}\frac{\left(1-q^{6n}\right)^{12}\left(1-q^{12n}\right)^{18}}{\left(1-q^{4n}\right)^{6}} \\
& +r_9q^7\prod_{n=1}^{\infty}\frac{\left(1-q^{2n}\right)^{14}\left(1-q^{4n}\right)^{8}\left(1-q^{12n}\right)^{16}}{\left(1-q^{6n}\right)^{14}} \\
& +r_{10}q\prod_{n=1}^{\infty}\frac{\left(1-q^{2n}\right)^{6}\left(1-q^{4n}\right)^{12}\left(1-q^{6n}\right)^{18}}{\left(1-q^{12n}\right)^{12}} \\
& +r_{11}q^4\prod_{n=1}^{\infty}\frac{\left(1-q^{2n}\right)^{20}\left(1-q^{6n}\right)^{4}\left(1-q^{12n}\right)^{4}}{\left(1-q^{4n}\right)^{4}} \\
& +r_{12}q^4\prod_{n=1}^{\infty}\frac{\left(1-q^{2n}\right)^{19}\left(1-q^{4n}\right)\left(1-q^{12n}\right)^{5}}{\left(1-q^{6n}\right)^{7}}
\end{aligned}
$$

$$
\begin{aligned}
&+r_{13}q^6\prod_{n=1}^{\infty}\frac{\left(1-q^{4n}\right)^{20}\left(1-q^{4n}\right)^{4}\left(1-q^{12n}\right)^{4}}{\left(1-q^{2n}\right)^{4}}\\
&+r_{14}q^{10}\prod_{n=1}^{\infty}\frac{\left(1-q^{6n}\right)^{14}\left(1-q^{12n}\right)^{14}}{\left(1-q^{2n}\right)^{2}\left(1-q^{4n}\right)^{2}}\\
&+r_{15}q^{6}\prod_{n=1}^{\infty}\frac{\left(1-q^{4n}\right)^{19}\left(1-q^{6n}\right)^{17}}{\left(1-q^{2n}\right)^{11}\left(1-q^{12n}\right)}\\
&+r_{16}q^{4}\prod_{n=1}^{\infty}\frac{\left(1-q^{4n}\right)^{18}\left(1-q^{6n}\right)^{18}}{\left(1-q^{2n}\right)^{6}\left(1-q^{12n}\right)^{6}}\\
&+r_{17}q^{8}\prod_{n=1}^{\infty}\frac{\left(1-q^{4n}\right)^{16}\left(1-q^{6n}\right)^{8}\left(1-q^{12n}\right)^{8}}{\left(1-q^{2n}\right)^{8}}\\
&+r_{18}q^{6}\prod_{n=1}^{\infty}\frac{\left(1-q^{2n}\right)^{11}\left(1-q^{4n}\right)^{12}\left(1-q^{12n}\right)^{12}}{\left(1-q^{6n}\right)^{12}}\\
&+r_{19}q^{8}\prod_{n=1}^{\infty}\frac{\left(1-q^{4n}\right)^{20}\left(1-q^{6n}\right)^{16}\left(1-q^{12n}\right)^{4}}{\left(1-q^{2n}\right)^{16}}
\end{aligned}
$$

$$
\begin{aligned}
= \quad & \delta(b_1)+\sum_{n=1}^{\infty}(c_1(\sigma_{11}(n)+c_2(\sigma_{11}\left(\frac{n}{2}\right)\\
&+c_3\sigma_5\left(\frac{n}{3}\right)+c_4(\sigma_5\left(\frac{n}{4}\right)\\
&+c_6\sigma_5\left(\frac{n}{6}\right)+c_{12}\sigma_5\left(\frac{n}{12}\right))\\
&+r_1f_1(n)+....+r_{19}f_{19}(n),
\end{aligned}
$$

where the constant term of the Fourier series is

$$
\delta(b_1)=\begin{cases} 0 \text{ if } \mathrm{b}_1\neq 0\\ 1 \text{ if } \mathrm{b}_1=0.\end{cases}.
$$

So

$$
\begin{aligned}
c(n)=c_1\sigma_{11}(n)+c_2\sigma_{11}\left(\frac{n}{2}\right)+ \quad & c_3\sigma_{11}\left(\frac{n}{3}\right)+c_4\sigma_{11}\left(\frac{n}{4}\right)+c_6\sigma_{11}\left(\frac{n}{6}\right)+c_{12}\sigma_{11}\left(\frac{n}{12}\right)\\
&+r_1f_1(n)+....+r_{19}f_{19}(n).
\end{aligned}
$$

In particular,

$$
\begin{aligned}
c(2n) \quad = \quad & c_1\sigma_{11}(2n)+c_2\sigma_{11}(n)+c_3\left(2049\sigma_{11}\left(\frac{n}{3}\right)-2048\sigma_{11}\left(\frac{n}{6}\right)\right)+c_4\sigma_{11}\left(\frac{n}{2}\right)\\
&+c_6\sigma_{11}\left(\frac{n}{3}\right)+c_{12}\sigma_{11}\left(\frac{n}{6}\right)+r_{11}f_{11}(2n)+....+r_{19}f_{19}(2n).\\
= \quad & c_1\sigma_{11}(2n)+c_2\sigma_{11}(n)+c_4\sigma_{11}\left(\frac{n}{2}\right)+(2049c_3+c_6)\,\sigma_{11}\left(\frac{n}{3}\right)+(c_{12}-2048c_3)\sigma_{11}\left(\frac{n}{6}\right),
\end{aligned}
$$

$$\begin{aligned} c(2n-1) &= c_1\sigma_{11}(2n-1) + c_3\sigma_{11}\left(\frac{2n-1}{3}\right) \\ &\quad + r_1 f_1(2n-1) + r_2 f_2(2n-1) + ... + r_{10} f_{10}(2n-1) \end{aligned}$$

and, since for n=1,2,. . . ,

$$f_{11}(2n-1) = f_{12}(2n-1) = ...f_{19}(2n-1) = 0,$$

$$f_1(2n) = f_2(2n) = ... = f_{10}(2n) = 0,$$

and it is easy to see that

$$\begin{aligned} \sigma_{11}\left(\frac{2n}{3}\right) &= \left(2^{11}+1\right)\sigma_{11}\left(\frac{n}{3}\right) - 2^{11}\sigma_{11}\left(\frac{n}{6}\right) \\ &= 2049\sigma_{11}\left(\frac{n}{3}\right) - 2048\sigma_{11}\left(\frac{n}{6}\right). \end{aligned}$$

■

Remark 2 *These formulas are valid for 112116 nontrivial eta quotients. Among them, we have found 198 eta quotients, see Table_1, such that*

$$c(2n) = c_1\sigma_{11}(2n) + c_2\sigma_{11}(n) + c_4\sigma_{11}\left(\frac{n}{2}\right) + (2049c_3 + c_6)\sigma_{11}\left(\frac{n}{3}\right) + (c_{12} - 2048c_3)\sigma_{11}\left(\frac{n}{6}\right)$$

and 334 eta quotients, see Table_2 such that

$$c(2n-1) = c_1\sigma_{11}(2n-1) + c_3\sigma_{11}\left(\frac{2n-1}{3}\right) = 0.$$

Remark 3 *If f is an eta quotient, then $f(-q)$ is also an eta quotient, and the coefficients of $\frac{1}{2}(f(q)+f(-q))$ are exactly the even coefficients of f. In particular, it means that we have obtained all coefficients of the the sum of 198 eta quotients. Moreover, $\frac{1}{2}(f(q)-f(-q))$ are exactly the odd coefficients of f. In particular, it means that we have obtained all coefficients of the the difference of 334 eta quotients.*

Remark 4 *$S_{12}(\Gamma_0(12))$ is 19 dimensional, see [5] (Chapter 3, pg.87 and Chapter 5, pg.197), and generated by*

$$\Delta, \Delta(2z), \Delta(3z), \Delta(4z), \Delta(6z), \Delta(12z), \Delta_{3,12}, \Delta_{3,12}(2z), \Delta_{3,12}(4z), \Delta_{4,12}, \Delta_{4,12}(3z),$$
$$\Delta_{6,12,1}, \Delta_{6,12,1}(2z), \Delta_{6,12,2}, \Delta_{6,12,2}(2z), \Delta_{6,12,3}, \Delta_{6,12,3}(2z), \Delta_{12,12,1}, \Delta_{12,12,2}$$

where Δ is the unique cuspidal form in $S_{12}(\Gamma_0(1))$, $\Delta_{3,12}$ is the unique newform in $S_6(\Gamma_0(3))$, $\Delta_{4,12}$ is the unique newform in $S_{12}(\Gamma_0(4))$, $\Delta_{6,12,1}, \Delta_{6,12,2}, \Delta_{6,12,3}$ are all newforms in $S_{12}(\Gamma_0(6))$ and $\Delta_{12,12,1}, \Delta_{12,12,2}$ are all newforms in $S_{12}(\Gamma_0(12))$.

By simple calculation, we see that

$$
\begin{aligned}
f_1 = \quad & -\frac{79}{18800640}\Delta(z) - \frac{79}{783360}\Delta(2z) + \frac{7353}{696320}\Delta(3z) - \frac{79}{9180}\Delta(4z) + \frac{22059}{87040}\Delta(6z) \\
& + \frac{7353}{340}\Delta(12z) + \frac{401}{27260928}\Delta_{3,12}(z) - \frac{5213}{4543488}\Delta_{3,12}(2z) + \frac{401}{13311}\Delta_{3,12}(4z) \\
& - \frac{13}{1400832}\Delta_{4,12}(z) - \frac{2079}{155648}\Delta_{4,12}(3z) - \frac{13}{1105920}\Delta_{6,12,1}(z) + \frac{13}{34560}\Delta_{6,12,1}(2z) \\
& - \frac{1}{165888}\Delta_{6,12,2}(z) - \frac{1}{5184}\Delta_{6,12,2}(2z) + \frac{35}{4810752}\Delta_{6,12,3}(z) \\
& + \frac{35}{150336}\Delta_{6,12,3}(2z) + \frac{5}{221184}\Delta_{12,12,1}(z) - \frac{7}{525312}\Delta_{12,12,2}(z)
\end{aligned}
$$

$$
\begin{aligned}
f_2 = \quad & -\frac{13}{3133440}\Delta(z) - \frac{13}{130560}\Delta(2z) + \frac{3333}{348160}\Delta(3z) - \frac{13}{1530}\Delta(4z) \\
& + \frac{9999}{43520}\Delta(6z) + \frac{3333}{170}\Delta(12z) + \frac{173}{13630464}\Delta_{3,12}(z) \\
& - \frac{2249}{2271744}\Delta_{3,12}(2z) + \frac{346}{13311}\Delta_{3,12}(4z) - \frac{1}{126976}\Delta_{4,12}(z) \\
& - \frac{1503}{126976}\Delta_{4,12}(3z) - \frac{11}{1105920}\Delta_{6,12,1}(z) + \frac{11}{34560}\Delta_{6,12,1}(2z) \\
& - \frac{11}{1990656}\Delta_{6,12,2}(z) - \frac{11}{62208}\Delta_{6,12,2}(2z) + \frac{25}{3608064}\Delta_{6,12,3}(z) \\
& + \frac{25}{112752}\Delta_{6,12,3}(2z) + \frac{205}{10285056}\Delta_{12,12,1}(z) - \frac{1}{82944}\Delta_{12,12,2}(z)
\end{aligned}
$$

$$
\begin{aligned}
f_3 = \quad & -\frac{7}{1762560}\Delta(z) - \frac{7}{73440}\Delta(2z) + \frac{559}{65280}\Delta(3z) \\
& - \frac{56}{6885}\Delta(4z) + \frac{559}{2720}\Delta(6z) + \frac{4472}{255}\Delta(12z) \\
& + \frac{7}{638928}\Delta_{3,12}(z) - \frac{91}{106488}\Delta_{3,12}(2z) \\
& + \frac{896}{39933}\Delta_{3,12}(4z) - \frac{1}{150784}\Delta_{4,12}(z) - \frac{1565}{150784}\Delta_{4,12}(3z) \\
& - \frac{7}{829440}\Delta_{6,12,1}(z) + \frac{7}{25920}\Delta_{6,12,1}(2z) - \frac{23}{4478976}\Delta_{6,12,2}(z) \\
& - \frac{23}{139968}\Delta_{6,12,2}(2z) + \frac{107}{16236288}\Delta_{6,12,3}(z) \\
& + \frac{107}{507384}\Delta_{6,12,3}(2z) + \frac{17}{964224}\Delta_{12,12,1}(z) - \frac{13}{1181952}\Delta_{12,12,2}(z)
\end{aligned}
$$

$$
\begin{aligned}
f_4 = \quad & \frac{1}{32640}\Delta(z) + \frac{1}{1360}\Delta(2z) - \frac{63}{10880}\Delta(3z) + \frac{16}{255}\Delta(4z) \\
& - \frac{189}{1360}\Delta(6z) - \frac{1008}{85}\Delta(12z) - \frac{1}{212976}\Delta_{3,12}(z) \\
& + \frac{13}{35496}\Delta_{3,12}(2z) - \frac{128}{13311}\Delta_{3,12}(4z) - \frac{3}{75392}\Delta_{4,12}(z) \\
& - \frac{1161}{75392}\Delta_{4,12}(3z) - \frac{1}{138240}\Delta_{6,12,1}(z) + \frac{1}{4320}\Delta_{6,12,1}(2z) \\
& - \frac{1}{82944}\Delta_{6,12,2}(z) - \frac{1}{2592}\Delta_{6,12,2}(2z) - \frac{1}{150336}\Delta_{6,12,3}(z) \\
& - \frac{1}{4698}\Delta_{6,12,3}(2z) + \frac{1}{107136}\Delta_{12,12,1}(z) + \frac{1}{32832}\Delta_{12,12,2}(z)
\end{aligned}
$$

$$
\begin{aligned}
f_5 = \quad & - \frac{19}{3760128}\Delta(z) - \frac{19}{156672}\Delta(2z) + \frac{405}{139264}\Delta(3z) \\
& - \frac{19}{1836}\Delta(4z) + \frac{1215}{17408}\Delta(6z) + \frac{405}{68}\Delta(12z) \\
& - \frac{47}{18173952}\Delta_{3,12}(z) + \frac{611}{3028992}\Delta_{3,12}(2z) \\
& - \frac{47}{8874}\Delta_{3,12}(4z) + \frac{157}{43425792}\Delta_{4,12}(z) \\
& - \frac{2673}{4825088}\Delta_{4,12}(3z) + \frac{1}{147456}\Delta_{6,12,1}(z) \\
& - \frac{1}{4608}\Delta_{6,12,1}(2z) - \frac{1}{442368}\Delta_{6,12,2}(z) - \frac{1}{13824}\Delta_{6,12,2}(2z) \\
& + \frac{5}{1603584}\Delta_{6,12,3}(z) + \frac{5}{50112}\Delta_{6,12,3}(2z) + \\
& - \frac{5}{2285568}\Delta_{12,12,1}(z) - \frac{1}{700416}\Delta_{12,12,2}(z)
\end{aligned}
$$

$$
\begin{aligned}
f_6 = \quad & \frac{1}{32640}\Delta(z) + \frac{1}{1360}\Delta(2z) - \frac{63}{10880}\Delta(3z) + \frac{16}{255}\Delta(4z) \\
& - \frac{189}{1360}\Delta(6z) - \frac{1008}{85}\Delta(12z) - \frac{1}{212976}\Delta_{3,12}(z) \\
& + \frac{13}{35496}\Delta_{3,12}(2z) - \frac{128}{13311}\Delta_{3,12}(4z) + \frac{1}{75392}\Delta_{4,12}(z) \\
& + \frac{387}{75392}\Delta_{4,12}(3z) - \frac{1}{138240}\Delta_{6,12,1}(z) + \frac{1}{4320}\Delta_{6,12,1}(2z) \\
& - \frac{1}{82944}\Delta_{6,12,2}(z) - \frac{1}{2592}\Delta_{6,12,2}(2z) - \frac{1}{150336}\Delta_{6,12,3}(z) \\
& - \frac{1}{4698}\Delta_{6,12,3}(2z) - \frac{1}{321408}\Delta_{12,12,1}(z) - \frac{1}{98496}\Delta_{12,12,2}(z)
\end{aligned}
$$

$$
\begin{aligned}
f_7 = \quad & \frac{211}{626688}\Delta(z) + \frac{211}{26112}\Delta(2z) - \frac{2187}{69632}\Delta(3z) + \frac{211}{306}\Delta(4z) \\
& - \frac{6561}{8704}\Delta(6z) - \frac{2187}{34}\Delta(12z) + \frac{213}{504832}\Delta_{3,12}(z) \\
& - \frac{8307}{252416}\Delta_{3,12}(2z) + \frac{426}{493}\Delta_{3,12}(4z) - \frac{3517}{7237632}\Delta_{4,12}(z) \\
& - \frac{531441}{2412544}\Delta_{4,12}(3z) + \frac{3}{8192}\Delta_{6,12,1}(z) - \frac{3}{256}\Delta_{6,12,1}(2z) \\
& + \frac{7}{73728}\Delta_{6,12,2}(z) + \frac{7}{2304}\Delta_{6,12,2}(2z) \\
& + \frac{11}{133632}\Delta_{6,12,3}(z) + \frac{11}{4176}\Delta_{6,12,3}(2z) + \\
& - \frac{71}{126976}\Delta_{12,12,1}(z) - \frac{5}{19456}\Delta_{12,12,2}(z)
\end{aligned}
$$

$$
\begin{aligned}
f_8 = \quad & \frac{1}{352512}\Delta(z) + \frac{1}{14688}\Delta(2z) - \frac{259}{39168}\Delta(3z) \\
& + \frac{8}{1377}\Delta(4z) - \frac{259}{1632}\Delta(6z) - \frac{2072}{153}\Delta(12z) \\
& - \frac{5}{638928}\Delta_{3,12}(z) + \frac{65}{106488}\Delta_{3,12}(2z) - \frac{640}{39933}\Delta_{3,12}(4z) \\
& - \frac{37}{12213504}\Delta_{4,12}(z) - \frac{17731}{4071168}\Delta_{4,12}(3z) + \frac{1}{165888}\Delta_{6,12,1}(z) \\
& - \frac{1}{5184}\Delta_{6,12,1}(2z) + \frac{7}{1492992}\Delta_{6,12,2}(z) + \frac{7}{46656}\Delta_{6,12,2}(2z) \\
& - \frac{31}{5412096}\Delta_{6,12,3}(z) - \frac{31}{169128}\Delta_{6,12,3}(2z) \\
& + \frac{7}{964224}\Delta_{12,12,1}(z) - \frac{5}{1181952}\Delta_{12,12,2}(z)
\end{aligned}
$$

$$
\begin{aligned}
f_9 = \quad & \frac{1543673}{43304140080}\Delta(z) + \frac{1543673}{180433920}\Delta(2z) - \frac{38051613}{481157120}\Delta(3z) \\
& + \frac{1543673}{2114460}\Delta(4z) - \frac{1141548339}{60144640}\Delta(6z) - \frac{38051613}{234940}\Delta(12z) \\
& + \frac{46641}{147410944}\Delta_{3,12}(z) - \frac{1818999}{73705472}\Delta_{3,12}(2z) + \frac{46641}{71978}\Delta_{3,12}(4z) \\
& - \frac{63891}{14475264}\Delta_{4,12}(z) - \frac{767637}{4825088}\Delta_{4,12}(3z) + \frac{141}{573440}\Delta_{6,12,1}(z) \\
& - \frac{141}{17920}\Delta_{6,12,1}(2z) + \frac{331}{1916928}\Delta_{6,12,2}(z) + \frac{331}{59904}\Delta_{6,12,2}(2z) \\
& + \frac{563}{2672640}\Delta_{6,12,3}(z) + \frac{563}{83520}\Delta_{6,12,3}(2z) + -\frac{137}{253952}\Delta_{12,12,1}(z) \\
& - \frac{25}{77824}\Delta_{12,12,2}(z) + \frac{1}{4457361592320}E_{12}(z) \\
& - \frac{683}{1485787197440}E_{12}(2z) - \frac{177147}{1485787197440}E_{12}(3z) \\
& + \frac{1}{2176446090}E_{12}(4z) + \frac{362974203}{1485787197440}E_{12}(6z) \\
& - \frac{177147}{725482030}E_{12}(12z)
\end{aligned}
$$

$$
\begin{aligned}
f_{10} = \quad & \frac{2201}{12240}\Delta(z) + \frac{2201}{510}\Delta(2z) - \frac{50301}{1360}\Delta(3z) + \frac{281728}{765}\Delta(4z) \\
& - \frac{150903}{170}\Delta(6z) - \frac{6438528}{85}\Delta(12z) + \frac{155}{986}\Delta_{3,12}(z) \\
& - \frac{6045}{493}\Delta_{3,12}(2z) + \frac{158720}{493}\Delta_{3,12}(4z) + \frac{6475}{56544}\Delta_{4,12}(z) \\
& + \frac{8007003}{18848}\Delta_{4,12}(3z) + \frac{79}{640}\Delta_{6,12,1}(z) - \frac{79}{20}\Delta_{6,12,1}(2z) \\
& + \frac{109}{1152}\Delta_{6,12,2}(z) + \frac{109}{36}\Delta_{6,12,2}(2z) + \frac{233}{2088}\Delta_{6,12,3}(z) \\
& + \frac{932}{261}\Delta_{6,12,3}(2z) + \frac{413}{2976}\Delta_{12,12,1}(z) + \frac{73}{912}\Delta_{12,12,2}(z)
\end{aligned}
$$

$$
\begin{aligned}
f_{11} = \quad & - \frac{26}{765}\Delta(2z) - \frac{896}{765}\Delta(4z) - \frac{729}{85}\Delta(6z) + \frac{279936}{85}\Delta(12z) \\
& + \frac{113}{2958}\Delta_{3,12}(2z) - \frac{1024}{1479}\Delta_{3,12}(4z) - \frac{1}{60}\Delta_{6,12,1}(2z) \\
& + \frac{1}{36}\Delta_{6,12,2}(2z) - \frac{4}{261}\Delta_{6,12,3}(2z)
\end{aligned}
$$

$$
\begin{aligned}
f_{12} = \quad & - \frac{1027}{12240}\Delta(2z) - \frac{112}{765}\Delta(4z) + \frac{2187}{1360}\Delta(6z) + \frac{34992}{85}\Delta(12z) \\
& + \frac{39}{1972}\Delta_{3,12}(2z) - \frac{768}{493}\Delta_{3,12}(4z) + \frac{3}{160}\Delta_{6,12,1}(2z) \\
& + \frac{7}{288}\Delta_{6,12,2}(2z) + \frac{11}{522}\Delta_{6,12,3}(2z)
\end{aligned}
$$

$$
\begin{aligned}
f_{13} = \quad & -\frac{7}{24480}\Delta(2z) - \frac{26}{765}\Delta(4z) + \frac{2187}{2720}\Delta(6z) - \frac{729}{85}\Delta(12z) \\
& -\frac{1}{5916}\Delta_{3,12}(2z) + \frac{113}{2958}\Delta_{3,12}(4z) + \frac{1}{3840}\Delta_{6,12,1}(2z) \\
& +\frac{1}{2304}\Delta_{6,12,2}(2z) - \frac{1}{4176}\Delta_{6,12,3}(2z) +
\end{aligned}
$$

$$
\begin{aligned}
f_{14} = \quad & \frac{1}{36}\Delta(6z) + \frac{16}{9}\Delta(12z) - \frac{1}{17496}\Delta_{6,12,2}(2z) \\
& +\frac{1}{17496}\Delta_{6,12,3}(2z)
\end{aligned}
$$

$$
\begin{aligned}
f_{15} = \quad & -\frac{7}{24480}\Delta(2z) - \frac{13}{170}\Delta(4z) + \frac{2187}{2720}\Delta(6z) + \frac{29997}{170}\Delta(12z) \\
& -\frac{5}{1836}\Delta_{3,12}(2z) + \frac{98}{459}\Delta_{3,12}(4z) + \frac{89}{34560}\Delta_{6,12,1}(2z) \\
& -\frac{13}{6912}\Delta_{6,12,2}(2z) + \frac{1}{432}\Delta_{6,12,3}(2z)
\end{aligned}
$$

$$
\begin{aligned}
f_{16} = \quad & -\frac{7}{4080}\Delta(2z) + \frac{36}{85}\Delta(4z) + \frac{6561}{1360}\Delta(6z) - \frac{6804}{85}\Delta(12z) \\
& +\frac{11}{5916}\Delta_{3,12}(2z) + \frac{176}{1479}\Delta_{3,12}(4z) + \frac{1}{240}\Delta_{6,12,1}(2z) \\
& -\frac{1}{232}\Delta_{6,12,3}(2z)
\end{aligned}
$$

$$
\begin{aligned}
f_{17} = \quad & -\frac{1}{153}\Delta(4z) + \frac{378}{17}\Delta(12z) \\
& -\frac{1}{3132}\Delta_{3,12}(2z) + \frac{308}{13311}\Delta_{3,12}(4z) \\
& +\frac{1}{3456}\Delta_{6,12,1}(2z) - \frac{1}{3456}\Delta_{6,12,2}(2z) + \frac{1}{3132}\Delta_{6,12,3}(2z) +
\end{aligned}
$$

$$
\begin{aligned}
f_{18} = \quad & -\frac{717}{110560}\Delta(2z) - \frac{189277}{58735}\Delta(4z) + \frac{216513}{110560}\Delta(6z) + \frac{37712628}{58735}\Delta(12z) \\
& +\frac{297}{8468}\Delta_{3,12}(2z) - \frac{194697}{71978}\Delta_{3,12}(4z) + \frac{297}{8960}\Delta_{6,12,1}(2z) \\
& -\frac{95}{3328}\Delta_{6,12,2}(2z) - \frac{77}{2320}\Delta_{6,12,3}(2z) + -\frac{1}{2176446090}E_{12}(2z) \\
& +\frac{1}{2176446090}E_{12}(4z) + \frac{177147}{725482030}E_{12}(6z) - \frac{177147}{725482030}E_{12}(12z)
\end{aligned}
$$

$$
\begin{aligned}
f_{19} = \quad & \frac{31}{1585845}\Delta(2z) + \frac{13067}{3171690}\Delta(4z) - \frac{3277}{58735}\Delta(6z) - \frac{1142579}{117470}\Delta(12z) \\
& + \frac{49}{323901}\Delta_{3,12}(2z) - \frac{7909}{647802}\Delta_{3,12}(4z) - \frac{1}{6720}\Delta_{6,12,1}(2z) \\
& + \frac{61}{606528}\Delta_{6,12,2}(2z) - \frac{13}{105705}\Delta_{6,12,3}(2z) + \frac{3}{725482030}E_{12}(2z) \\
& - \frac{3}{725482030}E_{12}(4z) - \frac{3}{725482030}E_{12}(6z) + \frac{3}{725482030}E_{12}(12z)
\end{aligned}
$$

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APPENDIX

$$\begin{aligned}
c_1: \quad &= \frac{137191304}{19829797677}k_0 - \frac{53657770}{59489393031}k_1 - \frac{7593272}{59489393031}k_2 + \frac{3280504}{19829797677}k_3 \\
&- \frac{5592400}{59489393031}k_4 + \frac{2796208}{59489393031}k_5 - \frac{155344}{6609932559}k_6 + \frac{699056}{59489393031}k_7 \\
&- \frac{349520}{59489393031}k_8 + \frac{58256}{19829797677}k_9 - \frac{87376}{59489393031}k_{10} + \frac{43696}{59489393031}k_{11} \\
&- \frac{7280}{19829797677}k_{12} + \frac{10928}{59489393031}k_{13} - \frac{5456}{59489393031}k_{14} + \frac{304}{6609932559}k_{15} \\
&- \frac{1360}{59489393031}k_{16} + \frac{688}{59489393031}k_{17} - \frac{112}{19829797677}k_{18} + \frac{176}{59489393031}k_{19} \\
&- \frac{80}{59489393031}k_{20} + \frac{16}{19829797677}k_{21} - \frac{16}{59489393031}k_{22} + \frac{16}{59489393031}k_{23}
\end{aligned}$$

$$
\begin{aligned}
c_2: \quad &= \frac{1968597297776}{6609932559}k_0 - \frac{875522436232}{19829797677}k_1 + \frac{84505395484}{19829797677}k_2 - \frac{2240584232}{6609932559}k_3 \\
&+ \frac{3819609200}{19829797677}k_4 - \frac{1909810064}{19829797677}k_5 + \frac{106099952}{2203310853}k_6 - \frac{477455248}{19829797677}k_7 \\
&+ \frac{238722160}{19829797677}k_8 - \frac{39788848}{6609932559}k_9 + \frac{59677808}{19829797677}k_{10} - \frac{29844368}{19829797677}k_{11} \\
&+ \frac{4972240}{6609932559}k_{12} - \frac{7463824}{19829797677}k_{13} + \frac{3726448}{19829797677}k_{14} - \frac{207632}{2203310853}k_{15} \\
&+ \frac{928880}{19829797677}k_{16} - \frac{469904}{19829797677}k_{17} + \frac{76496}{6609932559}k_{18} - \frac{120208}{19829797677}k_{19} \\
&+ \frac{54640}{19829797677}k_{20} - \frac{10928}{6609932559}k_{21} + \frac{10928}{19829797677}k_{22} - \frac{10928}{19829797677}k_{23}
\end{aligned}
$$

$$
\begin{aligned}
c_3: \quad &= -\frac{83476104536984}{19829797677}k_0 + \frac{44366472902746}{59489393031}k_1 - \frac{3889888078840}{59489393031}k_2 - \frac{422516024200}{19829797677}k_3 \\
&+ \frac{990716029600}{59489393031}k_4 - \frac{495359432032}{59489393031}k_5 + \frac{27519810976}{6609932559}k_6 - \frac{123840566624}{59489393031}k_7 \\
&+ \frac{61918866080}{59489393031}k_8 - \frac{10320283424}{19829797677}k_9 + \frac{15479007904}{59489393031}k_{10} - \frac{7740921184}{59489393031}k_{11} \\
&+ \frac{1289681120}{19829797677}k_{12} - \frac{1935938912}{59489393031}k_{13} + \frac{966552224}{59489393031}k_{14} - \frac{53854816}{6609932559}k_{15} \\
&+ \frac{240929440}{59489393031}k_{16} - \frac{121881952}{59489393031}k_{17} + \frac{19841248}{19829797677}k_{18} - \frac{31179104}{59489393031}k_{19} \\
&+ \frac{14172320}{59489393031}k_{20} - \frac{2834464}{19829797677}k_{21} + \frac{2834464}{59489393031}k_{22} - \frac{2834464}{59489393031}k_{23}
\end{aligned}
$$

$$
\begin{aligned}
c_4: \quad &= -\frac{143711027033024}{482525076807}k_0 + \frac{191743328426296}{4342725691263}k_1 - \frac{18506123050696}{4342725691263}k_2 + \frac{490445635720}{1447575230421}k_3 \\
&- \frac{836069163824}{4342725691263}k_4 + \frac{418010269280}{4342725691263}k_5 - \frac{69650973760}{1447575230421}k_6 + \frac{104375622016}{4342725691263}k_7 \\
&- \frac{51982545664}{4342725691263}k_8 + \frac{2842703360}{482525076807}k_9 - \frac{11974691840}{4342725691263}k_{10} + \frac{4355987456}{4342725691263}k_{11} \\
&+ \frac{362770432}{1447575230421}k_{12} - \frac{7073177600}{4342725691263}k_{13} + \frac{16598220800}{4342725691263}k_{14} - \frac{11472928768}{1447575230421}k_{15} \\
&+ \frac{69452333056}{4342725691263}k_{16} - \frac{139208458240}{4342725691263}k_{17} + \frac{1146388480}{17871299141}k_{18} - \frac{557218955264}{4342725691263}k_{19} \\
&+ \frac{1114478575616}{4342725691263}k_{20} - \frac{742991298560}{1447575230421}k_{21} + \frac{4457959751680}{4342725691263}k_{22} - \frac{8915921895424}{4342725691263}k_{23} \\
&+ \frac{16777216}{4085883}k_{24}
\end{aligned}
$$

$$
\begin{aligned}
c_6 : \quad &= \frac{2588261944044351491732 8}{3000823452662733} k_0 - \frac{4585360550017601552552}{3000823452662733} k_1 + \frac{4019430638926241164 36}{3000823452662733} k_2 \\
&+ \frac{13108201351394251837 6}{3000823452662733} k_3 - \frac{10244557125277323689 6}{3000823452662733} k_4 + \frac{51222932108270437024}{3000823452662733} k_5 \\
&- \frac{25599461036065825760}{3000823452662733} k_6 + \frac{12776159927443548448}{3000823452662733} k_7 - \frac{6352357873281233120}{3000823452662733} k_8 \\
&+ \frac{3128891273884173088}{3000823452662733} k_9 - \frac{1505006474742605024}{3000823452662733} k_{10} + \frac{681498503672195872}{3000823452662733} k_{11} \\
&- \frac{257593020326507744}{3000823452662733} k_{12} + \frac{34074710419147552}{3000823452662733} k_{13} + \frac{89835935814798112}{3000823452662733} k_{14} \\
&- \frac{163356814105851104}{3000823452662733} k_{15} + \frac{212268718410771232}{3000823452662733} k_{16} - \frac{248290173495567584}{3000823452662733} k_{17} \\
&+ \frac{278452261713871648}{3000823452662733} k_{18} - \frac{305098599788384480}{3000823452662733} k_{19} + \frac{330572711567595808}{3000823452662733} k_{20} \\
&- \frac{354874225554660320}{3000823452662733} k_{21} + \frac{379174253554343584}{3000823452662733} k_{22} - \frac{426602454755253920}{3000823452662733} k_{23} \\
&+ \frac{2409884745728}{8470035459} k_{24}
\end{aligned}
$$

$$
\begin{aligned}
c_{12} : \quad &= -\frac{2586970254909807601350 4}{3000823452662733} k_0 + \frac{4583122572026437209976}{3000823452662733} k_1 - \frac{13391561542373364604 0}{1000274484220911} k_2 \\
&- \frac{131018074580640860968}{3000823452662733} k_3 + \frac{102395596552341132880}{3000823452662733} k_4 - \frac{17065981556312821472}{1000274484220911} k_5 \\
&+ \frac{25586967352636299584}{3000823452662733} k_6 - \frac{12769912943733404288}{3000823452662733} k_7 + \frac{235156826366803712}{111141609357879} k_8 \\
&- \frac{3127329139682183680}{3000823452662733} k_9 + \frac{1504224915083465728}{3000823452662733} k_{10} - \frac{227035508086011904}{1000274484220911} k_{11} \\
&+ \frac{257394845918547968}{3000823452662733} k_{12} - \frac{33971039345106944}{3000823452662733} k_{13} - \frac{29965574874546176}{1000274484220911} k_{14} \\
&+ \frac{163405329522212864}{3000823452662733} k_{15} - \frac{212329003674533888}{3000823452662733} k_{16} + \frac{27599176189657088}{333424828073637} k_{17} \\
&- \frac{278647792510173184}{3000823452662733} k_{18} + \frac{305485229036093440}{3000823452662733} k_{19} - \frac{110447846474088448}{1000274484220911} k_{20} \\
&+ \frac{356414880411926528}{3000823452662733} k_{21} - \frac{382254848374538240}{3000823452662733} k_{22} + \frac{144254500472258560}{1000274484220911} k_{23} \\
&- \frac{2444663914496}{8470035459} k_{24}
\end{aligned}
$$

$$
\begin{aligned}
r_1 : \quad &= -\frac{7029001843222716743680}{19829797677}k_0 + \frac{3735813367318365765632}{59489393031}k_1 - \frac{3275364677288127365 12}{59489393031}k_2 \\
&- \frac{35577334286080827392}{19829797677}k_3 + \frac{83413842819752886272}{59489393031}k_4 - \frac{41694369979409063936}{59489393031}k_5 \\
&+ \frac{2314310057092481024}{6609932559}k_6 - \frac{10389173061648326656}{59489393031}k_7 + \frac{5160109930397532160}{59489393031}k_8 \\
&- \frac{844788203802370048}{19829797677}k_9 + \frac{1206876838568296448}{59489393031}k_{10} - \frac{525583816383635456}{59489393031}k_{11} \\
&+ \frac{54337378444017664}{19829797677}k_{12} + \frac{44107571790061568}{59489393031}k_{13} - \frac{178852000356859904}{59489393031}k_{14} \\
&+ \frac{31365795610943488}{6609932559}k_{15} - \frac{376405569052377088}{59489393031}k_{16} + \frac{471713646880301056}{59489393031}k_{17} \\
&- \frac{191639705395167232}{19829797677}k_{18} + \frac{688906000512671744}{59489393031}k_{19} - \frac{816558323406503936}{59489393031}k_{20} \\
&+ \frac{319292028288999424}{19829797677}k_{21} - \frac{1099193846327492608}{59489393031}k_{22} + \frac{1099193846327492608}{59489393031}k_{23}
\end{aligned}
$$

$$
\begin{aligned}
r_2 : \quad &= \frac{9687001036295190446080}{19829797677}k_0 - \frac{5148501566898386541568}{59489393031}k_1 + \frac{4513834816192555571 20}{59489393031}k_2 \\
&+ \frac{49034728939184981504}{19829797677}k_3 - \frac{11496636151705507 8400}{59489393031}k_4 + \frac{5746856965502712985 6}{59489393031}k_5 \\
&- \frac{3190110653564521472}{6609932559}k_6 + \frac{14322145792701082112}{59489393031}k_7 - \frac{7114017618187274240}{59489393031}k_8 \\
&+ \frac{1164376425905979904}{19829797677}k_9 - \frac{1660594966200656896}{59489393031}k_{10} + \frac{7173777775102722560}{59489393031}k_{11} \\
&- \frac{70555693680738304}{19829797677}k_{12} - \frac{82153755554619904}{59489393031}k_{13} + \frac{279272462949016576}{59489393031}k_{14} \\
&- \frac{48561934053684736}{6609932559}k_{15} + \frac{586623317616281600}{59489393031}k_{16} - \frac{743353203603327488}{59489393031}k_{17} \\
&+ \frac{305806752391226368}{19829797677}k_{18} - \frac{1113787856531140096}{59489393031}k_{19} + \frac{1337419379879514112}{59489393031}k_{20} \\
&- \frac{529438275739600384}{19829797677}k_{21} + \frac{1839210274558088192}{59489393031}k_{22} - \frac{1839210274558088192}{59489393031}k_{23}
\end{aligned}
$$

$$
\begin{aligned}
r_3: \quad &= -\frac{222421643304960553600}{2203310853}k_0 + \frac{118211452926172850512}{6609932559}k_1 - \frac{10360680729876791344}{6609932559}k_2 \\
&- \frac{1126886450090739824}{2203310853}k_3 + \frac{2641939308401506528}{6609932559}k_4 - \frac{1321060429928345728}{6609932559}k_5 \\
&+ \frac{73364654855260832}{734436951}k_6 - \frac{329556839648748896}{6609932559}k_7 + \frac{163763828171344928}{6609932559}k_8 \\
&- \frac{26777244798632608}{2203310853}k_9 + \frac{37904965416550432}{6609932559}k_{10} - \frac{15788374880930272}{6609932559}k_{11} \\
&+ \frac{1183168629571936}{2203310853}k_{12} + \frac{4058051992105504}{6609932559}k_{13} - \frac{9752352542226400}{6609932559}k_{14} \\
&+ \frac{1658881916929312}{734436951}k_{15} - \frac{20389941940065248}{6609932559}k_{16} + \frac{26575465621977632}{6609932559}k_{17} \\
&- \frac{11271646462038688}{2203310853}k_{18} + \frac{42322126391863840}{6609932559}k_{19} - \frac{52310789798604256}{6609932559}k_{20} \\
&+ \frac{21260309868779104}{2203310853}k_{21} - \frac{75251069414070368}{6609932559}k_{22} + \frac{75251069414070368}{6609932559}k_{23}
\end{aligned}
$$

$$
\begin{aligned}
r_4: \quad &= -\frac{7392215223684602560}{19829797677}k_0 + \frac{3928551544346165912}{59489393031}k_1 - \frac{344023484329373288}{59489393031}k_2 \\
&- \frac{37543278257625080}{19829797677}k_3 + \frac{88002219417588368}{59489393031}k_4 - \frac{44039308661585360}{59489393031}k_5 \\
&+ \frac{2448412189382864}{6609932559}k_6 - \frac{11017980593474224}{59489393031}k_7 + \frac{5493635270869840}{59489393031}k_8 \\
&- \frac{905494935818128}{19829797677}k_9 + \frac{1312428808628048}{59489393031}k_{10} - \frac{595423007101616}{59489393031}k_{11} \\
&+ \frac{73813113073264}{19829797677}k_{12} - \frac{19469703165616}{59489393031}k_{13} - \frac{96995881980080}{59489393031}k_{14} \\
&+ \frac{18911830740688}{6609932559}k_{15} - \frac{222292541127856}{59489393031}k_{16} + \frac{263313375471952}{59489393031}k_{17} \\
&- \frac{99768186587536}{19829797677}k_{18} + \frac{332277954021200}{59489393031}k_{19} - \frac{364245418269104}{59489393031}k_{20} \\
&+ \frac{131735650835440}{19829797677}k_{21} - \frac{426168486743536}{59489393031}k_{22} + \frac{426168486743536}{59489393031}k_{23}
\end{aligned}
$$

$$
\begin{aligned}
r_5: \quad &= -\frac{605435005600528531456}{19829797677}k_0 + \frac{321791064440572780544}{59489393031}k_1 - \frac{28222832432205750272}{59489393031}k_2 \\
&- \frac{3061544279114104832}{19829797677}k_3 + \frac{7178318207087722496}{59489393031}k_4 - \frac{3586610862513299456}{59489393031}k_5 \\
&+ \frac{198970736961806336}{6609932559}k_6 - \frac{892576406743711744}{59489393031}k_7 + \frac{442988399109898240}{59489393031}k_8 \\
&- \frac{72494649067085824}{19829797677}k_9 + \frac{103736489461686272}{59489393031}k_{10} - \frac{45664975392456704}{59489393031}k_{11} \\
&+ \frac{5048883154960384}{19829797677}k_{12} + \frac{1797635806060544}{59489393031}k_{13} - \frac{12239684442202112}{59489393031}k_{14} \\
&+ \frac{2181463130570752}{6609932559}k_{15} - \frac{25787153149984768}{59489393031}k_{16} + \frac{31523942159982592}{59489393031}k_{17} \\
&- \frac{12445638960357376}{19829797677}k_{18} + \frac{43390537871900672}{59489393031}k_{19} - \frac{49849265691115520}{59489393031}k_{20} \\
&+ \frac{18904366779572224}{19829797677}k_{21} - \frac{63576934986317824}{59489393031}k_{22} + \frac{63576934986317824}{59489393031}k_{23}
\end{aligned}
$$

$$
\begin{aligned}
r_6: \quad &= \frac{547724272121467328}{19829797677}k_0 - \frac{291109042431905144}{59489393031}k_1 + \frac{25524117437721224}{59489393031}k_2 \\
&+ \frac{2771953718787352}{19829797677}k_3 - \frac{6498832879482320}{59489393031}k_4 + \frac{3247452732792656}{59489393031}k_5 \\
&- \frac{180040763813776}{6609932559}k_6 + \frac{804553420954096}{59489393031}k_7 - \frac{392865457928464}{59489393031}k_8 \\
&+ \frac{60310626711632}{19829797677}k_9 - \frac{65167347394832}{59489393031}k_{10} - \frac{8111300299024}{59489393031}k_{11} \\
&+ \frac{22883185816144}{19829797677}k_{12} - \frac{135184827746576}{59489393031}k_{13} + \frac{222433933711088}{59489393031}k_{14} \\
&- \frac{38271131214992}{6609932559}k_{15} + \frac{516581596636912}{59489393031}k_{16} - \frac{756240342511888}{59489393031}k_{17} \\
&+ \frac{361157375860304}{19829797677}k_{18} - \frac{1521006208191248}{59489393031}k_{19} + \frac{2091571840690160}{59489393031}k_{20} \\
&- \frac{931723008359216}{19829797677}k_{21} + \frac{3498766209465136}{59489393031}k_{22} - \frac{3498766209465136}{59489393031}k_{23}
\end{aligned}
$$

$$
\begin{aligned}
r_7: \quad &= \frac{7383201101818445824}{19829797677}k_0 - \frac{3923907825658625024}{59489393031}k_1 + \frac{343870742935448576}{59489393031}k_2 \\
&+ \frac{37421170596667904}{19829797677}k_3 - \frac{87748189594738688}{59489393031}k_4 + \frac{43904678717227520}{59489393031}k_5 \\
&- \frac{2440827032511488}{6609932559}k_6 + \frac{10983846996928000}{59489393031}k_7 - \frac{5476568863221760}{59489393031}k_8 \\
&+ \frac{02650404335104}{19829797677}k_9 - \frac{1308162402028544}{59489393031}k_{10} + \frac{593289413176832}{59489393031}k_{11} \\
&- \frac{73457644294144}{19829797677}k_{12} + \frac{18936109371904}{59489393031}k_{13} + \frac{97262288251904}{59489393031}k_{14} \\
&- \frac{18926674491904}{6609932559}k_{15} + \frac{222358947383296}{59489393031}k_{16} - \frac{263346969224704}{59489393031}k_7 \\
&+ \frac{99773655337984}{19829797677}k_{18} - \frac{332286547771904}{59489393031}k_{19} + \frac{364249324519424}{59489393031}k_{20} \\
&- \frac{131736432085504}{19829797677}k_{21} + \frac{426169267993600}{59489393031}k_{22} - \frac{426169267993600}{59489393031}k_{23}
\end{aligned}
$$

$$
\begin{aligned}
r_8: \quad &= -\frac{27826021011840}{244812317}k_0 + \frac{14792578089776}{734436951}k_1 - \frac{1303810520912}{734436951}k_2 \\
&- \frac{136268844816}{244812317}k_3 + \frac{304125362720}{734436951}k_4 - \frac{115504514432}{734436951}k_5 \\
&- \frac{3816165600}{244812317}k_6 + \frac{136290345056}{734436951}k_7 - \frac{313610794784}{734436951}k_8 \\
&+ \frac{205466416032}{244812317}k_9 - \frac{1164716789536}{734436951}k_{10} + \frac{2170047402208}{734436951}k_{11} \\
&- \frac{1336571773536}{244812317}k_{12} + \frac{7352863856864}{734436951}k_{13} - \frac{13369694488352}{734436951}k_{14} \\
&+ \frac{8021956148640}{244812317}k_{15} - \frac{42783973041952}{734436951}k_{16} + \frac{74872052738272}{734436951}k_{17} \\
&- \frac{42784046738016}{244812317}k_{18} + \frac{213920256365792}{734436951}k_{19} - \frac{342272422090016}{734436951}k_{20} \\
&+ \frac{171136212462240}{244812317}k_{21} - \frac{684544852683424}{734436951}k_{22} + \frac{684544852683424}{734436951}k_{23}
\end{aligned}
$$

$$
\begin{aligned}
r_9: \quad &= -\frac{3561660864069632}{9565749}k_0 + \frac{1893025993080832}{28697247}k_1 - \frac{166027653971968}{28697247}k_2 \\
&- \frac{18007619743744}{9565749}k_3 + \frac{42211540025344}{28697247}k_4 - \frac{21076444499968}{28697247}k_5 \\
&+ \frac{1167641755648}{3188583}k_6 - \frac{5225062387712}{28697247}k_7 + \frac{2583084744704}{28697247}k_8 \\
&- \frac{420738953216}{9565749}k_9 + \frac{601661980672}{28697247}k_{10} - \frac{271505477632}{28697247}k_{11} \\
&+ \frac{35435429888}{9565749}k_{12} - \frac{23827632128}{28697247}k_{13} - \frac{17532633088}{28697247}k_{14} \\
&+ \frac{4232425472}{3188583}k_{15} - \frac{48492363776}{28697247}k_{16} + \frac{53571694592}{28697247}k_{17} \\
&- \frac{18744098816}{9565749}k_{18} + \frac{57441660928}{28697247}k_{19} - \frac{58167279616}{28697247}k_{20} \\
&+ \frac{19469717504}{9565749}k_{21} - \frac{58651025408}{28697247}k_{22} + \frac{58651025408}{28697247}k_{23}
\end{aligned}
$$

$$
\begin{aligned}
r_{10}: \quad &= -\frac{476052335552}{19829797677}k_0 + \frac{119032443832}{59489393031}k_1 + \frac{7593272}{59489393031}k_2 \\
&- \frac{3280504}{19829797677}k_3 + \frac{5592400}{59489393031}k_4 - \frac{2796208}{59489393031}k_5 \\
&+ \frac{155344}{6609932559}k_6 - \frac{699056}{59489393031}k_7 + \frac{349520}{59489393031}k_8 \\
&- \frac{58256}{19829797677}k_9 + \frac{87376}{59489393031}k_{10} - \frac{43696}{59489393031}k_{11} \\
&+ \frac{7280}{19829797677}k_{12} - \frac{10928}{59489393031}k_{13} + \frac{5456}{59489393031}k_{14} \\
&- \frac{304}{6609932559}k_{15} + \frac{1360}{59489393031}k_{16} - \frac{688}{59489393031}k_{17} \\
&+ \frac{112}{19829797677}k_{18} - \frac{176}{59489393031}k_{19} + \frac{80}{59489393031}k_{20} \\
&- \frac{16}{19829797677}k_{21} + \frac{16}{59489393031}k_{22} - \frac{16}{59489393031}k_{23}
\end{aligned}
$$

$$
\begin{aligned}
r_{11}: \quad &= \frac{6277794439232896}{55571902646499}k_0 - \frac{1511160452025968}{55571902646499}k_1 + \frac{653907099701008}{55571902646499}k_2 \\
&- \frac{467357095195472}{55571902646499}k_3 + \frac{363862258780768}{55571902646499}k_4 - \frac{281507794407584}{55571902646499}k_5 \\
&+ \frac{232252137406528}{55571902646499}k_6 - \frac{234086061531008}{55571902646499}k_7 + \frac{313551521189632}{55571902646499}k_8 \\
&- \frac{508955664078848}{55571902646499}k_9 + \frac{874239023509504}{55571902646499}k_{10} - \frac{1483285407727616}{55571902646499}k_{11} \\
&+ \frac{2434231789895680}{55571902646499}k_{12} - \frac{3853108962025472}{55571902646499}k_{13} + \frac{5896036638834688}{55571902646499}k_{14} \\
&- \frac{8749330546294784}{55571902646499}k_{15} + \frac{12627146727227392}{55571902646499}k_{16} - \frac{17765913528664064}{55571902646499}k_{17} \\
&+ \frac{24412338952732672}{55571902646499}k_{18} - \frac{32799425358430208}{55571902646499}k_{19} + \frac{43132763818491904}{55571902646499}k_{20} \\
&- \frac{55823536478388224}{55571902646499}k_{21} + \frac{73229177537953792}{55571902646499}k_{22} - \frac{108040459657084928}{55571902646499}k_{23} \\
&+ \frac{216080919314169856}{55571902646499}k_{24}
\end{aligned}
$$

$$
\begin{aligned}
r_{12}: \quad &= \frac{839636025917302144}{500147123818491}k_0 - \frac{70680399312300272}{500147123818491}k_1 - \frac{41357900805508976}{500147123818491}k_2 \\
&+ \frac{42448451523067504}{500147123818491}k_3 - \frac{32598768712313888}{500147123818491}k_4 + \frac{23852516117086624}{500147123818491}k_5 \\
&- \frac{16599850764392384}{500147123818491}k_6 + \frac{11322462955368448}{500147123818491}k_7 - \frac{8592011928928256}{500147123818491}k_8 \\
&+ \frac{9056553739899904}{500147123818491}k_9 - \frac{13412523660535808}{500147123818491}k_{10} + \frac{22362888815767552}{500147123818491}k_{11} \\
&- \frac{36566714550984704}{500147123818491}k_{12} + \frac{56590015831515136}{500147123818491}k_{13} - \frac{82869244035547136}{500147123818491}k_{14} \\
&+ \frac{115693941089124352}{500147123818491}k_{15} - \frac{155205456065626112}{500147123818491}k_{16} + \frac{201405514494558208}{500147123818491}k_{17} \\
&- \frac{254184493088964608}{500147123818491}k_{18} + \frac{313377969200250880}{500147123818491}k_{19} - \frac{378711921456545792}{500147123818491}k_{20} \\
&+ \frac{449638307114106880}{500147123818491}k_{21} - \frac{531749559574200320}{500147123818491}k_{22} + \frac{695972064494387200}{500147123818491}k_{23} \\
&- \frac{1391944128988774400}{500147123818491}k_{24}
\end{aligned}
$$

$$
\begin{aligned}
r_{13}: \quad &= \frac{344554724732101140320}{500147123818491}k_0 - \frac{182766981670019506540}{500147123818491}k_1 + \frac{132478952867874155156}{500147123818491}k_2 \\
&- \frac{104255451888613760476}{500147123818491}k_3 + \frac{81642352119103499192}{500147123818491}k_4 - \frac{62561499307615989616}{500147123818491}k_5 \\
&+ \frac{46813131046374981344}{500147123818491}k_6 - \frac{34150617881300518336}{500147123818491}k_7 + \frac{24281262242273581952}{500147123818491}k_8 \\
&- \frac{16873243349631512320}{500147123818491}k_9 + \frac{11569954184799723008}{500147123818491}k_{10} - \frac{8011411261450544128}{500147123818491}k_{11} \\
&+ \frac{5860044486019119104}{500147123818491}k_{12} - \frac{4825796922806781952}{500147123818491}k_{13} + \frac{4684690919279538176}{500147123818491}k_{14} \\
&- \frac{5287451915499857920}{500147123818491}k_{15} + \frac{6559650998291161088}{500147123818491}k_{16} - \frac{8496288321333753856}{500147123818491}k_{17} \\
&+ \frac{11145258257123667968}{500147123818491}k_{18} - \frac{14574279700890339328}{500147123818491}k_{19} + \frac{18890720593330012160}{500147123818491}k_{20} \\
&- \frac{24309316815835174912}{500147123818491}k_{21} + \frac{31932223698471317504}{500147123818491}k_{22} - \frac{47178037463743602688}{500147123818491}k_{23} \\
&+ \frac{94356074927487205376}{500147123818491}k_{24}
\end{aligned}
$$

$$
\begin{aligned}
r_{14}: \quad &= \frac{3068685778048}{941115051}k_0 - \frac{777333490256}{941115051}k_1 + \frac{399881434672}{941115051}k_2 - \frac{379850317616}{941115051}k_3 \\
&+ \frac{458466338464}{941115051}k_4 - \frac{652525805600}{941115051}k_5 + \frac{1050702670528}{941115051}k_6 - \frac{1806921528320}{941115051}k_7 \\
&+ \frac{3185531140096}{941115051}k_8 - \frac{5634920543744}{941115051}k_9 + \frac{9904635593728}{941115051}k_{10} \\
&- \frac{17226073051136}{941115051}k_{11} + \frac{29580175532032}{941115051}k_{12} - \frac{50072204435456}{941115051}k_{13} \\
&+ \frac{83413590851584}{941115051}k_{14} - \frac{136457325461504}{941115051}k_{15} + \frac{218626270461952}{941115051}k_{16} \\
&- \frac{341913159581696}{941115051}k_{17} + \frac{520023974281216}{941115051}k_{18} - \frac{766664696152064}{941115051}k_{19} \\
&+ \frac{1095541307047936}{941115051}k_{20} - \frac{1534065770676224}{941115051}k_{21} + \frac{2191885939769344}{941115051}k_{22} \\
&- \frac{3507526277955584}{941115051}k_{23} + \frac{7015052555911168}{941115051}k_{24}
\end{aligned}
$$

$$
\begin{aligned}
r_{15}: \quad &= -\frac{2582178341554060048417 6}{500147123818491}k_0 + \frac{3895748900961728115050}{500147123818491}k_1 - \frac{43945662468743112616 6}{500147123818491}k_2 \\
&+ \frac{99561785637338845874}{500147123818491}k_3 - \frac{82033507745153904484}{500147123818491}k_4 + \frac{63978915183167375816}{500147123818491}k_5 \\
&- \frac{48166072162620385168}{500147123818491}k_6 + \frac{35236440572231864096}{500147123818491}k_7 - \frac{25113464685848925760}{500147123818491}k_8 \\
&+ \frac{17504570622175862912}{500147123818491}k_9 - \frac{12057940066915332352}{500147123818491}k_{10} + \frac{8413874715264728576}{500147123818491}k_{11} \\
&- \frac{6228316684636595200}{500147123818491}k_{12} + \frac{5195867466260077568}{500147123818491}k_{13} - \frac{5066927195062687744}{500147123818491}k_{14} \\
&+ \frac{5655859011882146816}{500147123818491}k_{15} - \frac{6841649281359056896}{500147123818491}k_{16} + \frac{8564005192211907584}{500147123818491}k_{17} \\
&- \frac{10810327122276751360}{500147123818491}k_{18} + \frac{13589653368586554368}{500147123818491}k_{19} - \frac{16954298066568110080}{500147123818491}k_{20} \\
&+ \frac{21008889487075005440}{500147123818491}k_{21} - \frac{26443374352632580096}{500147123818491}k_{22} + \frac{37312344083747729408}{500147123818491}k_{23} \\
&- \frac{74624688167495458816}{500147123818491}k_{24}
\end{aligned}
$$

$$
\begin{aligned}
r_{16}: \quad &= -\frac{310431189252535212160}{500147123818491}k_0 + \frac{446944034054918373 92}{500147123818491}k_1 - \frac{3535577727645460144}{500147123818491}k_2 \\
&- \frac{122266953488546128}{500147123818491}k_3 + \frac{37326360405845600}{500147123818491}k_4 - \frac{21318942050343904}{500147123818491}k_5 \\
&+ \frac{14509573693584704}{500147123818491}k_6 - \frac{9215672733291520}{500147123818491}k_7 + \frac{5770016901625856}{500147123818491}k_8 \\
&- \frac{4475890089998848}{500147123818491}k_9 + \frac{5544247102567424}{500147123818491}k_{10} - \frac{9013069453453312}{500147123818491}k_{11} \\
&+ \frac{14658127056392192}{500147123818491}k_{12} - \frac{21911032402223104}{500147123818491}k_{13} + \frac{29802908743909376}{500147123818491}k_{14} \\
&- \frac{36945955088220160}{500147123818491}k_{15} + \frac{41553113352077312}{500147123818491}k_{16} - \frac{41496248399577088}{500147123818491}k_{17} \\
&+ \frac{34441353840361472}{500147123818491}k_{18} - \frac{18118963626360832}{500147123818491}k_{19} - \frac{9611307605917696}{500147123818491}k_{20} \\
&+ \frac{5303023058345984 0}{500147123818491}k_{21} - \frac{127826457051529216}{500147123818491}k_{22} + \frac{277418909987667968}{500147123818491}k_{23} \\
&- \frac{554837819975335936}{500147123818491}k_{24}
\end{aligned}
$$

$$
\begin{aligned}
r_{17}: \quad &= \frac{3087420261744652144985 6}{500147123818491} k_0 - \frac{5235394581769620446128}{500147123818491} k_1 + \frac{1102666601914986255440}{500147123818491} k_2 \\
&- \frac{614608074950533170544}{500147123818491} k_3 + \frac{5107502353929851890 88}{500147123818491} k_4 - \frac{411767515300075828672}{500147123818491} k_5 \\
&+ \frac{3216178281526320608 00}{500147123818491} k_6 - \frac{2431460619400534566 40}{500147123818491} k_7 + \frac{178006228747246317056}{500147123818491} k_8 \\
&- \frac{1266745856402692495 36}{500147123818491} k_9 + \frac{8857873811425386291 2}{500147123818491} k_{10} - \frac{623441420811908423 68}{500147123818491} k_{11} \\
&+ \frac{4612242362683859763 2}{500147123818491} k_{12} - \frac{3792844986386408243 2}{500147123818491} k_{13} + \frac{3590093376945353523 2}{500147123818491} k_{14} \\
&- \frac{3843987638331053670 4}{500147123818491} k_{15} + \frac{4425119071731807027 2}{500147123818491} k_{16} - \frac{5235919607941795840 0}{500147123818491} k_{17} \\
&+ \frac{6205485322592505036 8}{500147123818491} k_{18} - \frac{7279223466615559782 4}{500147123818491} k_{19} + \frac{8435163641542865715 2}{500147123818491} k_{20} \\
&- \frac{9629365050438234112 0}{500147123818491} k_{21} + \frac{1090008892726972743 68}{500147123818491} k_{22} - \frac{1344153668093271408 64}{500147123818491} k_{23} \\
&+ \frac{2688307336186542817 28}{500147123818491} k_{24}
\end{aligned}
$$

$$
\begin{aligned}
r_{18}: \quad &= \frac{49888631248}{12257649} k_0 - \frac{45976398458}{12257649} k_1 + \frac{41835356038}{12257649} k_2 - \frac{37655497730}{12257649} k_3 \\
&+ \frac{33471553540}{12257649} k_4 - \frac{29287609352}{12257649} k_5 + \frac{25103665168}{12257649} k_6 - \frac{20919720992}{12257649} k_7 \\
&+ \frac{16735776832}{12257649} k_8 - \frac{12551832704}{12257649} k_9 + \frac{8367888640}{12257649} k_{10} - \frac{4183944704}{12257649} k_{11} \\
&+ \frac{1024}{12257649} k_{12} + \frac{4183942144}{12257649} k_{13} - \frac{8367884288}{12257649} k_{14} + \frac{12551824384}{12257649} k_{15} \\
&- \frac{16735760384}{12257649} k_{16} + \frac{20919688192}{12257649} k_{17} - \frac{25103599616}{12257649} k_{18} + \frac{29287478272}{12257649} k_{19} \\
&- \frac{33471291392}{12257649} k_{20} + \frac{37654973440}{12257649} k_{21} - \frac{41838393344}{12257649} k_{22} + \frac{50205233152}{12257649} k_{23} \\
&- \frac{100410466304}{12257649} k_{24}
\end{aligned}
$$

$$
\begin{aligned}
r_{19}: \quad &= -\frac{87197894138645360}{110318841}k_0 + \frac{12652393592104750}{110318841}k_1 - \frac{980878121481938}{110318841}k_2 \\
&- \frac{72229529033018}{110318841}k_3 + \frac{36116907940468}{110318841}k_4 - \frac{18058401913064}{110318841}k_5 \\
&+ \frac{9027159830992}{110318841}k_6 - \frac{4509342703520}{110318841}k_7 + \frac{2248443860800}{110318841}k_8 \\
&- \frac{1115795931776}{110318841}k_9 + \frac{547476845824}{110318841}k_{10} - \frac{261109110272}{110318841}k_{11} \\
&+ \frac{115910751232}{110318841}k_{12} - \frac{41064639488}{110318841}k_{13} + \frac{1549613056}{110318841}k_{14} \\
&+ \frac{20609790976}{110318841}k_{15} - \frac{34091380736}{110318841}k_{16} + \frac{43853900800}{110318841}k_{17} \\
&- \frac{52376717312}{110318841}k_{18} + \frac{62139188224}{110318841}k_{19} - \frac{75620655104}{110318841}k_{20} \\
&+ \frac{97779801088}{110318841}k_{21} - \frac{137294305280}{110318841}k_{22} + \frac{216323313664}{110318841}k_{23} \\
&- \frac{432646627328}{110318841}k_{24}
\end{aligned}
$$

Formulas in terms of p and k:

$$
\begin{aligned}
E_{12}(q) &= (1+\frac{65\,520}{691}\sum_{n=1}^{\infty}\sigma_{11}(n)\,q^n) \\
&= (p^{24}+\frac{41052}{691}p^{23}+\frac{33980820}{691}p^{22}+\frac{1821930964}{691}p^{21}+ \\
&\quad \frac{34092098862}{691}p^{20}+\frac{340884330852}{691}p^{19}+\frac{2158576080388}{691}p^{18}+ \\
&\quad \frac{9452473799436}{691}p^{17}+\frac{30150062503677}{691}p^{16}+\frac{72378756074200}{691}p^{15}+ \\
&\quad \frac{133558779300456}{691}p^{14}+\frac{191958602404488}{691}p^{13} \\
&\quad +\frac{216461992062532}{691}p^{12}+\frac{191958602404488}{691}p^{11} \\
&\quad +\frac{133558779300456}{691}p^{10}+\frac{72378756074200}{691}p^{9} \\
&\quad +\frac{30150062503677}{691}p^{8}+\frac{9452473799436}{691}p^{7}+\frac{2158576080388}{691}p^{6} \\
&\quad +\frac{340884330852}{691}p^{5}+\frac{34092098862}{691}p^{4}+\frac{1821930964}{691}p^{3} \\
&\quad +33980820/691p^2+41052/691p+1)k^{12}
\end{aligned}
$$

$$E_{12}(q^2)$$

$$
\begin{aligned}
&= (p^{24}+12p^{23}+\frac{57840}{691}p^{22}+\frac{286594}{691}p^{21}+\frac{9327867}{691}p^{20}+ \\
&\quad \frac{85695402}{691}p^{19}+\frac{522489058}{691}p^{18}+\frac{2297328246}{691}p^{17}+ \\
&\quad \frac{14731029909}{1382}p^{16}+\frac{17688435340}{691}p^{15}+\frac{32611712916}{691}p^{14}+ \\
&\quad \frac{46855135428}{691}p^{13}+\frac{52835572642}{691}p^{12}+\frac{46855135428}{691}p^{11}+ \\
&\quad \frac{32611712916}{691}p^{10}+\frac{17688435340}{691}p^{9}+\frac{14731029909}{1382}p^{8}+ \\
&\quad \frac{2297328246}{691}p^{7}+\frac{522489058}{691}p^{6}+\frac{85695402}{691}p^{5}+\frac{9327867}{691}p^{4} \\
&\quad +\frac{286594}{691}p^{3}+\frac{57840}{691}p^{2}+12p+1)k^{12}
\end{aligned}
$$

$$E_{12}(q^3)$$

$$= (p^{24} + 12p^{23} + 60p^{22} + \frac{114604}{691}p^{21} + \frac{208302}{691}p^{20} + \frac{314652}{691}p^{19} + \frac{2514148}{691}p^{18} + \frac{19074996}{691}p^{17} + \frac{66904317}{691}p^{16} + \frac{134202280}{691}p^{15} + \frac{219067176}{691}p^{14} + \frac{361406328}{691}p^{13} + \frac{455600452}{691}p^{12} + \frac{361406328}{691}p^{11} + \frac{219067176}{691}p^{10} + \frac{134202280}{691}p^{9} + \frac{66904317}{691}p^{8} + \frac{19074996}{691}p^{7} + \frac{2514148}{691}p^{6} + \frac{314652}{691}p^{5} + \frac{208302}{691}p^{4} + \frac{114604}{691}p^{3} + 60p^{2} + 12p + 1)k^{12}$$

$$E_{12}(q^4)$$

$$= (\frac{1}{4096}p^{24} - \frac{6117}{707584}p^{23} + \frac{8306835}{707584}p^{22} - \frac{67708781}{176896}p^{21} + \frac{451969689}{353792}p^{20} + \frac{646778847}{176896}p^{19} - \frac{259597793}{44224}p^{18} - \frac{1176345297}{88448}p^{17} + \frac{3854045619}{353792}p^{16} + \frac{1419710665}{44224}p^{15} + \frac{500562579}{44224}p^{14} - \frac{75228357}{11056}p^{13} + \frac{227283689}{22112}p^{12} + \frac{71290077}{2764}p^{11} + \frac{12691461}{691}p^{10} + \frac{8589095}{1382}p^{9} + \frac{11661777}{11056}p^{8} - \frac{370701}{2764}p^{7} - \frac{782873}{2764}p^{6} - \frac{12948}{691}p^{5} + \frac{126402}{691}p^{4} + 154p^{3} + 60p^{2} + 12p + 1)k^{12}$$

$$E_{12}(q^6)$$

$$= (p^{24} + 12p^{23} + 60p^{22} + 154p^{21} + 177p^{20} - 78p^{19} - \frac{360542}{691}p^{18} - \frac{409014}{691}p^{17} + \frac{37269}{1382}p^{16} + \frac{492340}{691}p^{15} + \frac{443316}{691}p^{14} - \frac{18372}{691}p^{13} - \frac{279518}{691}p^{12} - \frac{18372}{691}p^{11} + \frac{443316}{691}p^{10} + \frac{492340}{691}p^{9} + \frac{37269}{1382}p^{8} - \frac{409014}{691}p^{7} - \frac{360542}{691}p^{6} - 78p^{5} + 177p^{4} + 154p^{3} + 60p^{2} + 12p + 1)k^{12}$$

$$E_{12}(q^{12})$$

$$
\begin{aligned}
= \; & (\frac{1}{4096}p^{24} + \frac{3}{1024}p^{23} + \frac{15}{1024}p^{22} + \frac{6139}{176896}p^{21} + \frac{4539}{353792}p^{20} - \\
& \frac{26403}{176896}p^{19} + \frac{29939}{88448}p^{18} + \frac{557703}{88448}p^{17} \\
& + \frac{8545779}{353792}p^{16} + \frac{1456555}{44224}p^{15} - \frac{1836591}{44224}p^{14} \\
& - \frac{2443827}{11056}p^{13} - \frac{6254161}{22112}p^{12} + \frac{267}{4}p^{11} + 606p^{10} + \frac{1265}{2}p^{9} \\
& - \frac{333}{16}p^{8} - \frac{2421}{4}p^{7} - \frac{2093}{4}p^{6} - 78p^{5} + 177p^{4} + 154p^{3} + 60p^{2} + 12p + 1)k^{12}
\end{aligned}
$$

$$
\begin{aligned}
f_1 \quad : \quad & = \sum_{n=0}^{\infty} f_1(n)\, q^n = \frac{\eta^{20}(4z)\,\eta^{10}(6z)\,\eta^{4}(12z)}{\eta^{10}(2z)} \\
= \quad & (-\frac{1}{32768}p^{21} - \frac{41}{65536}p^{20} - \frac{95}{16384}p^{19} - \frac{131}{4096}p^{18} - \frac{1901}{16384}p^{17} \\
& - \frac{18839}{65536}p^{16} - \frac{15831}{32768}p^{15} - \frac{2079}{4096}p^{14} - \frac{423}{2048}p^{13} \\
& + \frac{559}{2048}p^{12} + \frac{575}{1024}p^{11} + \frac{125}{256}p^{10} + \frac{31}{128}p^{9} + \frac{17}{256}p^{8} + \frac{1}{128}p^{7})k^{12},
\end{aligned}
$$

$$
\begin{aligned}
f_2 \quad : \quad & = \sum_{n=0}^{\infty} f_2(n)\, q^n = \frac{\eta^{15}(4z)\,\eta^{15}(6z)\,\eta^{3}(12z)}{\eta^{9}(2z)} \\
= \quad & (-1/8192p^{20} - 35/16384p^{19} - 273/16384p^{18} - 311/4096p^{17} - 227/1024 \\
& p^{16} - 6939/16384p^{15} - 8217/16384p^{14} - 2151/8192p^{13} + 819/4096 \\
& p^{12} + 1057/2048p^{11} + 485/1024p^{10} + 123/512p^{9} + 17/256p^{8} + 1/128p^{7})k^{12},
\end{aligned}
$$

$$
\begin{aligned}
f_3 \quad : \quad & = \sum_{n=0}^{\infty} f_3(n)\, q^n = \frac{\eta^{10}(4z)\,\eta^{20}(6z)\,\eta^{2}(12z)}{\eta^{8}(2z)} \\
= \quad & (-\frac{1}{2048}p^{19} - \frac{29}{4096}p^{18} - \frac{23}{512}p^{17} - \frac{665}{4096}p^{16} - \frac{185}{512}p^{15} \\
& - \frac{1991}{4096}p^{14} - \frac{159}{512}p^{13} + \frac{533}{4096}p^{12} + \frac{965}{2048}p^{11} + \frac{235}{512}p^{10} \\
& + \frac{61}{256}p^{9} + \frac{17}{256}p^{8} + \frac{1}{128}p^{7})k^{12},
\end{aligned}
$$

$$
\begin{aligned}
f_4 \quad : \quad &= \sum_{n=0}^{\infty} f_4(n)\, q^n = \eta^5(2z)\,\eta^5(4z)\,\eta^{13}(6z)\,\eta(12z) \\
&= (-\frac{1}{128}p^{20} - \frac{25}{256}p^{19} - \frac{257}{512}p^{18} - \frac{1327}{1024}p^{17} - \frac{1441}{1024}p^{16} \\
&\quad + \frac{995}{1024}p^{15} + \frac{4807}{1024}p^{14} + \frac{4761}{1024}p^{13} - \frac{819}{1024}p^{12} \\
&\quad - \frac{5515}{1024}p^{11} - \frac{4097}{1024}p^{10} + \frac{17}{512}p^{9} + \frac{221}{128}p^{8} + \frac{35}{32}p^{7} \\
&\quad + \frac{19}{64}p^{6} + \frac{1}{32}p^{5})k^{12},
\end{aligned}
$$

$$
\begin{aligned}
f_5 \quad : \quad &= \sum_{n=0}^{\infty} f_5(n)\, q^n = \frac{\eta^{16}(4z)\,\eta^{2}(6z)\,\eta^{8}(12z)}{\eta^{2}(2z)} \\
&= (\frac{1}{16384}p^{22} + \frac{19}{16384}p^{21} + \frac{641}{65536}p^{20} + \frac{1565}{32768}p^{19} \\
&\quad + \frac{4801}{32768}p^{18} + \frac{2297}{8192}p^{17} + \frac{18505}{65536}p^{16} - \frac{1239}{32768}p^{15} \\
&\quad - \frac{2211}{4096}p^{14} - \frac{1475}{2048}p^{13} - \frac{689}{2048}p^{12} + \frac{199}{1024}p^{11} + \frac{95}{256}p^{10} \\
&\quad + \frac{29}{128}p^{9} + \frac{17}{256}p^{8} + \frac{1}{128}p^{7})k^{12},
\end{aligned}
$$

$$
\begin{aligned}
f_6 \quad : \quad &= \sum_{n=0}^{\infty} f_6(n)\, q^n = \frac{\eta^{9}(2z)\,\eta^{9}(6z)\,\eta^{9}(12z)}{\eta^{3}(4z)} \\
&= (-1/128p^{20} - 17/256p^{19} - 105/512p^{18} - 215/1024p^{17} + 259/1024p^{16} \\
&\quad + 819/1024p^{15} + 495/1024p^{14} - 495/1024p^{13} - 819/1024p^{12} \\
&\quad - 259/1024p^{11} + 215/1024p^{10} + 105/512p^{9} + 17/256p^{8} + 1/128p^{7})k^{12},
\end{aligned}
$$

$$
\begin{aligned}
f_7 \quad : \quad &= \sum_{n=0}^{\infty} f_7(n)\, q^n = \frac{\eta^{11}(2z)\,\eta^{11}(4z)\,\eta^{7}(12z)}{\eta^{5}(6z)} \\
&= (\frac{1}{1024}p^{23} + \frac{17}{1024}p^{22} + \frac{247}{2048}p^{21} + \frac{485}{1024}p^{20} + \frac{16361}{16384}p^{19} \\
&\quad + \frac{10703}{16384}p^{18} - \frac{8023}{4096}p^{17} - \frac{42317}{8192}p^{16} - \frac{56119}{16384}p^{15} \\
&\quad + \frac{71643}{16384}p^{14} + \frac{74321}{8192}p^{13} + \frac{3679}{1024}p^{12} - \frac{595}{128}p^{11} \\
&\quad - \frac{2851}{512}p^{10} - \frac{317}{256}p^{9} + \frac{85}{64}p^{8} + \frac{67}{64}p^{7} + \frac{19}{64}p^{6} + \frac{1}{32}p^{5})k^{12},
\end{aligned}
$$

$$
\begin{aligned}
f_8 \quad : \quad &= \sum_{n=0}^{\infty} f_8(n)\, q^n = \frac{\eta^{12}(6z)\,\eta^{18}(12z)}{\eta^6(4z)} \\
&= (-\frac{1}{2048}p^{19} - \frac{13}{4096}p^{18} - \frac{1}{128}p^{17} - \frac{33}{4096}p^{16} + \frac{33}{4096}p^{14} \\
&\quad + \frac{1}{128}p^{13} + \frac{13}{4096}p^{12} + \frac{1}{2048}p^{11})k^{12},
\end{aligned}
$$

$$
\begin{aligned}
f_9 \quad : \quad &= \sum_{n=0}^{\infty} f_9(n)\, q^n = \frac{\eta^{14}(2z)\,\eta^{8}(4z)\,\eta^{16}(12z)}{\eta^{14}(6z)} \\
= \quad & \frac{1}{4096}p^{24} + \frac{1}{256}p^{23} + \frac{215}{8192}p^{22} + \frac{755}{8192}p^{21} + \frac{10321}{65536}p^{20} + \frac{191}{32768}p^{19} - \\
& \frac{16237}{32768}p^{18} - \frac{815}{1024}p^{17} - \frac{3959}{65536}p^{16} + \frac{37801}{32768}p^{15} + \\
& \frac{4565}{4096}p^{14} - \frac{443}{2048}p^{13} - \frac{1937}{2048}p^{12} - \frac{457}{1024}p^{11} + \\
& \frac{35}{256}p^{10} + \frac{25}{128}p^{9} + \frac{17}{256}p^{8} + \frac{1}{128}p^{7})k^{12},
\end{aligned}
$$

$$
\begin{aligned}
f_{10} \quad : \quad &= \sum_{n=0}^{\infty} f_{10}(n)\, q^n = \frac{\eta^{6}(2z)\,\eta^{12}(4z)\,\eta^{18}(6z)}{\eta^{12}(12z)} \\
= \quad & (\frac{1}{16}p^{20} + p^{19} + \frac{219}{32}p^{18} + \frac{811}{32}p^{17} + \frac{12881}{256}p^{16} + \frac{3783}{128}p^{15} \\
& - \frac{779}{8}p^{14} - \frac{3937}{16}p^{13} - \frac{21957}{128}p^{12} + \frac{11229}{64}p^{11} + \frac{26643}{64}p^{10} \\
& + \frac{3603}{16}p^{9} - \frac{38879}{256}p^{8} - \frac{34777}{128}p^{7} - \frac{7467}{64}p^{6} + \frac{1091}{32}p^{5} \\
& + \frac{931}{16}p^{4} + \frac{213}{8}p^{3} + \frac{23}{4}p^{2} + \frac{1}{2}p)k^{12},
\end{aligned}
$$

$$
\begin{aligned}
f_{11} \quad : \quad &= \sum_{n=0}^{\infty} f_{11}(n)\, q^n = \frac{\eta^{20}(2z)\,\eta^{4}(6z)\,\eta^{4}(12z)}{\eta^{4}(4z)} \\
= \quad & (-\frac{1}{8}p^{21} - \frac{17}{16}p^{20} - \frac{47}{16}p^{19} - \frac{21}{32}p^{18} + \frac{1443}{128}p^{17} + \frac{4275}{256}p^{16} \\
& - \frac{1097}{128}p^{15} - \frac{4673}{128}p^{14} - \frac{1883}{128}p^{13} + \frac{1883}{64}p^{12} + \frac{3697}{128}p^{11} \\
& - \frac{527}{128}p^{10} - \frac{531}{32}p^{9} - \frac{1551}{256}p^{8} + \frac{69}{32}p^{7} + \frac{71}{32}p^{6} + \frac{5}{8}p^{5} + \frac{1}{16}p^{4})k^{12},
\end{aligned}
$$

$$
\begin{aligned}
f_{12} \quad : \quad &= \sum_{n=0}^{\infty} f_{12}(n)\, q^n = \frac{\eta^{19}(2z)\,\eta(4z)\,\eta^5(12z)}{\eta(6z)} \\
= \quad & (-\frac{1}{32}p^{22} - \frac{23}{64}p^{21} - \frac{25}{16}p^{20} - \frac{333}{128}p^{19} + \frac{935}{512}p^{18} + \frac{13277}{1024}p^{17} \\
& + \frac{13173}{1024}p^{16} - \frac{14195}{1024}p^{15} - \frac{35731}{1024}p^{14} - \frac{9185}{1024}p^{13} + \frac{31643}{1024}p^{12} + \\
& \frac{27007}{1024}p^{11} - \frac{5895}{1024}p^{10} - \frac{527}{32}p^{9} - \frac{1445}{256}p^{8} + \frac{147}{64}p^{7} + \\
& \frac{143}{64}p^{6} + \frac{5}{8}p^{5} + \frac{1}{16}p^{4})k^{12},
\end{aligned}
$$

$$
\begin{aligned}
f_{13} \quad : \quad &= \sum_{n=0}^{\infty} f_{13}(n)\, q^n = \frac{\eta^{20}(4z)\,\eta^4(6z)\,\eta^4(12z)}{\eta^4(2z)} \\
= \quad & (\frac{1}{16384}p^{22} + \frac{21}{16384}p^{21} + \frac{793}{65536}p^{20} + \frac{1103}{16384}p^{19} + \frac{7931}{32768}p^{18} \\
& + \frac{9395}{16384}p^{17} + \frac{55257}{65536}p^{16} + \frac{8633}{16384}p^{15} - \frac{10083}{16384}p^{14} \\
& - \frac{1843}{1024}p^{13} - \frac{3639}{2048}p^{12} - \frac{245}{512}p^{11} + \frac{389}{512}p^{10} + \frac{31}{32}p^{9} \\
& + \frac{133}{256}p^{8} + \frac{9}{64}p^{7} + \frac{1}{64}p^{6})k^{12}.
\end{aligned}
$$

$$
\begin{aligned}
f_{14} \quad : \quad &= \sum_{n=0}^{\infty} f_{14}(n)\, q^n = \frac{\eta^{14}(6z)\,\eta^{14}(12z)}{\eta^2(2z)\,\eta^2(4z)} \\
= \quad & (-\frac{1}{2048}p^{19} - \frac{17}{4096}p^{18} - \frac{29}{2048}p^{17} - \frac{97}{4096}p^{16} - \frac{33}{2048}p^{15} \\
& + \frac{33}{4096}p^{14} + \frac{49}{2048}p^{13} + \frac{77}{4096}p^{12} + \frac{7}{1024}p^{11} + \frac{1}{1024}p^{10})k^{12}.
\end{aligned}
$$

$$
\begin{aligned}
f_{15} \quad : \quad &= \sum_{n=0}^{\infty} f_{15}(n)\, q^n = \frac{\eta^{19}(4z)\,\eta^{17}(6z)}{\eta^{11}(2z)\,\eta(12z)} \\
= \quad & (-\frac{1}{8192}p^{20} - \frac{39}{16384}p^{19} - \frac{343}{16384}p^{18} - \frac{895}{8192}p^{17} - \frac{765}{2048}p^{16} \\
& - \frac{14203}{16384}p^{15} - \frac{22095}{16384}p^{14} - \frac{81}{64}p^{13} - \frac{333}{1024}p^{12} \\
& + \frac{469}{512}p^{11} + \frac{771}{512}p^{10} + \frac{19}{16}p^{9} + \frac{35}{64}p^{8} + \frac{9}{64}p^{7} + \frac{1}{64}p^{6})k^{12}.
\end{aligned}
$$

$$
\begin{aligned}
f_{16} \quad : \quad &= \sum_{n=0}^{\infty} f_{16}(n)\, q^n = \frac{\eta^{18}(4z)\,\eta^{18}(6z)}{\eta^{6}(2z)\,\eta^{6}(12z)} \\
= \quad & (\frac{1}{1024}p^{20} + \frac{19}{1024}p^{19} + \frac{645}{4096}p^{18} + \frac{1599}{2048}p^{17} + \frac{10107}{4096}p^{16} \\
& + \frac{1281}{256}p^{15} + \frac{23867}{4096}p^{14} + \frac{2587}{2048}p^{13} - \frac{32175}{4096}p^{12} \\
& - \frac{3505}{256}p^{11} - \frac{2479}{256}p^{10} + \frac{3}{16}p^{9} + \frac{819}{128}p^{8} + \frac{93}{16}p^{7} + \frac{21}{8}p^{6} \\
& + \frac{5}{8}p^{5} + \frac{1}{16}p^{4})k^{12}.
\end{aligned}
$$

$$
\begin{aligned}
f_{17} \quad : \quad &= \sum_{n=0}^{\infty} f_{17}(n)\, q^n = \frac{\eta^{16}(4z)\,\eta^{8}(6z)\,\eta^{8}(12z)}{\eta^{8}(2z)} \\
= \quad & (-\frac{1}{32768}p^{21} - \frac{37}{65536}p^{20} - \frac{153}{32768}p^{19} - \frac{371}{16384}p^{18} - \frac{1159}{16384}p^{17} \\
& - \frac{9567}{65536}p^{16} - \frac{783}{4096}p^{15} - \frac{513}{4096}p^{14} + \frac{45}{1024}p^{13} + \frac{379}{2048}p^{12} \\
& + \frac{49}{256}p^{11} + \frac{27}{256}p^{10} + \frac{1}{32}p^{9} + \frac{1}{256}p^{8})k^{12}.
\end{aligned}
$$

$$
\begin{aligned}
f_{18} \quad : \quad &= \sum_{n=0}^{\infty} f_{18}(n)\, q^n = \frac{\eta^{12}(2z)\,\eta^{12}(4z)\,\eta^{12}(12z)}{\eta^{12}(6z)} \\
= \quad & \frac{1}{4096}p^{24} + \frac{9}{2048}p^{23} + \frac{279}{8192}p^{22} + \frac{1185}{8192}p^{21} + \frac{22401}{65536}p^{20} \\
& + \frac{657}{2048}p^{19} - \frac{15855}{32768}p^{18} - \frac{29277}{16384}p^{17} - \frac{108279}{65536}p^{16} \\
& + \frac{16921}{16384}p^{15} + \frac{56061}{16384}p^{14} + \frac{2061}{1024}p^{13} - \frac{2823}{2048}p^{12} - \frac{1197}{512}p^{11} - \\
& \frac{387}{512}p^{10} + \frac{15}{32}p^{9} + \frac{117}{256}p^{8} + \frac{9}{64}p^{7} + \frac{1}{64}p^{6})k^{12}.
\end{aligned}
$$

$$
\begin{aligned}
f_{19} \quad : \quad &= \sum_{n=0}^{\infty} f_{19}(n)\, q^n = \frac{\eta^{20}(4z)\,\eta^{16}(6z)\,\eta^{4}(12z)}{\eta^{16}(2z)} \\
= \quad & (\frac{1}{65536}p^{20} + \frac{5}{16384}p^{19} + \frac{91}{32768}p^{18} + \frac{249}{16384}p^{17} + \frac{3649}{65536}p^{16} \\
& + \frac{589}{4096}p^{15} + \frac{1099}{4096}p^{14} + \frac{373}{1024}p^{13} + \frac{731}{2048}p^{12} + \frac{63}{256}p^{11} \\
& + \frac{29}{256}p^{10} + \frac{1}{32}p^{9} + \frac{1}{256}p^{8})k^{12}.
\end{aligned}
$$

Table 1

No	b_1	b_2	b_3	b_4	b_5	a_2	a_4	a_6	a_{12}	c_1	c_2	c_3	c_4	c_6	c_{12}
1	1	0	0	0	23	−34	68	10	−20	$-\frac{14362180157}{1}$	$\frac{29428107141693}{1}$	$\frac{3839202032872509}{1}$	$-\frac{14362180157}{1}$	$-\frac{7866524965355770941}{1}$	$\frac{3839202032872509}{1}$
2	1	0	1	0	21	−33	63	15	−21	$-\frac{1283521600552 96}{1751780757}$	$\frac{1283521600552 96}{358939871 1093}$	$\frac{64176080027648}{468025874247573}$	$-\frac{62671953152}{1751780757}$	$-\frac{64176080027648}{958985016333277077}$	$\frac{31335976576}{468025874247573}$
3	1	0	2	0	19	−32	58	20	−22	$-\frac{16044020006912}{213511213}$	$\frac{16044020006912}{437484475437}$	$\frac{8022010003456}{57016730230317}$	$-\frac{7833994144}{213511213}$	$-\frac{8022010003456}{116827280241919533}$	$\frac{3916997072}{57016730230317}$
4	1	0	3	0	17	−31	53	25	−23	$-\frac{2005502500864}{26003461}$	$\frac{2005502500864}{53281091589}$	$\frac{1002751250432}{69410330982 45}$	$-\frac{979249268}{52006922}$	$-\frac{1002751250432}{142221768183040 05}$	$\frac{489624634}{27764132392980}$
5	1	0	4	0	15	−30	48	30	−24	$-\frac{250687812608}{3164445}$	$\frac{250687812608}{6483947805}$	$\frac{125343906304}{844344623133}$	$-\frac{244812317}{50631120}$	$-\frac{125343906304}{1730062132799517}$	$\frac{244812317}{27019027940256}$
6	1	0	5	0	13	−29	43	35	−25	$-\frac{31335976576}{384773}$	$\frac{31335976576}{788399877}$	$\frac{15667988288}{102629486781}$	$-\frac{244812317}{49250944}$	$-\frac{15667988288}{210287818414269}$	$\frac{244812317}{26273148615936}$
7	1	0	6	0	11	−28	38	40	−26	$-\frac{3916997072}{46745}$	$\frac{3916997072}{95780505}$	$\frac{1958498536}{12464150643}$	$-\frac{244812317}{47866880}$	$-\frac{1958498536}{25539044667507}$	$\frac{244812317}{25526580516864}$
8	1	0	7	0	9	−27	33	45	−27	$-\frac{489624634}{22695}$	$\frac{489624634}{46502055}$	$\frac{244812317}{12099316491}$	$-\frac{244812317}{46479360}$	$-\frac{244812317}{24791499490059}$	$\frac{244812317}{24779400173568}$
9	1	0	8	0	7	−26	28	50	−28	$-\frac{244812317}{22016}$	$\frac{244812317}{45110784}$	$\frac{244812317}{11734216608}$	$-\frac{244812317}{45088768}$	$-\frac{244812317}{24043409829792}$	$\frac{244812317}{24031675613184}$
10	1	0	9	0	5	−25	23	55	−29	$-\frac{244812317}{64007}$	$\frac{244812317}{43716781}$	$\frac{244812317}{34108641559}$	$-\frac{244812317}{131086336}$	$-\frac{244812317}{23294836184797}$	$\frac{244812317}{69850401912832}$
11	1	0	10	9	3	−24	18	60	−30	$-\frac{734436951}{557662}$	$\frac{734436951}{380883146}$	$\frac{734436951}{297090030718}$	$-\frac{734436951}{1142091776}$	$-\frac{244812317}{202912490980394}$	$\frac{734436951}{608440382910464}$
12	1	0	11	0	1	−23	13	65	−31	$-\frac{6609932559}{4853093}$	$\frac{2203310853}{3314662519}$	$\frac{6609932559}{2584937235221}$	$-\frac{6609932559}{9939134464}$	$-\frac{2203310853}{1765512131655943}$	$\frac{6609932559}{5293951457732608}$
13	1	1	0	1	21	−25	59	7	−17	$-\frac{59489393031}{31}$	$\frac{19829797677}{63519}$	$\frac{59489393031}{16474671}$	$-\frac{59489393031}{63488}$	$-\frac{19829797677}{33756600879}$	$\frac{59489393031}{33740126208}$
14	1	1	1	1	19	−24	54	12	−18	$-\frac{354287}{30}$	$\frac{354287}{61470}$	$\frac{354287}{15943230}$	$-\frac{354287}{61440}$	$-\frac{354287}{32667678270}$	$\frac{354287}{32651735040}$
15	1	1	2	1	17	−23	49	17	−19	$-\frac{354287}{29}$	$\frac{354287}{59421}$	$\frac{354287}{15411789}$	$-\frac{354287}{59392}$	$-\frac{354287}{31578755661}$	$\frac{354287}{31563343872}$
16	1	1	3	1	15	−22	44	22	−20	$-\frac{354287}{28}$	$\frac{354287}{57372}$	$\frac{354287}{14880348}$	$-\frac{354287}{57344}$	$-\frac{354287}{30489833052}$	$\frac{354287}{30474952704}$
17	1	1	4	1	13	−21	39	27	−21	$-\frac{354287}{27}$	$\frac{354287}{55323}$	$\frac{354287}{14348907}$	$-\frac{354287}{55296}$	$-\frac{354287}{29400910443}$	$\frac{354287}{29386561536}$
18	1	1	5	1	11	−20	34	32	−22	$-\frac{354287}{26}$	$\frac{354287}{53274}$	$\frac{354287}{13817466}$	$-\frac{354287}{53248}$	$-\frac{354287}{28311987834}$	$\frac{354287}{28298170368}$
19	1	1	6	1	9	−19	29	37	−23	$-\frac{354287}{25}$	$\frac{354287}{51225}$	$\frac{354287}{13286025}$	$-\frac{354287}{51200}$	$-\frac{354287}{27223065225}$	$\frac{354287}{27209779200}$
20	1	1	7	1	7	−18	24	42	−24	$-\frac{354287}{24}$	$\frac{354287}{49176}$	$\frac{354287}{12754584}$	$-\frac{354287}{49152}$	$-\frac{354287}{26134142616}$	$\frac{354287}{26121388032}$
21	1	1	8	1	5	−17	19	47	−25	$-\frac{354287}{23}$	$\frac{354287}{47127}$	$\frac{354287}{12223143}$	$-\frac{354287}{47104}$	$-\frac{354287}{25045220007}$	$\frac{354287}{25032996864}$
22	1	1	9	1	3	−16	14	52	−26	$-\frac{354287}{22}$	$\frac{354287}{45078}$	$\frac{354287}{11691702}$	$-\frac{354287}{45056}$	$-\frac{354287}{23956297398}$	$\frac{354287}{23944605696}$
23	1	1	10	1	1	−15	9	57	−27	$-\frac{354287}{21}$	$\frac{354287}{43029}$	$\frac{354287}{11160261}$	$-\frac{354287}{43008}$	$-\frac{354287}{22867374789}$	$\frac{354287}{22856214528}$
24	1	2	0	2	19	−16	50	4	−14	$-\frac{354287}{22}$	$\frac{354287}{45078}$	$\frac{354287}{11691702}$	$-\frac{354287}{45056}$	$-\frac{354287}{23956297398}$	$\frac{354287}{23944605696}$
25	1	2	1	2	17	−15	45	9	−15	$-\frac{354287}{21}$	$\frac{354287}{43029}$	$\frac{354287}{11160261}$	$-\frac{354287}{43008}$	$-\frac{354287}{22867374789}$	$\frac{354287}{22856214528}$
26	1	2	2	2	15	−14	40	14	−16	$-\frac{354287}{20}$	$\frac{354287}{40980}$	$\frac{354287}{10628820}$	$-\frac{354287}{40960}$	$-\frac{354287}{21778452180}$	$\frac{354287}{21767823360}$
27	1	2	3	2	13	−13	35	19	−17	$-\frac{354287}{19}$	$\frac{354287}{38931}$	$\frac{354287}{10097379}$	$-\frac{354287}{38912}$	$-\frac{354287}{20689529571}$	$\frac{354287}{20679432192}$
28	1	2	4	2	11	−12	30	24	−18	$-\frac{354287}{18}$	$\frac{354287}{36882}$	$\frac{354287}{9565938}$	$-\frac{354287}{34816}$	$-\frac{354287}{18511684353}$	$\frac{354287}{19591041024}$
29	1	2	5	2	9	−11	25	29	−19	$-\frac{354287}{17}$	$\frac{354287}{34833}$	$\frac{354287}{9034497}$	$-\frac{354287}{34816}$	$-\frac{354287}{18511684353}$	$\frac{354287}{18502649856}$
30	1	2	6	2	7	−10	20	34	−20	$-\frac{354287}{16}$	$\frac{354287}{32784}$	$\frac{354287}{8503056}$	$-\frac{354287}{32768}$	$-\frac{354287}{17422761744}$	$\frac{354287}{17414258688}$
31	1	2	7	2	5	−9	15	39	−21	$-\frac{354287}{15}$	$\frac{354287}{30735}$	$\frac{354287}{7971615}$	$-\frac{354287}{30720}$	$-\frac{354287}{16333839135}$	$\frac{354287}{16325867520}$
32	1	2	8	2	3	−8	10	44	−22	$-\frac{354287}{14}$	$\frac{354287}{28686}$	$\frac{354287}{7440174}$	$-\frac{354287}{28672}$	$-\frac{354287}{15244916526}$	$\frac{354287}{15237476352}$
33	1	2	9	2	1	−7	5	49	−23	$-\frac{354287}{13}$	$\frac{354287}{26637}$	$\frac{354287}{6908733}$	$-\frac{354287}{26624}$	$-\frac{354287}{14155993917}$	$\frac{354287}{14149085184}$
34	1	3	0	3	17	−7	41	1	−11	$-\frac{354287}{13}$	$\frac{354287}{26637}$	$\frac{354287}{6908733}$	$-\frac{354287}{26624}$	$-\frac{354287}{14155993917}$	$\frac{354287}{14149085184}$
35	1	3	1	3	15	−6	36	6	−12	$-\frac{354287}{12}$	$\frac{354287}{24588}$	$\frac{354287}{6377292}$	$-\frac{354287}{24576}$	$-\frac{354287}{13067071308}$	$\frac{354287}{13060694016}$
36	1	3	2	3	13	−5	31	11	−13	$-\frac{354287}{11}$	$\frac{354287}{22539}$	$\frac{354287}{5845851}$	$-\frac{354287}{22528}$	$-\frac{354287}{11978148699}$	$\frac{354287}{11972302848}$
37	1	3	3	3	11	−4	26	16	−14	$-\frac{354287}{10}$	$\frac{354287}{20490}$	$\frac{354287}{5314410}$	$-\frac{354287}{20480}$	$-\frac{354287}{10889226090}$	$\frac{354287}{10883911680}$
38	1	3	4	3	9	−3	21	21	−15	$-\frac{354287}{9}$	$\frac{354287}{18441}$	$\frac{354287}{4782969}$	$-\frac{354287}{18432}$	$-\frac{354287}{9800303481}$	$\frac{354287}{9795520512}$
39	1	3	5	3	7	−2	16	26	−16	$-\frac{354287}{8}$	$\frac{354287}{16392}$	$\frac{354287}{4251528}$	$-\frac{354287}{16384}$	$-\frac{354287}{8711380872}$	$\frac{354287}{8707129344}$
40	1	3	6	3	5	−1	11	31	−17	$-\frac{354287}{7}$	$\frac{354287}{14343}$	$\frac{354287}{3720087}$	$-\frac{354287}{14336}$	$-\frac{354287}{7622458263}$	$\frac{354287}{7618738176}$

41	1	3	7	3	3	0	6	36	−18	$-\frac{6}{354287}$	$\frac{12294}{354287}$	$\frac{3188646}{354287}$	$-\frac{12288}{354287}$	$-\frac{6533535654}{354287}$	$\frac{6530347008}{354287}$
42	1	3	8	3	1	1	1	41	−19	$-\frac{5}{354287}$	$\frac{10245}{354287}$	$\frac{2657205}{354287}$	$-\frac{10240}{354287}$	$-\frac{5444613045}{354287}$	$\frac{5441955840}{354287}$
43	1	4	0	4	15	2	32	−2	−8	$-\frac{4}{354287}$	$\frac{8196}{354287}$	$\frac{2125764}{354287}$	$-\frac{8192}{354287}$	$-\frac{4355690436}{354287}$	$\frac{4353564672}{354287}$
44	1	4	1	4	13	3	27	3	−9	$-\frac{3}{354287}$	$\frac{6147}{354287}$	$\frac{1594323}{354287}$	$-\frac{6144}{354287}$	$-\frac{3266767827}{354287}$	$\frac{3265173504}{354287}$
45	1	4	2	4	11	4	22	8	−10	$\frac{2}{354287}$	$\frac{4098}{354287}$	$\frac{1062882}{354287}$	$-\frac{4096}{354287}$	$-\frac{2177845218}{354287}$	$\frac{2176782336}{354287}$
46	1	4	3	4	9	5	17	13	−11	$-\frac{1}{354287}$	$\frac{2049}{354287}$	$\frac{531441}{354287}$	$-\frac{2048}{354287}$	$-\frac{1088922609}{354287}$	$\frac{1088391168}{354287}$
47	1	4	5	4	5	7	7	23	−13	$\frac{1}{354287}$	$-\frac{2049}{354287}$	$-\frac{531441}{354287}$	$\frac{2048}{354287}$	$\frac{1088922609}{354287}$	$-\frac{1088391168}{354287}$
48	1	4	6	4	3	8	2	28	−14	$\frac{2}{354287}$	$-\frac{4098}{354287}$	$-\frac{1062882}{354287}$	$\frac{4096}{354287}$	$\frac{2177845218}{354287}$	$-\frac{2176782336}{354287}$
49	1	4	7	4	1	9	−3	33	−15	$\frac{3}{354287}$	$-\frac{6147}{354287}$	$-\frac{1594323}{354287}$	$\frac{6144}{354287}$	$\frac{3266767827}{354287}$	$-\frac{3265173504}{354287}$
50	1	5	0	5	13	11	23	−5	−5	$\frac{5}{354287}$	$-\frac{10245}{354287}$	$-\frac{2657205}{354287}$	$\frac{10240}{354287}$	$\frac{5444613045}{354287}$	$-\frac{5441955840}{354287}$
51	1	5	1	5	11	12	18	0	−6	$\frac{6}{354287}$	$-\frac{12294}{354287}$	$-\frac{3188646}{354287}$	$\frac{12288}{354287}$	$\frac{6533535654}{354287}$	$-\frac{6530347008}{354287}$
52	1	5	2	5	9	13	13	5	−7	$\frac{7}{354287}$	$-\frac{14343}{354287}$	$-\frac{3720087}{354287}$	$\frac{14336}{354287}$	$\frac{7622458263}{354287}$	$-\frac{7618738176}{354287}$
53	1	5	3	5	7	14	8	10	−8	$\frac{8}{354287}$	$-\frac{16392}{354287}$	$-\frac{4251528}{354287}$	$\frac{16384}{354287}$	$\frac{8711380872}{354287}$	$-\frac{8707129344}{354287}$
54	1	5	4	5	5	15	3	15	−9	$\frac{9}{354287}$	$-\frac{18441}{354287}$	$-\frac{4782969}{354287}$	$\frac{18432}{354287}$	$\frac{9800303481}{354287}$	$-\frac{9795520512}{354287}$
55	1	5	5	5	3	16	−2	20	−10	$\frac{10}{354287}$	$-\frac{20490}{354287}$	$-\frac{5314410}{354287}$	$\frac{20480}{354287}$	$\frac{10889226090}{354287}$	$-\frac{10883911680}{354287}$
56	1	5	6	5	1	17	−7	25	−11	$\frac{11}{354287}$	$-\frac{22539}{354287}$	$-\frac{5845851}{354287}$	$\frac{22528}{354287}$	$\frac{11978148699}{354287}$	$-\frac{11972302848}{354287}$
57	1	6	0	6	11	20	14	−8	−2	$\frac{14}{354287}$	$-\frac{2868643}{354287}$	$-\frac{7440174}{354287}$	$\frac{28672}{354287}$	$\frac{15244916526}{354287}$	$-\frac{15237476352}{354287}$
58	1	6	1	6	9	21	9	−3	−3	$\frac{15}{354287}$	$-\frac{30735}{354287}$	$-\frac{7971615}{354287}$	$\frac{30720}{354287}$	$\frac{16333839135}{354287}$	$-\frac{16325867520}{354287}$
59	1	6	2	6	7	22	4	2	−4	$\frac{16}{354287}$	$-\frac{32784}{354287}$	$-\frac{8503056}{354287}$	$\frac{32768}{354287}$	$\frac{17422761744}{354287}$	$-\frac{17414258688}{354287}$
60	1	6	3	6	5	23	−1	7	−5	$\frac{17}{354287}$	$-\frac{34833}{354287}$	$-\frac{903449}{354287}$	$\frac{34816}{354287}$	$\frac{18511684353}{354287}$	$-\frac{18502649856}{354287}$
61	1	6	4	6	3	24	−6	12	−6	$\frac{18}{354287}$	$-\frac{36882}{354287}$	$-\frac{956593}{354287}$	$\frac{36864}{354287}$	$\frac{19600606962}{354287}$	$-\frac{19591041024}{354287}$
62	1	6	5	6	1	25	−11	17	−7	$\frac{19}{354287}$	$-\frac{38931}{354287}$	$-\frac{100973}{354287}$	$\frac{38912}{354287}$	$\frac{20689529571}{354287}$	$-\frac{20679432192}{354287}$
63	1	7	0	7	9	29	5	−11	1	$\frac{23}{354287}$	$-\frac{47127}{354287}$	$-\frac{122231}{354287}$	$\frac{47104}{354287}$	$\frac{25045220007}{354287}$	$-\frac{25032996864}{354287}$
64	1	7	1	7	7	30	0	−6	0	$\frac{24}{354287}$	$-\frac{49176}{354287}$	$-\frac{127545}{354287}$	$\frac{49152}{354287}$	$\frac{26134142616}{354287}$	$-\frac{26121388032}{354287}$
65	1	7	2	7	5	31	−5	−1	−1	$\frac{25}{354287}$	$-\frac{51225}{354287}$	$-\frac{132860}{354287}$	$\frac{51200}{354287}$	$\frac{27223065225}{354287}$	$-\frac{27209779200}{354287}$
66	1	7	3	7	3	32	−10	4	−2	$\frac{26}{354287}$	$-\frac{53274}{354287}$	$-\frac{138174}{354287}$	$\frac{53248}{354287}$	$\frac{28311987834}{354287}$	$-\frac{28298170368}{354287}$
67	1	7	4	7	1	33	−15	9	−3	$\frac{27}{354287}$	$-\frac{55323}{354287}$	$-\frac{143489}{354287}$	$\frac{55296}{354287}$	$\frac{29400910443}{354287}$	$-\frac{29386561536}{354287}$
68	1	8	0	8	7	38	−4	−14	4	$\frac{32}{354287}$	$-\frac{65568}{354287}$	$-\frac{170061}{354287}$	$\frac{65536}{354287}$	$\frac{34845523488}{354287}$	$-\frac{34828517376}{354287}$
69	1	8	1	8	5	39	−9	−9	3	$\frac{33}{354287}$	$-\frac{67617}{354287}$	$-\frac{175375}{354287}$	$\frac{67584}{354287}$	$\frac{35934446097}{354287}$	$-\frac{35916908544}{354287}$
70	1	8	2	8	3	40	−14	−4	2	$\frac{34}{354287}$	$-\frac{69666}{354287}$	$-\frac{180689}{354287}$	$\frac{69632}{354287}$	$\frac{37023368706}{354287}$	$-\frac{37005299712}{354287}$
71	1	8	3	8	1	41	−19	1	1	$\frac{35}{354287}$	$-\frac{71715}{354287}$	$-\frac{186004}{354287}$	$\frac{71680}{354287}$	$\frac{38112291315}{354287}$	$-\frac{38093690880}{354287}$
72	1	9	0	9	5	47	−13	−17	7	$\frac{41}{354287}$	$-\frac{84009}{354287}$	$-\frac{217890}{354287}$	$\frac{83968}{354287}$	$\frac{44645826969}{354287}$	$-\frac{44624037888}{354287}$
73	1	9	1	9	3	48	−18	−12	6	$\frac{42}{354287}$	$-\frac{86058}{354287}$	$-\frac{223205}{354287}$	$\frac{86016}{354287}$	$\frac{45734749578}{354287}$	$-\frac{45712429056}{354287}$
74	1	9	2	9	1	49	−23	−7	5	$\frac{43}{354287}$	$-\frac{88107}{354287}$	$-\frac{228519}{354287}$	$\frac{88064}{354287}$	$\frac{46823672187}{354287}$	$-\frac{46800820224}{354287}$
75	1	10	0	10	3	56	−22	−20	10	$\frac{50}{354287}$	$-\frac{102450}{354287}$	$-\frac{26572}{354287}$	$\frac{102400}{354287}$	$\frac{54446130450}{354287}$	$-\frac{54419558400}{354287}$
76	1	10	1	10	1	57	−27	−15	9	$\frac{51}{354287}$	$-\frac{104499}{354287}$	$-\frac{27103}{354287}$	$\frac{104448}{354287}$	$\frac{55535053059}{354287}$	$-\frac{55507949568}{354287}$
77	1	11	0	11	1	65	−31	−23	13	$\frac{59}{354287}$	$-\frac{120891}{354287}$	$-\frac{31355}{354287}$	$\frac{120832}{354287}$	$\frac{64246433931}{354287}$	$-\frac{64215078912}{354287}$
78	3	0	0	0	21	−30	60	6	−12	$-\frac{347934101}{128352160055296}$	$\frac{712916972949}{128352160055296}$	$\frac{94995038891925}{64176080027648}$	$-\frac{347934101}{62671953152}$	$-\frac{194644834689554325}{64176080027648}$	$\frac{94995038891925}{31335976576}$
79	3	0	1	0	19	−29	55	11	−13	$-\frac{43691053}{16044020006912}$	$\frac{8952296}{16044020006912}$	$\frac{11892032405037}{8022010003456}$	$-\frac{43691053}{7833994144}$	$-\frac{24366774397920813}{8022010003456}$	$\frac{11892032405037}{3916997072}$
80	3	0	2	0	17	−28	50	16	−14	$-\frac{5483525}{2005502500864}$	$\frac{112357427}{2005502500864}$	$\frac{1488465444357}{1002751250432}$	$-\frac{5483525}{979249268}$	$-\frac{3049865695487493}{1002751250432}$	$\frac{1488465444357}{489624634}$
81	3	0	3	0	15	−27	45	21	−15	$-\frac{687901}{250687812608}$	$\frac{1409509149}{250687812608}$	$\frac{186276113181}{125343906304}$	$-\frac{1375802}{244812317}$	$-\frac{381679755907869}{125343906304}$	$\frac{745104452724}{244812317}$
82	3	0	4	0	13	−26	40	26	−16	$-\frac{86261}{31335976576}$	$\frac{176748789}{31335976576}$	$\frac{23308728885}{15667988288}$	$-\frac{1380176}{244812317}$	$-\frac{47759585485365}{15667988288}$	$\frac{745879324320}{244812317}$
83	3	0	5	0	11	−25	35	31	−17	$-\frac{10813}{3916997072}$	$\frac{22155837}{3916997072}$	$\frac{2916281637}{1958498536}$	$-\frac{1384064}{244812317}$	$-\frac{5975461074213}{1958498536}$	$\frac{746568099072}{244812317}$
84	3	0	6	0	9	−24	30	36	−18	$-\frac{1355}{489624634}$	$\frac{2776395}{489624634}$	$\frac{364834152}{244812317}$	$-\frac{1387520}{244812317}$	$-\frac{747545177448}{244812317}$	$\frac{747180343296}{244812317}$

85	3	0	7	0	7	−23	25	41	−19	$-\frac{679}{244812317}$	$\frac{1391271}{244812317}$	$\frac{365099883}{244812317}$	$-\frac{1390592}{244812317}$	$-\frac{748089660267}{244812317}$	$\frac{747724560384}{244812317}$
86	3	0	8	0	5	−22	20	46	−20	$-\frac{2041}{734436951}$	$\frac{1394003}{354287}$	$\frac{1096008265}{734436951}$	$-\frac{4179968}{734436951}$	$-\frac{748573644995}{244812317}$	$\frac{2244624926720}{734436951}$
87	3	0	9	0	3	−21	15	51	−21	$-\frac{18401}{6609932559}$	$\frac{12567883}{2203310853}$	$\frac{9869743313}{6609932559}$	$-\frac{37685248}{6609932559}$	$-\frac{6741034682779}{2203310853}$	$\frac{20213234305024}{6609932559}$
88	3	0	10	0	1	−20	10	56	−22	$-\frac{165865}{59489393031}$	$\frac{113285795}{19829797677}$	$\frac{88873041241}{59489393031}$	$-\frac{339691520}{59489393031}$	$-\frac{607002877167603}{19829797677}$	$\frac{182011988461568}{59489393031}$
89	3	1	0	1	19	−21	51	3	−9	$-\frac{1}{354287}$	$\frac{2049}{354287}$	$\frac{531441}{354287}$	$-\frac{2048}{354287}$	$-\frac{1088922609}{354287}$	$\frac{1088391168}{354287}$
90	3	1	1	1	17	−20	46	8	−10	”	”	”	”	”	”
91	3	1	2	1	15	−19	41	13	−11	”	”	”	”	”	”
92	3	1	3	1	13	−18	36	18	−12	”	”	”	”	”	”
93	3	1	4	1	11	−17	31	23	−13	”	”	”	”	”	”
94	3	1	5	1	9	−16	26	28	−14	”	”	”	”	”	”
95	3	1	6	1	7	−15	21	33	−15	”	”	”	”	”	”
96	3	1	7	1	5	−14	16	38	−16	”	”	”	”	”	”
97	3	1	8	1	3	−13	11	43	−17	”	”	”	”	”	”
98	3	1	9	1	1	−12	6	48	−18	”	”	”	”	”	”
99	3	2	0	2	17	−12	42	0	−6	”	”	”	”	”	”
100	3	2	1	2	15	−11	37	5	−7	”	”	”	”	”	”
101	3	2	2	2	13	−10	32	10	−8	”	”	”	”	”	”
102	3	2	3	2	11	−9	27	15	−9	”	”	”	”	”	”
103	3	2	4	2	9	−8	22	20	−10	”	”	”	”	”	”
104	3	2	5	2	7	−7	17	25	−11	”	”	”	”	”	”
105	3	2	6	2	5	−6	12	30	−12	”	”	”	”	”	”
106	3	2	7	2	3	−5	7	35	−13	”	”	”	”	”	”
107	3	2	8	2	1	−4	2	40	−14	”	”	”	”	”	”
108	3	3	0	3	15	−3	33	−3	−3	”	”	”	”	”	”
109	3	3	1	3	13	−2	28	2	−4	”	”	”	”	”	”
110	3	3	2	3	11	−1	23	7	−5	”	”	”	”	”	”
111	3	3	3	3	9	0	18	12	−6	”	”	”	”	”	”
112	3	3	4	3	7	1	13	17	−7	”	”	”	”	”	”
113	3	3	5	3	5	2	8	22	−8	”	”	”	”	”	”
114	3	3	6	3	3	3	3	27	−9	”	”	”	”	”	”
115	3	3	7	3	1	4	−2	32	−10	”	”	”	”	”	”
116	3	4	0	4	13	6	24	−6	0	”	”	”	”	”	”
117	3	4	1	4	11	7	19	−1	−1	”	”	”	”	”	”
118	3	4	2	4	9	8	14	4	−2	”	”	”	”	”	”
119	3	4	3	4	7	9	9	9	−3	”	”	”	”	”	”
120	3	4	4	4	5	10	4	14	−4	”	”	”	”	”	”
121	3	4	5	4	3	11	−1	19	−5	”	”	”	”	”	”
122	3	4	6	4	1	12	−6	24	−6	”	”	”	”	”	”
123	3	5	0	5	11	15	15	−9	3	”	”	”	”	”	”
124	3	5	1	5	9	16	10	−4	2	”	”	”	”	”	”
125	3	5	2	5	7	17	5	1	1	”	”	”	”	”	”
126	3	5	3	5	5	18	0	6	0	”	”	”	”	”	”
127	3	5	4	5	3	19	−5	11	−1	”	”	”	”	”	”
128	3	5	5	5	1	20	−10	16	−2	”	”	”	”	”	”

129	3	6	0	6	9	24	6	−12	6	”	”	”	”	”	”
130	3	6	1	6	7	25	1	−7	5	”	”	”	”	”	”
131	3	6	2	6	5	26	−4	−2	4	”	”	”	”	”	”
132	3	6	3	6	3	27	−9	3	3	”	”	”	”	”	”
133	3	6	4	6	1	28	−14	8	2	”	”	”	”	”	”
134	3	7	0	7	7	33	−3	−15	9	”	”	”	”	”	”
135	3	7	1	7	5	34	−8	−10	8	”	”	”	”	”	”
136	3	7	2	7	3	35	−13	−5	7	”	”	”	”	”	”
137	3	7	3	7	1	36	−18	0	6	”	”	”	”	”	”
138	3	8	0	8	5	42	−12	−18	12	”	”	”	”	”	”
139	3	8	1	8	3	43	−17	−13	11	”	”	”	”	”	”
140	3	8	2	8	1	44	−22	−8	10	”	”	”	”	”	”
141	3	9	0	9	3	51	−21	−21	15	”	”	”	”	”	”
142	3	9	1	9	1	52	−26	−16	14	”	”	”	”	”	”
143	3	10	0	10	1	60	−30	−24	18	”	”	”	”	”	”
144	5	0	0	0	19	−26	52	2	4	$\frac{1594323}{128352160055296}$	$-\frac{3266767827}{128352160055296}$	$-\frac{141220348371}{64176080027648}$	$\frac{1594323}{62671953152}$	$\frac{289360493812179}{64176080027648}$	$-\frac{141220348371}{31335976576}$
145	5	0	1	0	17	−25	47	7	−5	$\frac{177147}{16044020006912}$	$-\frac{362974203}{16044020006912}$	$-\frac{15691149819}{8022010003456}$	$\frac{177147}{7833994144}$	$\frac{32151165979131}{8022010003456}$	$-\frac{15691149819}{3916997072}$
146	5	0	2	0	15	−24	42	12	−6	$\frac{19683}{2005502500864}$	$-\frac{40330467}{2005502500864}$	$-\frac{1743461091}{1002751250432}$	$\frac{19683}{979249268}$	$\frac{3572351775459}{1002751250432}$	$-\frac{1743461091}{489624634}$
147	5	0	3	0	13	−23	37	17	−7	$\frac{2187}{250687812608}$	$-\frac{4481163}{250687812608}$	$-\frac{193717899}{125343906304}$	$\frac{4374}{244812317}$	$\frac{396927975051}{125343906304}$	$-\frac{774871596}{244812317}$
148	5	0	4	0	11	−22	32	22	−8	$\frac{243}{31335976576}$	$-\frac{497907}{31335976576}$	$-\frac{21524211}{15667988288}$	$\frac{3888}{244812317}$	$\frac{44103108339}{15667988288}$	$-\frac{688774752}{244812317}$
149	5	0	5	0	9	−21	27	27	−9	$\frac{27}{3916997072}$	$-\frac{55323}{3916997072}$	$-\frac{2391579}{1958498536}$	$\frac{3456}{244812317}$	$\frac{4900345371}{1958498536}$	$-\frac{612244224}{244812317}$
150	5	0	6	0	7	−20	22	32	−10	$\frac{3}{489624634}$	$-\frac{6147}{489624634}$	$-\frac{265731}{244812317}$	$\frac{3072}{244812317}$	$\frac{544482819}{244812317}$	$-\frac{544217088}{244812317}$
151	5	0	7	0	5	−19	17	37	−11	$\frac{4}{734436951}$	$-\frac{2732}{244812317}$	$-\frac{708616}{734436951}$	$\frac{8192}{734436951}$	$\frac{483984728}{244812317}$	$-\frac{1451245568}{734436951}$
152	5	0	8	0	3	−18	12	42	−12	$\frac{32}{6609932559}$	$-\frac{21856}{2203310853}$	$-\frac{5668928}{6609932559}$	$\frac{65536}{6609932559}$	$\frac{3871877824}{2203310853}$	$-\frac{11609964544}{6609932559}$
153	5	0	9	0	1	−17	7	47	−13	$\frac{256}{59489393031}$	$-\frac{174848}{19829797677}$	$-\frac{45351424}{59489393031}$	$\frac{524288}{59489393031}$	$\frac{309750225592}{19829797677}$	$-\frac{928797163 52}{59489393031}$
154	7	0	0	0	17	−22	44	−2	4	$\frac{177147}{128352160055296}$	$-\frac{362974203}{128352160055296}$	$-\frac{15691149819}{64176080027648}$	$\frac{177147}{62671953152}$	$\frac{32151165979131}{64176080027648}$	$-\frac{15691149819}{31335976576}$
155	7	0	1	0	15	−21	39	3	3	$\frac{19683}{16044020006912}$	$-\frac{40330467}{16044020006912}$	$-\frac{1743461091}{8022010003456}$	$\frac{19683}{7833994144}$	$\frac{3572351775459}{8022010003456}$	$-\frac{1743461091}{3916997072}$
156	7	0	2	0	13	−20	34	8	2	$\frac{2187}{2005502500864}$	$-\frac{4481163}{2005502500864}$	$-\frac{193717899}{1002751250432}$	$\frac{2187}{979249268}$	$\frac{396927975051}{1002751250432}$	$-\frac{193717899}{489624634}$
157	7	0	3	0	11	−19	29	13	1	$\frac{243}{250687812608}$	$-\frac{497907}{250687812608}$	$-\frac{21524211}{125343906304}$	$\frac{486}{244812317}$	$\frac{44103108339}{125343906304}$	$-\frac{86096844}{244812317}$
158	7	0	4	0	9	−18	24	18	0	$\frac{27}{31335976576}$	$-\frac{55323}{31335976576}$	$-\frac{2391579}{15667988288}$	$\frac{432}{244812317}$	$\frac{4900345371}{15667988288}$	$-\frac{76530528}{244812317}$
159	7	0	5	0	7	−17	19	23	−1	$\frac{3}{3916997072}$	$-\frac{6147}{3916997072}$	$-\frac{265731}{1958498536}$	$\frac{384}{244812317}$	$\frac{544482819}{1958498536}$	$-\frac{68027136}{244812317}$
160	7	0	6	0	5	−16	14	28	−2	$\frac{1}{1468873902}$	$-\frac{683}{489624634}$	$-\frac{88577}{734436951}$	$\frac{1024}{734436951}$	$\frac{60498091}{244812317}$	$-\frac{181405696}{734436951}$
161	7	0	7	0	3	−15	9	33	−3	$\frac{4}{6609932559}$	$-\frac{2732}{2203310853}$	$-\frac{708616}{6609932559}$	$\frac{8192}{6609932559}$	$\frac{483984728}{2203310853}$	$-\frac{1451245568}{6609932559}$
162	7	0	8	0	1	−14	4	38	−4	$\frac{32}{59489393031}$	$-\frac{21856}{19829797677}$	$-\frac{5668928}{59489393031}$	$\frac{65536}{59489393031}$	$\frac{3871877824}{19829797677}$	$-\frac{11609964544}{59489393031}$
163	9	0	0	0	15	−18	36	−6	12	$\frac{19683}{128352160055296}$	$-\frac{40330467}{128352160055296}$	$-\frac{1743461091}{64176080027648}$	$\frac{19683}{62671953152}$	$\frac{3572351775459}{64176080027648}$	$-\frac{1743461091}{31335976576}$
164	9	0	1	0	13	−17	31	−1	11	$\frac{2187}{16044020006912}$	$-\frac{4481163}{16044020006912}$	$-\frac{193717899}{8022010003456}$	$\frac{2187}{7833994144}$	$\frac{396927975051}{8022010003456}$	$-\frac{193717899}{3916997072}$
165	9	0	2	0	11	−16	26	4	10	$\frac{243}{2005502500864}$	$-\frac{497907}{2005502500864}$	$-\frac{21524211}{1002751250432}$	$\frac{243}{979249268}$	$\frac{44103108339}{1002751250432}$	$-\frac{21524211}{489624634}$
166	9	0	3	0	9	−15	21	9	9	$\frac{27}{250687812608}$	$-\frac{55323}{250687812608}$	$-\frac{2391579}{125343906304}$	$\frac{54}{244812317}$	$\frac{4900345371}{125343906304}$	$-\frac{9566316}{244812317}$
167	9	0	4	0	7	−14	16	14	8	$\frac{3}{31335976576}$	$-\frac{6147}{31335976576}$	$-\frac{265731}{15667988288}$	$\frac{48}{244812317}$	$\frac{544482819}{15667988288}$	$-\frac{8503392}{244812317}$
168	9	0	5	0	5	−13	11	19	7	$\frac{1}{11750991216}$	$-\frac{683}{3916997072}$	$-\frac{88577}{5875495608}$	$\frac{128}{734436951}$	$\frac{60498091}{1958498536}$	$-\frac{22675712}{734436951}$
169	9	0	6	0	3	−12	6	24	6	$\frac{1}{13219865118}$	$-\frac{683}{4406621706}$	$-\frac{88577}{6609932559}$	$\frac{1024}{6609932559}$	$\frac{60498091}{2203310853}$	$-\frac{181405696}{6609932559}$
170	9	0	7	0	1	−11	1	29	5	$\frac{4}{59489393031}$	$-\frac{2732}{19829797677}$	$-\frac{708616}{59489393031}$	$\frac{8192}{59489393031}$	$\frac{483984728}{19829797677}$	$-\frac{1451245568}{59489393031}$
171	11	0	0	0	13	−14	28	−10	20	$\frac{2187}{128352160055296}$	$-\frac{4481163}{128352160055296}$	$-\frac{193717899}{64176080027648}$	$\frac{2187}{62671953152}$	$\frac{396927975051}{64176080027648}$	$\frac{193717899}{31335976576}$
172	11	0	1	0	11	−13	23	−5	19	$\frac{243}{16044020006912}$	$-\frac{497907}{16044020006912}$	$-\frac{21524211}{8022010003456}$	$\frac{243}{7833994144}$	$\frac{44103108339}{8022010003456}$	$-\frac{21524211}{3916997072}$

173	11	0	2	0	9	−12	18	0	18	$\frac{27}{2005502500864}$	$-\frac{55323}{2005502500864}$	$-\frac{2391579}{1002751250432}$	$\frac{27}{979249268}$	$\frac{4900345371}{1002751250432}$	$-\frac{2391579}{489624634}$
174	11	0	3	0	7	−11	13	5	17	$\frac{3}{250687812608}$	$-\frac{6147}{250687812608}$	$-\frac{265731}{125343906304}$	$\frac{6}{244812317}$	$\frac{544482819}{125343906304}$	$-\frac{1062924}{244812317}$
175	11	0	4	0	5	−10	8	10	16	$\frac{1}{94007929728}$	$-\frac{683}{31335976576}$	$-\frac{88577}{47003964864}$	$\frac{16}{734436951}$	$\frac{60498091}{15667988288}$	$-\frac{2834464}{734436951}$
176	11	0	5	0	3	−9	3	15	15	$\frac{1}{105758920944}$	$-\frac{683}{35252973648}$	$-\frac{88577}{52879460472}$	$\frac{128}{6609932559}$	$\frac{60498091}{17626486824}$	$-\frac{22675712}{6609932559}$
177	11	0	6	0	1	−8	−2	20	14	$\frac{1}{118978786062}$	$-\frac{683}{39659595354}$	$-\frac{88577}{59489393031}$	$\frac{1024}{59489393031}$	$\frac{60498091}{59489393031}$	$-\frac{181405696}{59489393031}$
178	13	0	0	0	11	−10	20	−14	28	$\frac{243}{128352160055296}$	$-\frac{497907}{128352160055296}$	$-\frac{21524211}{64176080027648}$	$\frac{243}{62671953152}$	$\frac{44103108339}{64176080027648}$	$-\frac{21524211}{31335976576}$
179	13	0	1	0	9	−9	15	−9	27	$\frac{27}{16044020006912}$	$-\frac{55323}{16044020006912}$	$-\frac{2391579}{8022010003456}$	$\frac{27}{7833994144}$	$\frac{4900345371}{8022010003456}$	$-\frac{2391579}{3916997072}$
180	13	0	2	0	7	−8	10	−4	26	$\frac{3}{2005502500864}$	$-\frac{6147}{2005502500864}$	$-\frac{265731}{1002751250432}$	$\frac{3}{979249268}$	$\frac{544482819}{1002751250432}$	$-\frac{265731}{489624634}$
181	13	0	3	0	5	−7	5	1	25	$\frac{1}{752063437824}$	$-\frac{683}{250687812608}$	$-\frac{88577}{376031718912}$	$\frac{2}{734436951}$	$\frac{60498091}{125343906304}$	$-\frac{354308}{734436951}$
182	13	0	4	0	3	−6	0	6	24	$\frac{1}{846071367552}$	$-\frac{683}{282023789184}$	$-\frac{88577}{423035683776}$	$\frac{16}{6609932559}$	$\frac{60498091}{141011894592}$	$-\frac{2834464}{6609932559}$
183	13	0	5	0	1	−5	−5	11	23	$\frac{1}{951830288496}$	$-\frac{683}{317276762832}$	$-\frac{88577}{475915144248}$	$\frac{128}{59489393031}$	$\frac{60498091}{158638381416}$	$-\frac{22675712}{59489393031}$
184	15	0	0	0	9	−6	12	−18	36	$\frac{27}{128352160055296}$	$-\frac{55323}{128352160055296}$	$-\frac{2391579}{64176080027648}$	$\frac{27}{62671953152}$	$\frac{4900345371}{64176080027648}$	$-\frac{2391579}{313359765 76}$
185	15	0	1	0	7	−5	7	−13	35	$\frac{3}{16044020006912}$	$-\frac{6147}{16044020006912}$	$-\frac{265731}{8022010003456}$	$\frac{3}{7833994144}$	$\frac{544482819}{8022010003456}$	$-\frac{265731}{3916997072}$
186	15	0	2	0	5	−4	2	−8	34	$\frac{1}{6016507502592}$	$-\frac{683}{2005502500864}$	$-\frac{88577}{3008253751296}$	$\frac{1}{2937747804}$	$\frac{60498091}{1002751250432}$	$-\frac{88577}{1468873902}$
187	15	0	3	0	3	−3	−3	−3	33	$\frac{1}{6768570940416}$	$-\frac{683}{2256190313472}$	$-\frac{88577}{3384285470208}$	$\frac{2}{6609932559}$	$\frac{60498091}{1128095156736}$	$-\frac{354308}{6609932559}$
188	15	0	4	0	1	−2	−8	2	32	$\frac{1}{7614642307968}$	$-\frac{683}{2538214102656}$	$-\frac{88577}{3807321153984}$	$\frac{16}{59489393031}$	$\frac{60498091}{1269107051328}$	$-\frac{2834464}{59489393031}$
189	17	0	0	0	7	−2	4	−22	44	$\frac{3}{128352160055296}$	$-\frac{6147}{128352160055296}$	$-\frac{265731}{64176080027648}$	$\frac{3}{62671953152}$	$\frac{544482819}{64176080027648}$	$-\frac{265731}{313359765 76}$
190	17	0	1	0	5	−1	−1	−17	43	$\frac{1}{48132060020736}$	$-\frac{683}{16044020006912}$	$-\frac{88577}{24066030010368}$	$\frac{1}{23501982432}$	$\frac{60498091}{8022010003456}$	$-\frac{88577}{11750991216}$
191	17	0	2	0	3	0	−6	−12	42	$\frac{1}{54148567523328}$	$-\frac{683}{18049522507776}$	$-\frac{88577}{27074283761664}$	$\frac{1}{26439730236}$	$\frac{60498091}{9024761253888}$	$-\frac{354308}{13219865118}$
192	17	0	3	0	1	1	−11	−7	41	$\frac{1}{60917138463744}$	$-\frac{683}{20305712821248}$	$-\frac{88577}{30458569231872}$	$\frac{2}{59489393031}$	$\frac{60498091}{10152856410624}$	$-\frac{88577}{59489393031}$
193	19	0	0	0	5	2	−4	−26	52	$\frac{1}{385056480165888}$	$-\frac{683}{128352160055296}$	$-\frac{88577}{192528240082944}$	$\frac{1}{188015859456}$	$\frac{60498091}{64176080027648}$	$-\frac{88577}{94007929728}$
194	19	0	1	0	3	3	−9	−21	51	$\frac{1}{433188540186624}$	$-\frac{683}{144396180062208}$	$-\frac{88577}{216594270093312}$	$\frac{1}{211517841888}$	$\frac{60498091}{72198090031104}$	$-\frac{88577}{105758920944}$
195	19	0	2	0	1	4	−14	−16	50	$\frac{1}{487337107709952}$	$-\frac{683}{162445702569984}$	$-\frac{88577}{243668553854976}$	$\frac{1}{237957572124}$	$\frac{60498091}{81222851284992}$	$-\frac{88577}{118978786062}$
196	21	0	0	0	3	6	−12	−30	60	$\frac{1}{3465508321492992}$	$-\frac{683}{1155169440497664}$	$-\frac{88577}{1732754160746496}$	$\frac{1}{1692142735104}$	$\frac{60498091}{577584720248832}$	$-\frac{88577}{846071367552}$
197	21	0	1	0	1	7	−17	−25	59	$\frac{1}{3898696861679616}$	$-\frac{683}{1299565620559872}$	$-\frac{88577}{1949348430839808}$	$\frac{1}{1903660576992}$	$\frac{60498091}{649782810279936}$	$-\frac{88577}{951830288496}$
198	23	0	0	0	1	10	−20	−34	68	$\frac{1}{31189574893436928}$	$-\frac{683}{10396524964478976}$	$-\frac{88577}{15594787446718464}$	$\frac{1}{15229284615936}$	$\frac{60498091}{5198262482239488}$	$-\frac{88577}{7614642307968}$

Table 2

No	b_1	b_2	b_3	b_4	b_5	a_2	a_4	a_6	a_{12}	c_1	c_2	c_3	c_4	c_6	c_{12}
1	0	0	0	0	24	−36	72	12	−24	0	36	0	$-\frac{1815957}{50443}$	$-\frac{320820957495}{8923164928}$	$\frac{1166909041719}{8923164928}$
2	0	0	1	0	22	−35	67	17	−25	0	35	0	$-\frac{1765514}{50443}$	$-\frac{155957395929}{4461582464}$	$\frac{579001438041}{4461582464}$
3	0	0	2	0	20	−34	62	22	−26	0	34	0	$-\frac{1715071}{50443}$	$-\frac{3550884506}{104568339}$	$\frac{13465979243}{104568339}$
4	0	0	3	0	18	−33	57	27	−27	0	33	0	$-\frac{1664185}{50443}$	$-\frac{1148839313}{34856113}$	$\frac{4453870892}{34856113}$
5	0	0	4	0	16	−32	52	32	−28	0	32	0	$-\frac{1614185}{50443}$	$-\frac{3342151372}{104568339}$	$\frac{13257246109}{104568339}$
6	0	0	5	0	14	−31	47	37	−29	0	31	0	$-\frac{1563742}{50443}$	$-\frac{3237784805}{104568339}$	$\frac{13152879542}{104568339}$
7	0	0	6	0	12	−30	42	42	−30	0	30	0	$-\frac{1513299}{50443}$	$-\frac{1044472746}{34856113}$	$\frac{4349504325}{34856113}$
8	0	0	7	0	10	−29	37	47	−31	0	29	0	$-\frac{1462856}{50443}$	$-\frac{3029051671}{104568339}$	$\frac{12944146408}{104568339}$
9	0	0	8	0	8	−28	32	52	−32	0	28	0	$-\frac{1412413}{50443}$	$-\frac{2924685104}{104568339}$	$\frac{12839779841}{104568339}$
10	0	0	9	0	6	−27	27	57	−33	0	27	0	$-\frac{1361970}{50443}$	$-\frac{940106179}{34856113}$	$\frac{4245137758}{34856113}$
11	0	0	10	0	4	−26	22	62	−34	0	26	0	$-\frac{1311527}{50443}$	$-\frac{2715951970}{104568339}$	$\frac{12631046707}{104568339}$
12	0	0	11	0	2	−25	17	67	−35	0	25	0	$-\frac{1261084}{50443}$	$-\frac{2611585403}{104568339}$	$\frac{12526680140}{104568339}$
13	0	0	12	0	0	−24	12	72	−36	0	24	0	$-\frac{98061920}{4085883}$	$-\frac{203084725720}{8470035459}$	$\frac{1006207397344}{8470035459}$
14	0	1	0	1	22	−27	63	9	−21	0	27	0	$-\frac{1361970}{50443}$	$-\frac{120332733381}{4461582464}$	$\frac{543376775493}{4461582464}$
15	0	1	1	1	20	−26	58	14	−22	0	26	0	$-\frac{1311527}{50443}$	$-\frac{14485060359}{557697808}$	$\frac{67365565623}{557697808}$
16	0	1	2	1	18	−25	53	19	−23	0	25	0	$-\frac{1261084}{50443}$	$-\frac{2611585403}{104568339}$	$\frac{12526680140}{104568339}$
17	0	1	3	1	16	−24	48	24	−24	0	24	0	$-\frac{1210641}{50443}$	$-\frac{835739612}{34856113}$	$\frac{4140771191}{34856113}$
18	0	1	4	1	14	−23	43	29	−25	0	23	0	$-\frac{1160198}{50443}$	$-\frac{2402852269}{104568339}$	$\frac{12317947006}{104568339}$
19	0	1	5	1	12	−22	38	34	−26	0	22	0	$-\frac{1109755}{50443}$	$-\frac{2298485702}{104568339}$	$\frac{122135804390}{104568339}$
20	0	1	6	1	10	−21	33	39	−27	0	21	0	$-\frac{1059312}{50443}$	$-\frac{731373045}{34856113}$	$\frac{4036404624}{34856113}$
21	0	1	7	1	8	−20	28	44	−28	0	20	0	$-\frac{1008869}{50433}$	$-\frac{2089752568}{104568339}$	$\frac{12004847305}{104568339}$
22	0	1	8	1	6	−19	23	49	−29	0	19	0	$-\frac{958426}{50443}$	$-\frac{1985386001}{104568339}$	$\frac{11900480738}{104568339}$
23	0	1	9	1	4	−18	18	54	−30	0	18	0	$-\frac{907983}{50443}$	$-\frac{627006478}{34856113}$	$\frac{3932038057}{34856113}$
24	0	1	10	1	2	−17	13	59	−31	0	17	0	$-\frac{857540}{50443}$	$-\frac{1776652867}{104568339}$	$\frac{11691747604}{104568339}$
25	0	1	11	1	0	−16	8	64	−32	0	16	0	$-\frac{7263872}{453987}$	$-\frac{15050576704}{941115051}$	$\frac{104286427264}{941115051}$
26	0	2	0	2	20	−18	54	6	−18	0	18	0	$-\frac{907983}{50443}$	$-\frac{5016404925}{278848904}$	$\frac{31456657557}{278848904}$
27	0	2	1	2	18	−17	49	11	−19	0	17	0	$-\frac{857540}{50443}$	$-\frac{1184452059}{69712226}$	$\frac{7794515217}{69712226}$
28	0	2	2	2	16	−16	44	16	−20	0	16	0	$-\frac{807097}{50443}$	$-\frac{1672286300}{104568339}$	$\frac{11587381037}{104568339}$
29	0	2	3	2	14	−15	39	21	−21	0	15	0	$-\frac{756654}{50443}$	$-\frac{522639911}{34856113}$	$\frac{3827671490}{34856113}$
30	0	2	4	2	12	−14	34	26	−22	0	14	0	$-\frac{706211}{50443}$	$-\frac{1463553166}{104568339}$	$\frac{11378647903}{104568339}$
31	0	2	5	2	10	−13	29	31	−23	0	13	0	$-\frac{655768}{50443}$	$\frac{1359186599}{104568339}$	$\frac{11274281336}{104568339}$
32	0	2	6	2	8	−12	24	36	−24	0	12	0	$-\frac{605325}{50443}$	$-\frac{418273344}{34856113}$	$\frac{3723304923}{34856113}$
33	0	2	7	2	6	−11	19	41	−25	0	11	0	$-\frac{554882}{50443}$	$-\frac{1150453465}{104568339}$	$\frac{11065548202}{104568339}$
34	0	2	8	2	4	−10	14	46	−26	0	10	0	$-\frac{504439}{50443}$	$-\frac{1046086898}{104568339}$	$\frac{10961181635}{104568339}$
35	0	2	9	2	2	−9	9	51	−27	0	9	0	$-\frac{453996}{50443}$	$-\frac{313906777}{34856113}$	$\frac{3618938356}{34856113}$
36	0	2	10	2	0	−8	4	56	−28	0	8	0	$-\frac{403552}{50443}$	$-\frac{837353768}{104568339}$	$\frac{10752446432}{104568339}$
37	0	3	0	3	18	−9	45	3	−15	0	9	0	$-\frac{403553}{50443}$	$-\frac{279050664}{34856113}$	$\frac{3584082243}{34856113}$
38	0	3	1	3	16	−8	40	8	−16	0	8	0	$-\frac{256}{50443}$	$-\frac{6561}{3485}$	$\frac{1679616}{3485}$
39	0	3	2	3	14	−7	35	13	−17	0	7	0	$\frac{353110}{50433}$	$-\frac{732987197}{104568339}$	$\frac{10648081934}{104568339}$
40	0	3	3	3	12	−6	30	18	−18	0	6	0	$-\frac{302667}{50443}$	$-\frac{209540210}{34856113}$	$-\frac{3514571789}{34856113}$

41	0	3	4	3	10	−5	25	23	−19	0	5	0	$-\frac{252224}{50443}$	$-\frac{524254063}{104568339}$	$\frac{10439348800}{104568339}$
42	0	3	5	3	8	−4	20	28	−20	0	4	0	$-\frac{201781}{50443}$	$-\frac{419887496}{104568339}$	$\frac{10334982233}{104568339}$
43	0	3	6	3	6	−3	15	33	−21	0	3	0	$-\frac{151338}{50433}$	$-\frac{105173643}{34856113}$	$\frac{3410205222}{34856113}$
44	0	3	7	3	4	−2	10	38	−22	0	2	0	$-\frac{100895}{50443}$	$-\frac{211154362}{104568339}$	$\frac{10126249099}{104568339}$
45	0	3	8	3	2	−1	5	43	−23	0	1	0	$-\frac{50452}{50443}$	$-\frac{106787795}{104568339}$	$\frac{10021882532}{104568339}$
46	0	3	9	3	0	0	0	48	−24	0	0	0	0	$-\frac{16}{691}$	$\frac{65536}{691}$
47	0	4	0	4	16	0	36	0	−12	0	0	0	$-\frac{9}{50443}$	$-\frac{9}{34856113}$	$\frac{2421252}{34856113}$
48	0	4	1	4	14	1	31	5	−13	0	−1	0	$\frac{50434}{50443}$	$\frac{33443721}{34856113}$	$\frac{3271587858}{34856113}$
49	0	4	2	4	12	2	26	10	−14	0	−2	0	$\frac{100877}{50443}$	$\frac{206311906}{104568339}$	$\frac{9708782831}{104568339}$
50	0	4	3	4	10	3	21	15	−15	0	−3	0	$\frac{151320}{50443}$	$\frac{103559491}{34856113}$	$\frac{3201472088}{34856113}$
51	0	4	4	4	8	4	16	20	−16	0	−4	0	$\frac{201763}{50443}$	$\frac{415045040}{104568339}$	$\frac{9500049697}{104568339}$
52	0	4	5	4	6	5	11	25	−17	0	−5	0	$\frac{252206}{50443}$	$\frac{519411607}{104568339}$	$\frac{9395683130}{104568339}$
53	0	4	6	4	4	6	6	30	−18	0	−6	0	$\frac{302649}{50443}$	$\frac{207926058}{34856113}$	$\frac{3097105521}{34856113}$
54	0	4	7	4	2	7	1	35	−19	0	−7	0	$\frac{353092}{50433}$	$\frac{728144741}{104568339}$	$\frac{9186949996}{104568339}$
55	0	4	8	4	0	8	−4	40	−20	0	−8	0	$\frac{403616}{50443}$	$\frac{832510984}{104568339}$	$\frac{9082415840}{104568339}$
56	0	5	0	5	14	9	27	−3	−9	0	−9	0	$\frac{453978}{50443}$	$\frac{320363505}{34856113}$	$\frac{2953645629}{34856113}$
57	0	5	1	5	12	10	22	2	−10	0	−10	0	$\frac{504421}{50443}$	$\frac{351385950}{34856113}$	$-\frac{6561}{34856113}$
58	0	5	2	5	10	11	17	7	−11	0	11	0	$\frac{554864}{50443}$	$\frac{1145611009}{104568339}$	$\frac{8769483728}{104568339}$
59	0	5	3	5	8	12	12	12	−12	0	−12	0	$\frac{605307}{50443}$	$\frac{416659192}{34856113}$	$\frac{2888372387}{34856113}$
60	0	5	4	5	6	13	7	17	−13	0	−13	0	$\frac{655750}{50443}$	$\frac{1354344143}{104568339}$	$\frac{8560750594}{104568339}$
61	0	5	5	5	4	14	2	22	−14	0	−14	0	$\frac{706193}{50443}$	$\frac{1458710710}{104568339}$	$\frac{8456384027}{104568339}$
62	0	5	6	5	2	15	−3	27	−15	0	−15	0	$\frac{756636}{50443}$	$\frac{521025759}{34856113}$	$\frac{27840058209808}{34856113}$
63	0	5	7	5	0	16	−8	32	−16	0	−16	0	$\frac{807808}{50443}$	$\frac{1667440928}{104568339}$	$\frac{8246142592}{104568339}$
64	0	6	0	6	12	18	18	−6	−6	0	−18	0	$\frac{907965}{50443}$	$\frac{599565510}{34856113}$	$\frac{2705466069}{34856113}$
65	0	6	1	6	10	19	13	−1	−7	0	−19	0	$\frac{958408}{50443}$	$\frac{625745427}{34856113}$	$\frac{2679286152}{34856113}$
66	0	6	2	6	8	20	8	4	−8	0	−20	0	$\frac{1008851}{50443}$	$\frac{2084910112}{104568339}$	$\frac{7830184625}{104568339}$
67	0	6	3	6	6	21	3	9	−9	0	−21	0	$\frac{1059294}{50443}$	$\frac{729758893}{34856113}$	$\frac{2575272686}{34856113}$
68	0	6	4	6	4	22	−2	14	−10	0	−22	0	$\frac{1109737}{50443}$	$\frac{2293643246}{104568339}$	$\frac{7621451491}{104568339}$
69	0	6	5	6	2	23	−7	19	−11	0	−23	0	$\frac{1160180}{50443}$	$\frac{2398009813}{104568339}$	$\frac{7517084924}{104568339}$
70	0	6	6	6	0	24	−12	24	−12	0	−24	0	$\frac{1217184}{50443}$	$\frac{834116712}{34856113}$	$\frac{2466381216}{34856113}$
71	0	7	0	7	10	27	9	−9	−3	0	−27	0	$\frac{1361952}{50443}$	$\frac{835184763}{34856113}$	$\frac{2469846816}{34856113}$
72	0	7	1	7	8	28	4	−4	−4	0	−28	0	$\frac{1412395}{50443}$	$\frac{1248766920}{34856113}$	$\frac{2056264659}{34856113}$
73	0	7	2	7	6	29	−1	1	−5	0	−29	0	$\frac{1462838}{50443}$	$\frac{3024209215}{104568339}$	$\frac{6890885522}{104568339}$
74	0	7	3	7	4	30	−6	6	−6	0	−30	0	$\frac{1513281}{50443}$	$\frac{1042858594}{34856113}$	$\frac{2262172985}{34856113}$
75	0	7	4	7	2	31	−11	11	−7	0	−31	0	$\frac{1563724}{50443}$	$\frac{3232942349}{104568339}$	$\frac{6682152388}{104568339}$
76	0	7	5	7	0	32	−16	16	−8	0	−32	0	$\frac{1673216}{50443}$	$\frac{3337072720}{104568339}$	$\frac{6455613440}{104568339}$
77	0	8	0	8	8	36	0	−12	0	0	−36	0	$\frac{1815939}{50443}$	$\frac{4557424176}{34856113}$	$-\frac{1252392597}{34856113}$
78	0	8	1	8	6	37	−5	−7	−1	0	−37	0	$\frac{1866382}{50443}$	$-\frac{917507715}{34856113}$	$\frac{4222539294}{34856113}$
79	0	8	2	8	4	38	−10	−2	−2	0	−38	0	$\frac{1916825}{50443}$	$\frac{3963508318}{104568339}$	$\frac{5951586419}{104568339}$
80	0	8	3	8	2	39	−15	3	−3	0	−39	0	$\frac{1967268}{50443}$	$\frac{1355958295}{34856113}$	$\frac{1949073284}{34856113}$
81	0	8	4	8	0	40	−20	8	−4	0	−40	0	$\frac{2549152}{50443}$	$\frac{4170115688}{104568339}$	$\frac{4643301856}{104568339}$
82	0	9	0	9	6	45	−9	−15	3	0	−45	0	$\frac{2269926}{50443}$	$-\frac{44716962843}{34856113}$	$\frac{48021994422}{34856113}$
83	0	9	1	9	4	46	−14	−10	2	0	−46	0	$\frac{2320369}{50443}$	$\frac{19230586674}{34856113}$	$-\frac{15925555095}{34856113}$
84	0	9	2	9	2	47	−19	−5	1	0	−47	0	$\frac{2370812}{50433}$	$\frac{4902807421}{104568339}$	$\frac{5012287316}{104568339}$

85	0	9	3	9	0	48	-24	0	0	0	-48	0	$\frac{98688}{691}$	$\frac{22776448}{477481}$	$-\frac{22776448}{477481}$
86	0	10	0	10	4	54	-18	-18	6	0	-54	0	$\frac{2923913}{50443}$	$\frac{530810982810}{34856113}$	$-\frac{527505951231}{34856113}$
87	0	10	1	10	2	55	-23	-13	5	0	-55	0	$\frac{2774356}{50443}$	$-\frac{139136271129}{34856113}$	$\frac{142441302708}{34856113}$
88	0	10	2	10	0	56	-28	-8	4	0	-56	0	$\frac{45871520}{50443}$	$\frac{5669919640}{104568339}$	$-\frac{84990677536}{104568339}$
89	0	11	0	11	2	63	-27	-21	9	0	-63	0	$\frac{3177900}{50443}$	$-\frac{5498714302641}{34856113}$	$\frac{5502019334220}{34856113}$
90	0	11	1	11	0	64	-32	-16	8	0	-64	0	$\frac{390648832}{50443}$	$\frac{1130099927952}{34856113}$	$-\frac{1394502454272}{34856113}$
91	0	12	0	12	0	72	-36	-24	12	0	-72	0	$\frac{3490416288}{50443}$	$\frac{54160613772696}{34856113}$	$-\frac{56566676762208}{34856113}$
92	2	0	0	0	22	-32	64	8	-16	0	1	0	-1	$-\frac{176559}{176896}$	$\frac{176559}{176896}$
93	2	0	1	0	20	-31	59	13	-17	0	1	0	-1	$-\frac{264833}{265344}$	$\frac{264833}{265344}$
94	2	0	2	0	18	-30	54	18	-18	0	1	0	-1	$-\frac{2069}{2073}$	$\frac{2069}{2073}$
95	2	0	3	0	16	-29	49	23	-19	”	”	”	”	”	”
96	2	0	4	0	14	-28	44	28	-20	”	”	”	”	”	”
97	2	0	5	0	12	-27	39	33	-21	”	”	”	”	”	”
98	2	0	6	0	10	-26	34	38	-22	”	”	”	”	”	”
99	2	0	7	0	8	-25	29	43	-23	”	”	”	”	”	”
100	2	0	8	0	6	-24	24	48	-24	”	”	”	”	”	”
101	2	0	9	0	4	-23	19	53	-25	”	”	”	”	”	”
102	2	0	10	0	2	-22	14	58	-26	”	”	”	”	”	”
103	2	0	11	0	0	-21	9	63	-27	0	1	0	$-\frac{4085884}{4085883}$	$-\frac{8453691923}{8470035459}$	$\frac{8453693996}{8470035459}$
104	2	1	0	1	20	-23	55	5	-13	0	1	0	-1	$-\frac{88263}{88448}$	$\frac{88263}{88448}$
105	2	1	1	1	18	-22	50	10	-14	0	1	0	-1	$-\frac{33103}{33168}$	$\frac{33103}{33168}$
106	2	1	2	1	16	-21	45	15	-15	0	1	0	-1	$-\frac{2069}{2073}$	$\frac{2069}{2073}$
107	2	1	3	1	14	-20	40	20	-16	”	”	”	”	”	”
108	2	1	4	1	12	-19	35	25	-17	”	”	”	”	”	”
109	2	1	5	1	10	-18	30	30	-18	”	”	”	”	”	”
110	2	1	6	1	8	-17	25	35	-19	”	”	”	”	”	”
111	2	1	7	1	6	-16	20	40	-20	”	”	”	”	”	”
112	2	1	8	1	4	-15	15	45	-21	”	”	”	”	”	”
113	2	1	9	1	2	-14	10	50	-22	”	”	”	”	”	”
114	2	1	10	1	0	-13	5	55	-23	0	1	0	$-\frac{453988}{453987}$	$-\frac{939299099}{941115051}$	$\frac{939301172}{941115051}$
115	2	2	0	2	18	-14	46	2	-10	0	1	0	-1	$-\frac{5523}{5528}$	$\frac{5523}{5528}$
116	2	2	1	2	16	-13	41	7	-11	0	1	0	-1	$-\frac{4139}{4146}$	$\frac{4139}{4146}$
117	2	2	2	2	14	-12	36	12	-12	0	1	0	-1	$-\frac{2069}{2073}$	$\frac{2069}{2073}$
118	2	2	3	2	12	-11	31	17	-13	”	”	”	”	”	”
119	2	2	4	2	10	-10	26	22	-14	”	”	”	”	”	”
120	2	2	5	2	8	-9	21	27	-15	”	”	”	”	”	”
121	2	2	6	2	6	-8	16	32	-16	”	”	”	”	”	”
122	2	2	7	2	4	-7	11	37	-17	”	”	”	”	”	”
123	2	2	8	2	2	-6	6	42	-18	”	”	”	”	”	”
124	2	2	9	2	0	-5	1	47	-19	0	1	0	$-\frac{50444}{50443}$	$-\frac{104366563}{10458339}$	$\frac{104368636}{10458339}$
125	2	3	0	3	16	-5	37	-1	-7	0	1	0	-1	$-\frac{1371}{1382}$	$\frac{1371}{1382}$
126	2	3	1	3	14	-4	32	4	-8	0	1	0	-1	$-\frac{2065}{2073}$	$\frac{2065}{2073}$
127	2	3	2	3	12	-3	27	9	-9	0	1	0	-1	$-\frac{2069}{2073}$	$\frac{2069}{2073}$
128	2	3	3	3	10	-2	22	14	-10	”	”	”	”	”	”

129	2	3	4	3	8	−1	17	19	−11	”	”	”	”	”	”
130	2	3	5	3	6	0	12	24	−12	”	”	”	”	”	”
131	2	3	6	3	4	1	7	29	−13	”	”	”	”	”	”
132	2	3	7	3	2	2	2	34	−14	”	”	”	”	”	”
133	2	3	8	3	0	3	−3	39	−15	0	1	0	$-\frac{50452}{50443}$	$-\frac{104366531}{10458339}$	$\frac{104385188}{10458339}$
134	2	4	0	4	14	4	28	−4	−4	0	1	0	−1	$-\frac{711}{691}$	$\frac{711}{691}$
135	2	4	1	4	12	5	23	1	−5	0	1	0	−1	$-\frac{2101}{2073}$	$\frac{2101}{2073}$
136	2	4	2	4	10	6	18	6	−6	0	1	0	−1	$-\frac{2069}{2073}$	$\frac{2069}{2073}$
137	2	4	3	4	8	7	13	11	−7	0	1	0	−1	$-\frac{2069}{2073}$	$\frac{2069}{2073}$
138	2	4	4	4	6	8	8	16	−8	0	1	0	−1	$-\frac{2069}{2073}$	$\frac{2069}{2073}$
139	2	4	5	4	4	9	3	21	−9	0	1	0	−1	$-\frac{2069}{2073}$	$\frac{2069}{2073}$
140	2	4	6	4	2	10	−2	26	−10	0	1	0	−1	$-\frac{2069}{2073}$	$\frac{2069}{2073}$
141	2	4	7	4	0	11	−7	31	−11	0	1	0	$-\frac{50524}{50443}$	$-\frac{104366243}{104568339}$	$\frac{104534156}{104568339}$
142	2	5	0	5	12	13	19	−7	−1	0	1	0	−1	$-\frac{615}{691}$	$\frac{615}{691}$
143	2	5	1	5	10	14	14	−2	−2	0	1	0	−1	$-\frac{1813}{2073}$	$\frac{1813}{2073}$
144	2	5	2	5	8	15	9	3	−3	0	1	0	−1	$-\frac{2069}{2073}$	$\frac{2069}{2073}$
145	2	5	3	5	6	16	4	8	−4	”	”	”	”	”	”
146	2	5	4	5	4	17	−1	13	−5	”	”	”	”	”	”
147	2	5	5	5	2	18	−6	18	−6	”	”	”	”	”	”
148	2	5	6	5	0	19	−11	23	−7	0	1	0	$-\frac{51172}{50443}$	$-\frac{104363651}{10458339}$	$\frac{105874868}{10458339}$
149	2	6	0	6	10	22	10	−10	2	0	1	0	−1	$-\frac{519}{691}$	$\frac{519}{691}$
150	2	6	1	6	8	23	5	−5	1	0	1	0	−1	$-\frac{4117}{2073}$	$\frac{4117}{2073}$
151	2	6	2	6	6	24	0	0	0	0	1	0	−1	$-\frac{2069}{2073}$	$\frac{2069}{2073}$
152	2	6	3	6	4	25	−5	5	−1	”	”	”	”	”	”
153	2	6	4	6	2	26	−10	10	−2	”	”	”	”	”	”
154	2	6	5	6	0	27	−15	15	−3	0	1	0	$-\frac{57004}{50443}$	$-\frac{104340323}{10458339}$	$\frac{117941276}{10458339}$
155	2	7	0	7	8	31	1	−13	5	0	1	0	−1	$-\frac{8199}{691}$	$\frac{8199}{691}$
156	2	7	1	7	6	32	−4	−8	4	0	1	0	−1	$-\frac{14315}{2073}$	$\frac{14315}{2073}$
157	2	7	2	7	4	33	−9	−3	3	0	1	0	−1	$-\frac{2069}{2073}$	$\frac{2069}{2073}$
158	2	7	3	7	2	34	−14	2	2	”	”	”	”	”	”
159	2	7	4	7	0	35	−19	7	1	0	1	0	$-\frac{109492}{50443}$	$-\frac{104130371}{10458339}$	$\frac{226538948}{10458339}$
160	2	8	0	8	6	40	−8	−16	8	0	1	0	−1	$\frac{108537}{691}$	$-\frac{108537}{691}$
161	2	8	1	8	4	41	−13	−11	7	0	1	0	−1	$-\frac{133141}{2073}$	$\frac{133141}{2073}$
162	2	8	2	8	2	42	−18	−6	6	0	1	0	−1	$-\frac{2069}{2073}$	$\frac{2069}{2073}$
163	2	8	3	8	0	43	−23	−1	5	0	1	0	$-\frac{581884}{50443}$	$-\frac{102240803}{10458339}$	$\frac{1203917996}{10458339}$
164	2	9	0	9	4	49	−17	−19	11	0	1	0	−1	$-\frac{1267719}{691}$	$\frac{1267719}{691}$
165	2	9	1	9	2	50	−22	−14	10	0	1	0	−1	$\frac{1046507}{2073}$	$-\frac{1046507}{2073}$
166	2	9	2	9	0	51	−27	−9	9	0	1	0	$-\frac{4833412}{50443}$	$-\frac{85234691}{10458339}$	$\frac{10000329428}{10458339}$
167	2	10	0	10	2	58	−26	−22	14	0	1	0	−1	$\frac{13281273}{691}$	$-\frac{13281273}{691}$
168	2	10	1	10	0	59	−31	−17	13	0	1	0	$-\frac{43097164}{50443}$	$-\frac{423078733027}{10458339}$	$\frac{512314585660}{10458339}$
169	2	11	0	11	0	67	−35	−25	17	0	1	0	$-\frac{387470932}{50443}$	$-\frac{6628814230593}{34856113}$	$\frac{6896521788492}{34856113}$
170	4	0	0	0	20	−28	56	4	−8	0	0	0	0	$-\frac{11}{530688}$	$\frac{11}{530688}$
171	4	0	1	0	18	−27	51	9	−9	0	0	0	0	$-\frac{1}{265344}$	$\frac{1}{265344}$
172	4	0	10	0	0	−18	6	54	−18	0	0	0	$\frac{1}{4085883}$	$-\frac{4}{8470035459}$	$\frac{2069}{8470035459}$

173	4	1	0	1	18	−19	47	1	−5	0	0	0	0	$\frac{35}{265344}$	$-\frac{35}{265344}$
174	4	1	1	1	16	−18	42	6	−6	0	0	0	0	$\frac{1}{33168}$	$-\frac{1}{33168}$
175	4	1	9	1	0	−10	2	46	−14	0	0	0	$\frac{1}{453987}$	$-\frac{4}{941115051}$	$-\frac{2069}{941115051}$
176	4	2	0	2	16	−10	38	−2	−2	0	0	0	0	$-\frac{13}{16584}$	$\frac{13}{16584}$
177	4	2	1	2	14	−9	33	3	−3	0	0	0	0	$-\frac{1}{4146}$	$\frac{1}{4146}$
178	4	2	8	2	0	−2	−2	38	−10	0	0	0	$\frac{1}{50443}$	$-\frac{4}{10458339}$	$-\frac{2069}{10458339}$
179	4	3	0	3	14	−1	29	−5	1	0	0	0	0	$\frac{17}{4146}$	$-\frac{17}{4146}$
180	4	3	1	3	12	0	24	0	0	0	0	0	0	$\frac{4}{2073}$	$-\frac{4}{2073}$
181	4	3	7	3	0	6	−6	30	−6	0	0	0	$\frac{9}{50443}$	$-\frac{12}{34856113}$	$-\frac{6207}{34856113}$
182	4	4	0	4	12	8	20	−8	4	0	0	0	0	$-\frac{32}{2073}$	$\frac{32}{2073}$
183	4	4	1	4	10	9	15	−3	3	”	”	”	”	”	”
184	4	4	6	4	0	14	−10	22	−2	0	0	0	$\frac{81}{50443}$	$-\frac{108}{34856113}$	$\frac{55863}{34856113}$
185	4	5	0	5	10	17	11	−11	7	0	0	0	0	$-\frac{32}{2073}$	$\frac{32}{2073}$
186	4	5	1	5	8	18	6	−6	6	0	0	0	0	$\frac{256}{2073}$	$-\frac{256}{2073}$
187	4	5	5	5	0	22	−14	14	2	0	0	0	$\frac{729}{50443}$	$-\frac{972}{34856113}$	$-\frac{502767}{34856113}$
188	4	6	0	6	8	26	2	−14	10	0	0	0	0	$\frac{2560}{2073}$	$-\frac{2560}{2073}$
189	4	6	1	6	6	27	−3	−9	9	0	0	0	0	$-\frac{2048}{2073}$	$\frac{2048}{2073}$
190	4	6	4	6	0	30	−18	6	6	0	0	0	$\frac{6561}{50443}$	$-\frac{8748}{34856113}$	$-\frac{4524903}{34856113}$
191	4	7	0	7	6	35	−7	−17	13	0	0	0	0	$-\frac{38912}{2073}$	$\frac{38912}{2073}$
192	4	7	1	7	4	36	−12	−12	12	0	0	0	0	$\frac{16384}{2073}$	$-\frac{16384}{2073}$
193	4	7	3	7	0	38	−22	−2	10	0	0	0	$\frac{59049}{50443}$	$-\frac{78732}{34856113}$	$-\frac{40724127}{34856113}$
194	4	8	0	8	4	44	−16	−20	16	0	0	0	0	$\frac{458752}{2073}$	$-\frac{458752}{2073}$
195	4	8	1	8	2	45	−21	−15	15	0	0	0	0	$-\frac{131072}{2073}$	$\frac{131072}{2073}$
196	4	8	2	8	0	46	−26	−10	14	0	0	0	$\frac{531441}{50443}$	$-\frac{708588}{34856113}$	$-\frac{366517143}{34856113}$
197	4	9	0	9	2	53	−25	−23	19	0	0	0	0	$-\frac{4849664}{2073}$	$\frac{4849664}{2073}$
198	4	9	1	9	0	54	−30	−18	18	0	0	0	$\frac{4782969}{50443}$	$\frac{52874187292}{10458339}$	$-\frac{62789282029}{10458339}$
199	4	10	0	10	0	62	−34	−26	22	0	0	0	$\frac{43046721}{50443}$	$\frac{2432920494844}{10458339}$	$-\frac{2522156347477}{10458339}$
200	6	0	0	0	18	−24	48	0	0	0	0	0	0	$-\frac{3}{176896}$	$\frac{3}{176896}$
201	6	0	1	0	16	−23	43	5	−1	0	0	0	0	$-\frac{1}{265344}$	$\frac{1}{265344}$
202	6	0	9	0	0	−15	3	45	−9	0	0	0	$-\frac{1}{4085883}$	$\frac{4}{8470035459}$	$\frac{2069}{8470035459}$
203	6	1	0	1	16	−15	39	−3	3	0	0	0	0	$\frac{9}{88448}$	$-\frac{9}{88448}$
204	6	1	1	1	14	−14	34	2	2	0	0	0	0	$\frac{1}{33168}$	$-\frac{1}{33168}$
205	6	1	8	1	0	−7	−1	37	−5	0	0	0	$-\frac{1}{453987}$	$\frac{4}{941115051}$	$\frac{2069}{941115051}$
206	6	2	0	2	14	−6	30	−6	6	0	0	0	0	$-\frac{3}{5528}$	$\frac{3}{5528}$
207	6	2	1	2	12	−5	25	−1	5	0	0	0	0	$-\frac{1}{4146}$	$\frac{1}{4146}$
208	6	2	7	2	0	1	−5	29	−1	0	0	0	$-\frac{1}{50443}$	$\frac{4}{10458339}$	$\frac{2069}{10458339}$
209	6	3	0	3	12	3	21	−9	9	0	0	0	0	$\frac{3}{1382}$	$-\frac{3}{1382}$
210	6	3	1	3	10	4	16	−4	8	0	0	0	0	$\frac{4}{2073}$	$-\frac{4}{2073}$
211	6	3	6	3	0	9	−9	21	3	0	0	0	$-\frac{9}{50443}$	$\frac{12}{34856113}$	$\frac{6207}{34856113}$
212	6	4	1	4	8	13	7	−7	11	0	0	0	0	$-\frac{32}{2073}$	$\frac{32}{2073}$
213	6	4	5	4	0	17	−13	13	7	0	0	0	$-\frac{81}{50443}$	$\frac{108}{34856113}$	$\frac{55863}{34856113}$
214	6	5	0	5	8	21	3	−15	15	0	0	0	0	$-\frac{96}{691}$	$\frac{96}{691}$
215	6	5	1	5	6	22	−2	−10	14	0	0	0	0	$\frac{256}{2073}$	$-\frac{256}{2073}$
216	6	5	4	5	0	25	−17	5	11	0	0	0	$-\frac{729}{50443}$	$\frac{972}{34856113}$	$\frac{502767}{34856113}$

217	6	6	0	6	6	30	-6	-18	18	0	0	0	0	$\frac{1536}{691}$	$-\frac{1536}{691}$
218	6	6	1	6	4	31	-11	-13	17	0	0	0	0	$-\frac{2048}{2073}$	$\frac{2048}{2073}$
219	6	6	3	6	0	33	-21	-3	15	0	0	0	$-\frac{6561}{50443}$	$\frac{8748}{34856113}$	$\frac{4524903}{34856113}$
220	6	7	0	7	4	39	-15	-21	21	0	0	0	0	$-\frac{18432}{691}$	$\frac{18432}{691}$
221	6	7	1	7	2	40	-20	-16	20	0	0	0	0	$\frac{16384}{2073}$	$-\frac{16384}{2073}$
222	6	7	2	7	0	41	-25	-11	19	0	0	0	$-\frac{59049}{50433}$	$\frac{78732}{34856113}$	$\frac{40724127}{34856113}$
223	6	8	0	8	2	48	-24	-24	24	0	0	0	0	$\frac{196608}{691}$	$-\frac{196608}{691}$
224	6	8	1	8	0	49	-29	-19	23	0	0	0	$-\frac{531441}{50433}$	$-\frac{6609539132}{10458339}$	$\frac{7711216325}{10458339}$
225	6	9	0	9	0	57	-33	-27	27	0	0	0	$-\frac{4782969}{50443}$	$-\frac{99168596148}{34856113}$	$\frac{102473627727}{34856113}$
226	8	0	0	0	16	-20	40	-4	8	0	0	0	0	$-\frac{7}{530688}$	$\frac{7}{530688}$
227	8	0	1	0	14	-19	35	1	7	0	0	0	0	$-\frac{1}{265344}$	$\frac{1}{265344}$
228	8	0	8	0	0	-12	0	36	0	0	0	0	$\frac{1}{4085883}$	$-\frac{4}{8470035459}$	$-\frac{2069}{8470035459}$
229	8	1	0	1	14	-11	31	-7	11	0	0	0	0	$\frac{19}{265344}$	$-\frac{19}{265344}$
230	8	1	1	1	12	-10	26	-2	10	0	0	0	0	$\frac{1}{33168}$	$-\frac{1}{33168}$
231	8	1	7	1	0	-4	-4	28	4	0	0	0	$\frac{1}{453987}$	$-\frac{4}{941115051}$	$-\frac{2069}{941115051}$
232	8	2	0	2	12	-2	22	-10	14	0	0	0	0	$-\frac{5}{16584}$	$\frac{5}{16584}$
233	8	2	1	2	10	-1	17	-5	13	0	0	0	0	$-\frac{1}{4146}$	$\frac{1}{4146}$
234	8	2	6	2	0	4	-8	20	8	0	0	0	$\frac{1}{50443}$	$-\frac{4}{10458339}$	$-\frac{2069}{10458339}$
235	8	3	0	3	10	7	13	-13	17	0	0	0	0	$\frac{1}{4146}$	$-\frac{1}{4146}$
236	8	3	1	3	8	8	8	-8	16	0	0	0	0	$\frac{4}{2073}$	$-\frac{4}{2073}$
237	8	3	5	3	0	12	-12	12	12	0	0	0	$\frac{9}{50443}$	$-\frac{12}{34856113}$	$-\frac{6207}{34856113}$
238	8	4	0	4	8	16	4	-16	20	0	0	0	0	$\frac{32}{2073}$	$-\frac{32}{2073}$
239	8	4	1	4	6	17	-1	-11	19	0	0	0	0	$-\frac{32}{2073}$	$\frac{32}{2073}$
240	8	4	4	4	0	20	-16	4	16	0	0	0	$\frac{81}{50443}$	$-\frac{108}{34856113}$	$-\frac{55863}{34856113}$
241	8	5	0	5	6	25	-5	-19	23	0	0	0	0	$-\frac{544}{2073}$	$\frac{544}{2073}$
242	8	5	1	5	4	26	-10	-14	22	0	0	0	0	$\frac{256}{2073}$	$-\frac{256}{2073}$
243	8	5	3	5	0	28	-20	-4	20	0	0	0	$\frac{729}{50443}$	$-\frac{972}{34856113}$	$-\frac{502767}{34856113}$
244	8	6	0	6	4	34	-14	-22	26	0	0	0	0	$\frac{6656}{2073}$	$-\frac{6656}{2073}$
245	8	6	1	6	2	35	-19	-17	25	0	0	0	0	$-\frac{2048}{2073}$	$\frac{2048}{2073}$
246	8	6	2	6	0	36	-24	-12	24	0	0	0	$\frac{6561}{50443}$	$-\frac{8748}{34856113}$	$-\frac{4524903}{34856113}$
247	8	7	0	7	2	43	-23	-25	29	0	0	0	0	$-\frac{71680}{2073}$	$\frac{71680}{2073}$
248	8	7	1	7	0	44	-28	-20	28	0	0	0	$\frac{59049}{50443}$	$\frac{826221916}{10458339}$	$-\frac{948630493}{10458339}$
249	8	8	0	8	0	52	-32	-28	32	0	0	0	$\frac{531441}{50443}$	$\frac{36362031164}{10458339}$	$-\frac{37463708357}{10458339}$
250	10	0	0	0	14	-16	32	-8	16	0	0	0	0	$-\frac{5}{530688}$	$\frac{5}{530688}$
251	10	0	1	0	12	-15	27	-3	15	0	0	0	0	$-\frac{1}{265344}$	$\frac{1}{265344}$
252	10	0	7	0	0	-9	-3	27	9	0	0	0	$-\frac{1}{4085883}$	$\frac{4}{8470035459}$	$\frac{2069}{8470035459}$
253	10	1	0	1	12	-7	23	-11	19	0	0	0	0	$\frac{11}{265344}$	$-\frac{11}{265344}$
254	10	1	1	1	10	-6	18	-6	18	0	0	0	0	$\frac{1}{33168}$	$-\frac{1}{33168}$
255	10	1	6	1	0	-1	-7	19	13	0	0	0	$-\frac{1}{453987}$	$\frac{4}{941115051}$	$\frac{2069}{941115051}$
256	10	2	0	2	10	2	14	-14	22	0	0	0	0	$-\frac{1}{16584}$	$\frac{1}{16584}$
257	10	2	1	2	8	3	9	-9	21	0	0	0	0	$-\frac{1}{4146}$	$\frac{1}{4146}$
258	10	2	5	2	0	7	-11	11	17	0	0	0	$-\frac{1}{50443}$	$\frac{4}{10458339}$	$\frac{2069}{10458339}$
259	10	3	0	3	8	11	5	-17	25	0	0	0	0	$-\frac{7}{4146}$	$\frac{7}{4146}$
260	10	3	1	3	6	12	0	-12	24	0	0	0	0	$\frac{4}{2073}$	$-\frac{4}{2073}$

261	10	3	4	3	0	15	-15	3	21	0	0	0	$-\frac{9}{50443}$	$\frac{12}{34856113}$	$\frac{6207}{34856113}$
262	10	4	0	4	6	20	-4	-20	28	0	0	0	0	$\frac{64}{2073}$	$-\frac{64}{2073}$
263	10	4	1	4	4	21	-9	-15	27	0	0	0	0	$-\frac{32}{2073}$	$\frac{32}{2073}$
264	10	4	3	4	0	23	-19	-5	25	0	0	0	$-\frac{81}{50443}$	$\frac{108}{34856113}$	$\frac{55863}{34856113}$
265	10	5	0	5	4	29	-13	-23	31	0	0	0	0	$-\frac{800}{2073}$	$\frac{800}{2073}$
266	10	5	1	5	2	30	-18	-18	30	0	0	0	0	$\frac{256}{2073}$	$-\frac{256}{2073}$
267	10	5	2	5	0	31	-23	-13	29	0	0	0	$-\frac{729}{50443}$	$\frac{972}{34856113}$	$\frac{502767}{34856113}$
268	10	6	0	6	2	38	-22	-26	34	0	0	0	0	$\frac{8704}{2073}$	$-\frac{8704}{2073}$
269	10	6	1	6	0	39	-27	-21	33	0	0	0	$-\frac{6561}{50443}$	$-\frac{103281020}{10458339}$	$\frac{116881973}{10458339}$
270	10	7	0	7	0	47	-31	-29	37	0	0	0	$-\frac{59049}{50443}$	$-\frac{4441976156}{104568339}$	$\frac{4564384733}{104568339}$
271	12	0	0	0	12	-12	24	-12	24	0	0	0	0	$-\frac{1}{176896}$	$\frac{1}{176896}$
272	12	0	1	0	10	-11	19	-7	23	0	0	0	0	$-\frac{1}{265344}$	$\frac{1}{265344}$
273	12	0	6	0	0	-6	-6	18	18	0	0	0	$\frac{1}{4085883}$	$-\frac{4}{8470035459}$	$-\frac{2069}{8470035459}$
274	12	1	0	1	10	-3	15	-15	27	0	0	0	0	$\frac{1}{88448}$	$-\frac{1}{88448}$
275	12	1	1	1	8	-2	10	-10	26	0	0	0	0	$\frac{1}{33168}$	$-\frac{1}{33168}$
276	12	1	5	1	0	2	-10	10	22	0	0	0	$\frac{1}{453987}$	$-\frac{4}{941115051}$	$-\frac{2069}{941115051}$
277	12	2	0	2	8	6	6	-18	30	0	0	0	0	$\frac{1}{5528}$	$-\frac{1}{5528}$
278	12	2	1	2	6	7	1	-13	29	0	0	0	0	$-\frac{1}{4146}$	$\frac{1}{4146}$
279	12	2	4	2	0	10	-14	2	26	0	0	0	$\frac{1}{50443}$	$-\frac{4}{10458339}$	$-\frac{2069}{10458339}$
280	12	3	0	3	6	15	-3	-21	33	0	0	0	0	$-\frac{5}{1382}$	$\frac{5}{1382}$
281	12	3	1	3	4	16	-8	-16	32	0	0	0	0	$\frac{4}{2073}$	$-\frac{4}{2073}$
282	12	3	3	3	0	18	-18	-6	30	0	0	0	$\frac{9}{50443}$	$-\frac{12}{34856113}$	$-\frac{6207}{34856113}$
283	12	4	0	4	4	24	-12	-24	36	0	0	0	0	$\frac{32}{691}$	$-\frac{32}{691}$
284	12	4	1	4	2	25	-17	-19	35	0	0	0	0	$-\frac{32}{2073}$	$\frac{32}{2073}$
285	12	4	2	4	0	26	-22	-14	34	0	0	0	$\frac{81}{50443}$	$-\frac{108}{34856113}$	$-\frac{55863}{34856113}$
286	12	5	0	5	2	33	-21	-27	39	0	0	0	0	$-\frac{352}{691}$	$\frac{352}{691}$
287	12	5	1	5	0	34	-26	-22	38	0	0	0	$\frac{729}{50443}$	$\frac{12910492}{10458339}$	$-\frac{14421709}{10458339}$
288	12	6	0	6	0	42	-30	-30	42	0	0	0	$\frac{6561}{50443}$	$\frac{180778964}{34855113}$	$-\frac{185312615}{34855113}$
289	14	0	0	0	10	-8	16	-16	32	0	0	0	0	$-\frac{1}{530688}$	$\frac{1}{530688}$
290	14	0	1	0	8	-7	11	-11	31	0	0	0	0	$-\frac{1}{265344}$	$\frac{1}{265344}$
291	14	0	5	0	0	-3	-9	9	27	0	0	0	$-\frac{1}{4085883}$	$\frac{4}{8470035459}$	$\frac{2069}{8470035459}$
292	14	1	0	1	8	1	7	-19	35	0	0	0	0	$-\frac{5}{265344}$	$\frac{5}{265344}$
293	14	1	1	1	6	2	2	-14	34	0	0	0	0	$\frac{1}{33168}$	$-\frac{1}{33168}$
294	14	1	4	1	0	5	-13	1	31	0	0	0	$-\frac{1}{453987}$	$\frac{4}{941115051}$	$\frac{2069}{941115051}$
295	14	2	0	2	6	10	-2	-22	38	0	0	0	0	$\frac{7}{16584}$	$-\frac{7}{16584}$
296	14	2	1	2	4	11	-7	-17	37	0	0	0	0	$-\frac{1}{4146}$	$\frac{1}{4146}$
297	14	2	3	2	0	13	-17	-7	35	0	0	0	$-\frac{1}{50443}$	$\frac{4}{10458339}$	$\frac{2069}{10458339}$
298	14	3	0	3	4	19	-11	-25	41	0	0	0	0	$-\frac{23}{4146}$	$\frac{23}{4146}$
299	14	3	1	3	2	20	-16	-20	40	0	0	0	0	$\frac{4}{2073}$	$-\frac{4}{2073}$
300	14	3	2	3	0	21	-21	-15	39	0	0	0	$-\frac{9}{50443}$	$\frac{12}{34856113}$	$\frac{6207}{34856113}$
301	14	3	0	4	2	28	-20	-28	44	0	0	0	0	$\frac{128}{2073}$	$-\frac{128}{2073}$
302	14	4	1	4	0	29	-25	-23	43	0	0	0	$-\frac{81}{50443}$	$-\frac{1613852}{10458339}$	$\frac{1781765}{10458339}$
303	14	5	0	5	0	37	-29	-31	47	0	0	0	$-\frac{729}{50443}$	$-\frac{66178300}{10458339}$	$\frac{67689517}{10458339}$
304	16	0	0	0	8	-4	8	-20	40	0	0	0	0	$\frac{1}{530688}$	$-\frac{1}{530688}$

305	16	0	1	0	6	-3	3	-15	39	0	0	0	0	$-\frac{1}{265344}$	$\frac{1}{265344}$
306	16	0	4	0	0	0	-12	0	36	0	0	0	$\frac{1}{4085883}$	$-\frac{4}{8470035459}$	$-\frac{2069}{8470035459}$
307	16	1	0	1	6	5	-1	-23	43	0	0	0	0	$-\frac{13}{265344}$	$\frac{13}{265344}$
308	16	1	1	1	4	6	-6	-18	42	0	0	0	0	$\frac{1}{33168}$	$-\frac{1}{33168}$
309	16	1	3	1	0	8	-16	-8	40	0	0	0	$\frac{1}{453987}$	$-\frac{4}{941115051}$	$-\frac{2069}{941115051}$
310	16	2	0	2	4	14	-10	-26	46	0	0	0	0	$\frac{11}{16584}$	$-\frac{11}{16584}$
311	16	2	1	2	2	15	-15	-21	45	0	0	0	0	$-\frac{1}{4146}$	$\frac{1}{4146}$
312	16	2	2	2	0	16	-20	-16	44	0	0	0	$\frac{1}{50443}$	$-\frac{4}{10458339}$	$-\frac{2069}{10458339}$
313	16	3	0	3	2	23	-19	-29	49	0	0	0	0	$-\frac{31}{4146}$	$\frac{31}{4146}$
314	16	3	1	3	0	24	-24	-24	48	0	0	0	$\frac{9}{50443}$	$\frac{201736}{10458339}$	$-\frac{220393}{10458339}$
315	16	4	0	4	0	32	-28	-32	52	0	0	0	$\frac{81}{50443}$	$\frac{8070556}{10458339}$	$-\frac{8238469}{10458339}$
316	18	0	0	0	6	0	0	-24	48	0	0	0	0	$\frac{1}{176896}$	$-\frac{1}{176896}$
317	18	0	1	0	4	1	-5	-19	47	0	0	0	0	$-\frac{1}{265344}$	$\frac{1}{265344}$
318	18	0	3	0	0	3	-15	-9	45	0	0	0	$-\frac{1}{4085883}$	$\frac{4}{8470035459}$	$\frac{2069}{8470035459}$
319	18	1	0	1	4	9	-9	-27	51	0	0	0	0	$-\frac{7}{88448}$	$\frac{7}{88448}$
320	18	1	1	1	2	10	-14	-22	50	0	0	0	0	$\frac{1}{33168}$	$-\frac{1}{33168}$
321	18	1	2	1	0	11	-19	-17	49	0	0	0	$-\frac{1}{453987}$	$\frac{4}{941115051}$	$\frac{2069}{941115051}$
322	18	2	0	2	2	18	-18	-30	54	0	0	0	0	$\frac{5}{5528}$	$-\frac{5}{5528}$
323	18	2	1	2	0	19	-23	-25	53	0	0	0	$-\frac{1}{50443}$	$-\frac{50435}{209136678}$	$\frac{54581}{209136678}$
324	18	3	0	3	0	27	-27	-33	57	0	0	0	$-\frac{9}{50443}$	$-\frac{655735}{69712226}$	$\frac{668173}{69712226}$
325	20	0	0	0	4	4	-8	-28	56	0	0	0	0	$\frac{5}{530688}$	$-\frac{5}{530688}$
326	20	0	1	0	2	5	-13	-23	55	0	0	0	0	$-\frac{1}{265344}$	$\frac{1}{265344}$
327	20	0	2	0	0	6	-18	-18	54	0	0	0	$\frac{1}{4085883}$	$-\frac{4}{8470035459}$	$-\frac{2069}{8470035459}$
328	20	1	0	1	2	13	-17	-31	59	0	0	0	0	$-\frac{29}{265344}$	$\frac{29}{265344}$
329	20	1	1	1	0	14	-22	-26	58	0	0	0	$\frac{1}{453987}$	$\frac{453923}{15057840816}$	$-\frac{487091}{15057840816}$
330	20	2	0	2	0	22	-26	-34	62	0	0	0	$\frac{1}{50443}$	$\frac{958385}{836546712}$	$-\frac{974969}{836546712}$
331	22	0	0	0	2	8	-16	-32	64	0	0	0	0	$\frac{7}{530688}$	$-\frac{7}{530688}$
332	22	0	1	0	0	9	-21	-27	63	0	0	0	$-\frac{1}{4085883}$	$-\frac{4085371}{1084164538752}$	$\frac{4350715}{1084164538752}$
333	22	1	0	1	0	17	-25	-35	67	0	0	0	$-\frac{1}{453987}$	$-\frac{16797007}{12046272528}$	$\frac{17062351}{12046272528}$
334	24	0	0	0	0	12	-24	-36	72	0	0	0	$\frac{1}{4085883}$	$\frac{36771923}{2168329077504}$	$-\frac{37302611}{2168329077504}$