

# Selfie Numbers – III: With Factorial and Without Square–Root – Up To Five Digits

Inder J. Taneja<sup>1</sup>

## Abstract

In previous works [11, 15, 16], the construction of Selfie numbers is done in different forms, such as in order of digits, in reverse order of digits, in increasing and decreasing orders of digits. This has been done using factorial and square-root with basic operations. This work is restricted up to five digits only with factorial and without use of square-root. Studies including square-root can be seen in author's work [22].

## 1 Selfie Numbers

Numbers represented by their own digits connected by certain operations are understood as "Selfie numbers". These numbers are divided in two categories. Each category is again divided in two ways, i.e., one in order of digits appearing in the numbers and their reverse, and the second is in increasing and decreasing order of digits. Below are some examples of Selfie numbers.

### 1.1 Representations in Order of Digits and Reverse

- Order of Digits

$$\begin{aligned} 24 &= (2 \times \sqrt{4})!. \\ 936 &= (\sqrt{9!})^3 + 6!. \\ 1296 &= \sqrt{(1+2)^{19}/6}. \\ 12969 &= 1 \times 2 \times 9 \times 6! + 9. \\ 24453 &:= \sqrt{\sqrt{2^{4!}} + (4! + 5)^3}. \end{aligned}$$

- Reverse Order of Digits

$$\begin{aligned} 24 &= \sqrt{(4!)^2}. \\ 936 &= 6! + (3!)^{\sqrt{9}}. \\ 1296 &= 6^{(\sqrt{9}+2-1)}. \\ 20167 &= 7 + (6+1+0!)!/2. \\ 91125 &= (5 \times (-2+11))^{\sqrt{9}}. \end{aligned}$$

### 1.2 Representations in Increasing and Decreasing Orders of Digits

- Increasing Order of Digits

$$\begin{aligned} 936 &= 3!! + 6^{\sqrt{9}}. \\ 1296 &= (1+2)! \times 6^{\sqrt{9}}. \\ 8397 &= -3 - 7! + 8!/\sqrt{9}. \\ 45576 &:= -4! + 5! \times 5 \times 76. \\ 573846 &= -3!! - (\sqrt{4} - (5! - 6) \times 7! - 8). \end{aligned}$$

- Decreasing Order of Digits

$$\begin{aligned} 936 &= (\sqrt{9})!! + 6^3. \\ 1296 &= ((\sqrt{9})! \times 6)^2 \times 1. \\ 20148 &= (8! - 4)/2 - 10. \\ 53783 &:= 8 + 75 \times (-3 + 3!!). \\ 435609 &= 9 + (6! - 5!/\sqrt{4})^{(3-0!)}. \end{aligned}$$

Some studied on this kind of numbers appearing in sections 1.1–1.4 can be seen in Taneja [11, 15, 16].

We observe that there are number that can be represented without any order, for example,

$$\begin{aligned} 34562 &= 2 - (3 - 5) \times 6! \times 4!. \\ 87369 &= (3! + 7) \times 8!/6 + 9. \end{aligned}$$

Even though these numbers are also *Selfie numbers*, but are not under study.

### 1.3 Symmetrical Representations

In [15], author studied an interesting *symmetrical consecutive representation of Selfie numbers*, such as

$$\begin{aligned} 72590 &= 0 + 9!/5 + 2 \times 7. \\ 72591 &= 1 + 9!/5 + 2 \times 7. \\ 72592 &= 2 + 9!/5 + 2 \times 7. \\ 72593 &= 3 + 9!/5 + 2 \times 7. \\ 72594 &= 4 + 9!/5 + 2 \times 7. \end{aligned}$$

$$\begin{aligned} 72595 &= 5 + 9!/5 + 2 \times 7. \\ 72596 &= 6 + 9!/5 + 2 \times 7. \\ 72597 &= 7 + 9!/5 + 2 \times 7. \\ 72598 &= 8 + 9!/5 + 2 \times 7. \\ 72599 &= 9 + 9!/5 + 2 \times 7. \end{aligned}$$

---

<sup>1</sup>Formerly, Professor of Mathematics, Universidade Federal de Santa Catarina, 88.040-900 Florianópolis, SC, Brazil. e-mail: ijtaneja@gmail.com.

## 1.4 Unified Selfie Numbers

We observe that there are numbers that can be written in all the four ways. For simplicity, we call them as *unified Selfie numbers* [20]. According to subsections 1.1 and 1.2, the numbers 936 and 1296 are *unified Selfie numbers*. See below:

$$\begin{aligned} 936 &= (\sqrt{9})!^3 + 6! = 6! + 3!^{\sqrt{9}} = 3!! + 6^{\sqrt{9}} = (\sqrt{9})!! + 6^3. \\ 1296 &= \sqrt{(1+2)!^6/6} = 6^{\sqrt{9}+2-1} = (1+2)! \times 6^{\sqrt{9}} = ((\sqrt{9})! \times 6)^2 \times 1. \end{aligned}$$

More precisely, *unified Selfie numbers* are understood as:

$$\begin{aligned} \text{Unified Selfie number} &= \text{Order of digits} \\ &= \text{Reverse order of digits} \\ &= \text{Increasing order of digits} \\ &= \text{Decreasing order of digits}. \end{aligned}$$

## 1.5 Patterned Selfie Numbers

Madachy [4], pages 174–175 discussed the idea of different kind of numbers. In [21], we called them as *patterned Selfie numbers* and studied extensively. See examples below:

$$\begin{array}{lll} 36 = 3! \times 6 & 4296 = (-4 + (2 \times \sqrt{9})!) \times 6 & 93552 = ((\sqrt{9})! \times 3!^5 + 5!) \times 2 \\ 360 = 3! \times 60 & 42960 = (-4 + (2 \times \sqrt{9})!) \times 60 & 935520 = ((\sqrt{9})! \times 3!^5 + 5!) \times 20 \\ 3600 = 3! \times 600 & 429600 = (-4 + (2 \times \sqrt{9})!) \times 600 & 9355200 = ((\sqrt{9})! \times 3!^5 + 5!) \times 200 \end{array}$$

In [11, 15, 16], we studied extensively "*Selfie numbers*" having the operations, *addition, subtraction, multiplication, potentiation, division, square-root and factorial* i.e.,  $[+, -, \times, ^, /, \sqrt{ }, !]$ . This work is an extension of previous work [11, 15, 16], but limited only up to 5 digits. Working with six digits with *square-root* and *factorial* there are more than 60000 possibilities. In continuation the second part – **Selfie Numbers – II**, [23] is on six digits without factorial. This work is restricted up to five digits and only with factorial. Studies including square-root can be seen in author's work [22].

Study on numbers in different situation can be seen in [10, 12, 13, 14, 17, 18, 19]. For some comments refer to [1, 5]. Previous work in this direction can seen in [2, 3, 6, 7, 8, 9].

## 2 Selfie Numbers with Plus and Minus Signs

In 1966, Madachy [4], page 167, gave examples of *selfie numbers* just with factorial sum:

$$\begin{aligned} 1 &= 1! \\ 2 &= 2! \\ 145 &= 1! + 4! + 5! \\ 40585 &= 4! + 0! + 5! + 8! + 5! \end{aligned}$$

This section deals with similar kind of numbers with factorial using only plus and minus signs. For other expressions see subsequent sections.

### 2.1 Digits Order

$$\begin{array}{lll} 120 = ((1+2)! - 0!)!. & 1464 = (-1+4)!! + 6! + 4!. & 5162 = 5! + (1+6)! + 2. \\ 144 = (1+4)! + 4!. & 4296 = -4! + (-2+9)! - 6!. & 5163 = 5! + (1+6)! + 3. \\ 145 = 1 + 4! + 5!. & 4317 = -4 - 3!! + 1 + 7!. & 5164 = 5! + (1+6)! + 4. \\ 660 = 6! - 60. & 4320 = (4+3)! - (2+0)!!. & 5165 = 5! + (1+6)! + 5. \\ 715 = (7-1)! - 5. & 5016 = -(5-0)! + (1+6)!. & 5166 = 5! + (1+6)! + 6. \\ 733 = 7 + 3!! + 3!. & 5017 = -(5-0)! + 1 + 7!. & 5167 = 5! + (1+6)! + 7. \\ 1435 = (-1+4)!! + 3!! - 5. & 5034 = -5 - 0! + (3+4)!. & 5168 = 5! + (1+6)! + 8. \\ 1440 = (-1+4)!! + (4-0)!!. & 5035 = (5-0)! + 3! - 5. & 5169 = 5! + (1+6)! + 9. \\ 1463 = -1 + 4! + 6! + 3!!. & 5160 = 5! + (1+6)! + 0. & 5177 = 5! + 17 + 7!. \\ & 5161 = 5! + (1+6)! + 1. & 5184 = 5! + (-1+8)! + 4!. \end{array}$$

$$\begin{aligned}
5637 &= -5! + 6! - 3 + 7!. \\
6476 &= 6! - 4 + 7! + 6!. \\
10077 &= -1 - 0! - 0! + 7! + 7!. \\
35274 &= (3 + 5)! - 2 - 7! - 4. \\
35276 &= (3 + 5)! + 2 - 7! - 6. \\
35283 &= 3! - (5 + 2)! + 8! - 3. \\
35304 &= (3 + 5)! - (3! + 0!)! + 4!. \\
35875 &= 3!! - 5! + 8! - 7! - 5. \\
35880 &= 3!! - 5! + 8! - (8 - 0!)!. \\
38728 &= -3!! - 872 + 8!. \\
38753 &= -3!! + 8! - 7 - 5! - 3!!. \\
38800 &= -3!! + 8! - 800. \\
38864 &= -3!! + 8! + 8 - 6! - 4!. \\
38866 &= -3!! + 8! - 8 - 6! - 6. \\
39388 &= 3! - 938 + 8!. \\
39480 &= -3!! - (9 - 4)! + 8! + 0. \\
39481 &= -3!! - (9 - 4)! + 8! + 1. \\
39482 &= -3!! - (9 - 4)! + 8! + 2. \\
39483 &= -3!! - (9 - 4)! + 8! + 3. \\
39484 &= -3!! - (9 - 4)! + 8! + 4. \\
39485 &= -3!! - (9 - 4)! + 8! + 5. \\
39486 &= -3!! - (9 - 4)! + 8! + 6. \\
39487 &= -3!! - (9 - 4)! + 8! + 7. \\
39488 &= -3!! - (9 - 4)! + 8! + 8.
\end{aligned}$$

$$\begin{aligned}
39489 &= -3!! - (9 - 4)! + 8! + 9. \\
39538 &= -3!! - 9 - 53 + 8!. \\
39583 &= -3 - 9 - 5 + 8! - 3!!. \\
39624 &= -(-3+9)!+(6+2)!+4!. \\
40175 &= -4! - 0! + (1 + 7)! - 5!. \\
40195 &= -(4+0)!+(-1+9)!-5. \\
40281 &= -40 + 2 + 8! - 1. \\
40285 &= -4! - (0! + 2)! + 8! - 5. \\
40287 &= -4! - 02 + 8! - 7. \\
40289 &= -4! + 02 + 8! - 9. \\
40290 &= -4! - (0! + 2)! + (9 - 0!)!. \\
40309 &= -4 - 0! - 3! + (-0! + 9)!. \\
40314 &= -(4 - 0!)! + (3 + 1 + 4)!!. \\
40316 &= -4 + (03 - 1 + 6)!!. \\
40320 &= (40 - 32)! + 0. \\
40321 &= (40 - 32)! + 1. \\
40322 &= (40 - 32)! + 2. \\
40323 &= (40 - 32)! + 3. \\
40324 &= (40 - 32)! + 4. \\
40325 &= (40 - 32)! + 5. \\
40326 &= (40 - 32)! + 6. \\
40327 &= (40 - 32)! + 7. \\
40328 &= (40 - 32)! + 8. \\
40329 &= (40 - 32)! + 9. \\
40355 &= 40 + (3 + 5)! - 5.
\end{aligned}$$

$$\begin{aligned}
40358 &= 40 + 3 - 5 + 8!. \\
40360 &= 40 + (3 + 6 - 0!)!. \\
40438 &= (4 + 0!)! + 4 - 3! + 8!. \\
40440 &= (4 + 04)! + (4 + 0!)!. \\
40441 &= (4 + 0!)! + (4 + 4)! + 1. \\
40442 &= (4 + 0!)! + (4 + 4)! + 2. \\
40443 &= (4 + 0!)! + (4 + 4)! + 3. \\
40444 &= (4 + 0!)! + (4 + 4)! + 4. \\
40445 &= (4 + 0!)! + (4 + 4)! + 5. \\
40446 &= (4 + 0!)! + (4 + 4)! + 6. \\
40447 &= (4 + 0!)! + (4 + 4)! + 7. \\
40448 &= (4 + 0!)! + (4 + 4)! + 8. \\
40449 &= (4 + 0!)! + (4 + 4)! + 9. \\
40458 &= -(4 - 0!)! + 4! + 5! + 8!. \\
40584 &= (4 + 0!)! + 5! + 8! + 4!. \\
40585 &= 4! + 0! + 5! + 8! + 5!. \\
41038 &= (4 - 1)!! + 0! - 3 + 8!. \\
44637 &= (4 + 4)! - 6! - 3 + 7!. \\
45377 &= 4! + (5 + 3)! + 7! - 7. \\
80518 &= 8! - 0! - 5! - 1 + 8!. \\
80519 &= 8! - 0! - 5! + (-1 + 9)!. \\
80638 &= 8! + 3 - 6 + 0! + 8!. \\
80755 &= 8! + (0! + 7)! + 5! - 5. \\
80760 &= 8! + (0! + 7)! + (6 - 0!)!.
\end{aligned}$$

## 2.2 Reverse Order of Digits

$$\begin{aligned}
144 &= 4! + (4 + 1)!. \\
145 &= 5! + 4! + 1. \\
715 &= -5 + (-1 + 7)!. \\
733 &= 3! + 3!! + 7. \\
1435 &= -5 + 3!! + (4 - 1)!!. \\
1463 &= 3!! + 6! + 4! - 1. \\
1464 &= 4! + 6! + (4 - 1)!!. \\
4296 &= -6! + (9 - 2)! - 4!. \\
4317 &= 7! + 1 - 3!! - 4. \\
4957 &= 7! - 59 - 4!. \\
4967 &= 7! - 69 - 4. \\
5016 &= (6 + 1)! - (-0! + 5)!. \\
5017 &= 7! + 1 - (-0! + 5)!. \\
5034 &= (4 + 3)! - 0! - 5. \\
5035 &= (5 + 3 - 0)!! - 5. \\
5160 &= 0 + (6 + 1)! + 5!. \\
5161 &= 1 + (6 + 1)! + 5!. \\
5162 &= 2 + (6 + 1)! + 5!. \\
5163 &= 3 + (6 + 1)! + 5!. \\
5164 &= 4 + (6 + 1)! + 5!. \\
5165 &= 5 + (6 + 1)! + 5!. \\
5166 &= 6 + (6 + 1)! + 5!. \\
5167 &= 7 + (6 + 1)! + 5!. \\
5168 &= 8 + (6 + 1)! + 5!. \\
5169 &= 9 + (6 + 1)! + 5!. \\
5175 &= 5! + 7! + 15. \\
5184 &= 4! + (8 - 1)! + 5!. \\
5637 &= 7! - 3 + 6! - 5!.
\end{aligned}$$

$$\begin{aligned}
6476 &= 6! + 7! - 4 + 6!. \\
10077 &= 7! + 7! - 0! - 0! - 1. \\
35274 &= -4 - 7! - 2 + (5 + 3)!. \\
35276 &= -6 - 7! + 2 + (5 + 3)!. \\
35304 &= 4! - (0! + 3)! + (5 + 3)!. \\
35875 &= -5 - 7! + 8! - 5! + 3!!. \\
38753 &= -3!! - 5! - 7 + 8! - 3!!. \\
38864 &= -4! - 6! + 8 + 8! - 3!!. \\
38866 &= -6! - 6! - 8 + 8! - 3!. \\
39481 &= 1 + 8! - (-4 + 9)! - 3!!. \\
39482 &= 2 + 8! - (-4 + 9)! - 3!!. \\
39483 &= 3 + 8! - (-4 + 9)! - 3!!. \\
39484 &= 4 + 8! - (-4 + 9)! - 3!!. \\
39485 &= -5! + 8! - 4 + 9 - 3!!. \\
39486 &= -6! + 8! - (-4 + 9)! + 3!. \\
39487 &= 7 + 8! - (-4 + 9)! - 3!!. \\
39488 &= 8 + 8! - (-4 + 9)! - 3!!. \\
39489 &= 9 + 8! - (-4 + 9)! - 3!!. \\
39538 &= 8! - 3!! - 59 - 3. \\
39624 &= 4! + (2 + 6)! - (9 - 3)!. \\
40175 &= -5! + (7 + 1)! - 0! - 4!. \\
40195 &= -5! + (9 - 1)! - 0! - 4. \\
40285 &= -5 + 8! - (2 + 0!)! - 4!. \\
40287 &= -7 + 8! - 2 - 04!. \\
40288 &= 8! - 8 - 20 - 4. \\
40289 &= -9 + 8! + 2 - 04!. \\
40309 &= (9 - 0!)! - 3! - 0! - 4. \\
40313 &= -3 + (1 + 3! + 0!)! - 4.
\end{aligned}$$

$$\begin{aligned}
40314 &= -(4 - 1)! + (3 + 0! + 4)!. \\
40315 &= -5 + (13 - 0! - 4)!. \\
40316 &= (6 - 1 + 3)! - 04. \\
40318 &= 8! - 1 + 3 - 04. \\
40438 &= 8! - 3! + 4 + (0! + 4)!. \\
40440 &= 0 + (4 + 4)! + (0! + 4)!. \\
40441 &= 1 + (4 + 4)! + (0! + 4)!. \\
40442 &= 2 + (4 + 4)! + (0! + 4)!. \\
40443 &= 3 + (4 + 4)! + (0! + 4)!. \\
40444 &= 4 + (4 + 4)! + (0! + 4)!. \\
40445 &= 5 + (4 + 4)! + (0! + 4)!. \\
40446 &= 6 + (4 + 4)! + (0! + 4)!. \\
40447 &= 7 + (4 + 4)! + (0! + 4)!. \\
40448 &= 8 + (4 + 4)! + (0! + 4)!. \\
40449 &= 9 + (4 + 4)! + (0! + 4)!. \\
40458 &= 8! + 5! - (4 - 0!)! + 4!. \\
40584 &= 4! + 8! + 5! + (0! + 4)!. \\
40585 &= 5! + 8! + 5! + 0! + 4!. \\
41036 &= 6! + (3! + 0! + 1)! - 4. \\
41038 &= 8! + 3!! + 0! + 1 - 4. \\
44637 &= 7! - 3 - 6! + (4 + 4)!. \\
45377 &= 7! - 7 + (3 + 5)! + 4!. \\
45384 &= 4! + 8! + (3! + 5 - 4)!. \\
80518 &= (8! - 1 - (5! + 0!)) + 8!. \\
80519 &= (9 - 1)! - 5! - 0! + 8!. \\
80585 &= -5 + 8! - 50 + 8!. \\
80635 &= (5 + 3)! - 6 + 0! + 8!. \\
80755 &= 5! - 5 + (7 + 0!)! + 8!.
\end{aligned}$$

### 2.3 Increasing Order of Digits

$$\begin{aligned} 120 &= (-0! + (1 + 2)!)! \\ 144 &= (1 + 4)! + 4! \\ 145 &= (1 + 4!) + 5! \\ 720 &= (0! - 2 + 7)! \\ 733 &= 3!! + 3! + 7 \\ 744 &= 4! + (-4 + 7)!! \\ \\ 1463 &= -1 + 3!! + 4! + 6! \\ 1464 &= (-1 + 4)!! + 4! + 6! \\ 4317 &= 1 - 3!! - 4 + 7! \\ 4320 &= -(0! + 2)!! + (3 + 4)! \\ 5017 &= 0! - (-1 + 5)! + 7! \\ 5034 &= -0! + (3 + 4)! - 5 \\ 5035 &= (-0! + 3 + 5)! - 5 \\ 5037 &= -0! + 3 - 5 + 7! \\ 5039 &= -0! + (3 - 5 + 9)! \\ 5040 &= (-0! - 0! + 4 + 5)! \\ 5167 &= 1 + 5! + 6 + 7! \\ 5171 &= 11 + 5! + 7! \\ 5172 &= 12 + 5! + 7! \\ 5173 &= 13 + 5! + 7! \\ 5174 &= 14 + 5! + 7! \\ 5175 &= 15 + 5! + 7! \\ 5637 &= -3 - 5! + 6! + 7! \\ 6476 &= -4 + 6! + 6! + 7! \\ \\ 10077 &= -0! - 0! - 1 + 7! + 7! \\ 33837 &= -3!! - 3!! - 3 - 7! + 8! \\ 35184 &= -(1 + 3)! + 4! - 5! + 8! \\ 35276 &= 2 + (3 + 5)! - 6 - 7! \\ 35280 &= -(0! - 2 + 3 + 5)! + 8! \end{aligned}$$

### 2.4 Decreasing Order of Digits

$$\begin{aligned} 120 &= ((2 + 1)! - 0)! \\ 144 &= 4! + (4 + 1)! \\ 145 &= 5! + 4! + 1 \\ 660 &= 6! - 60 \\ 733 &= 7 + 3! + 3!! \\ 744 &= (7 - 4)!! + 4! \\ \\ 1463 &= 6! + 4! + 3!! - 1 \\ 1464 &= 6! + 4! + (4 - 1)!! \\ 4316 &= -6! - 4 + (3! + 1)! \\ 4317 &= 7! - 4 - 3!! + 1 \\ 4320 &= (4 + 3)! - (2 + 0!)!! \\ 4967 &= -9 + 7! - 64 \\ 5017 &= 7! - (5 - 1)! + 0! \\ 5034 &= -5 + (4 + 3)! - 0! \\ 5035 &= -5 + (5 + 3 - 0)! \\ 5037 &= 7! - 5 + 3 - 0! \\ 5039 &= (9 - 5 + 3)! - 0! \\ 5167 &= 7! + 6 + 5! + 1 \\ 5170 &= 7! + 5! + 10 \\ 5171 &= 7! + 5! + 11 \\ 5637 &= 7! + 6! - 5! - 3 \end{aligned}$$

$$\begin{aligned} 38753 &= -3!! - 3!! - 5! - 7 + 8! \\ 38864 &= -3!! - 4! - 6! + 8 + 8! \\ 38866 &= -3!! - 6! - 6 - 8 + 8! \\ 39485 &= -3!! - 4 - 5! + 8! + 9 \\ 39583 &= -3!! + (3 + 5)! - 8 - 9 \\ 39588 &= -3!! + (5 - 8 + 8! - 9)! \\ 39600 &= (0! + 0! + 3)! - (-6 + 9)!! \\ 39608 &= -0! - (-3 + 6)!! + 8! + 9! \\ 40185 &= -0! - 14 - 5! + 8! \\ 40268 &= -(0! + 2)! - 46 + 8! \\ 40283 &= -0! - 2 - 34 + 8! \\ 40287 &= -02 - 4! - 7 + 8! \\ 40288 &= -024 - 8 + 8! \\ 40289 &= 02 - 4! + 8! - 9 \\ 40313 &= (0! + 1 + 3)! - 3 - 4 \\ 40315 &= (-0! + 13 - 4)! - 5 \\ 40317 &= (0! + 1 + 3)! + 4 - 7 \\ 40319 &= -0! + (13 + 4 - 9)! \\ 40323 &= -0! + (2 + 3 + 3)! + 4 \\ 40324 &= (-0! + 2 + 3 + 4)! + 4 \\ 40325 &= (-0! + 2 + 3 + 4)! + 5 \\ 40326 &= (-0! + 2 + 3 + 4)! + 6 \\ 40327 &= (-0! + 2 + 3 + 4)! + 7 \\ 40328 &= (-0! + 2 + 3 + 4)! + 8 \\ 40329 &= (-0! + 2 + 3 + 4)! + 9 \\ 40330 &= (0! + 0! + 3)! + 3! + 4 \\ 40338 &= -03 - 3 + 4! + 8! \\ 40340 &= (0! + 0! + 3)! - 4 + 4! \\ 40342 &= -0! + 23 + (4 + 4)! \\ 40343 &= -0! + (3! + 3! - 4)! + 4! \\ 40358 &= -0! + 34 + 5 + 8! \\ \\ 6476 &= 7! + 6! + 6! - 4 \\ \\ 10077 &= 7! + 7! - 1 - 0! - 0! \\ 33837 &= 8! - 7! - 3 - 3!! - 3!! \\ 35184 &= 8! - 5! + 4! - (3! + 1)! \\ 35276 &= -7! - 6 + (5 + 3)! + 2 \\ 35280 &= 8! - (5 + 3 - 2 + 0)! \\ 35875 &= 8! - 7! - 5 - 5! + 3!! \\ 38753 &= 8! - 7 - 5! - 3!! - 3!! \\ 38866 &= 8! - 8 - 6 - 6! - 3!! \\ 39485 &= 9 + 8! - 5! - 4 - 3!! \\ 39538 &= -9 + 8! - 53 - 3!! \\ 39583 &= -9 - 8 + (5 + 3)! - 3!! \\ 39588 &= -9 - 8 + 8! + 5 - 3!! \\ 39600 &= -(9 - 6)!! + (3! + 0! + 0!)!! \\ 39608 &= 9 + 8! - (6 - 3)!! - 0! \\ 39624 &= -(9 - 6)!! + 4! + (3! + 2)! \\ 39658 &= -9 + 8! - 653 \\ 40158 &= 8! - 5! - 41 - 0! \\ 40280 &= 8! - 42 + 0! + 0! \\ 40283 &= 8! - 4 - 32 - 0! \\ 40288 &= 8! - 8 - 4 - 20 \\ 40314 &= (4 + 4)! - (3 - 1 + 0)! \\ \\ 40368 &= -0! + 3 + 46 + 8! \\ 40435 &= (-0! + 3)! + (4 + 4)! - 5 \\ 40441 &= 0! + (1 + 4)! + (4 + 4)! \\ 40444 &= (0! + 4)! + 4 + (4 + 4)! \\ 40445 &= 0! + 4 + (4 + 4)! + 5! \\ 40446 &= (0! + 4)! + (4 + 4)! + 6 \\ 40447 &= (0! + 4)! + (4 + 4)! + 7 \\ 40448 &= (0! + 4)! + 4 + 4 + 8! \\ 40449 &= (0! + 4)! + (4 + 4)! + 9 \\ 40458 &= -(-0! + 4)! + 4! + 5! + 8! \\ 40484 &= (0! + 4)! + 44 + 8! \\ 40485 &= (0! + 4)! + 45 + 8! \\ 40486 &= (0! + 4)! + 46 + 8! \\ 40487 &= (0! + 4)! + 47 + 8! \\ 40488 &= (0! + 4)! + 48 + 8! \\ 40584 &= (0! + 4)! + 4! + 5! + 8! \\ 40585 &= 0! + 4! + 5! + 5! + 8! \\ 40786 &= -0! + 467 + 8! \\ 41036 &= (0! + 1 + 3)! - 4 + 6! \\ 41038 &= 0! + 1 + 3!! - 4 + 8! \\ 41040 &= (0! + 0! + 1)!! + (4 + 4)! \\ 44637 &= -3 + (4 + 4)! - 6! + 7! \\ 45238 &= -2 + (3 + 4)! - 5! + 8! \\ 45475 &= (4 + 4)! + 5! - 5 + 7! \\ 80518 &= -0! - 1 - 5! + 8! + 8! \\ 80585 &= 055 + 8! + 8! \\ 80635 &= 0! + (3 + 5)! - 6 + 8! \\ 80638 &= 0! + 3 - 6 + 8! + 8! \\ 80641 &= 0! + (14 - 6)! + 8! \\ 80658 &= (-0! + 5)! - 6 + 8! + 8! \\ 81360 &= (0! + 1 + 3)! + 6! + 8! \end{aligned}$$

$$\begin{aligned} 40321 &= 4 - 3 + (-2 + 10)! \\ 40330 &= 4 + 3! + (3! + 0! + 0!)! \\ 40340 &= 4! - 4 + (3! + 0! + 0!)! \\ 40345 &= -5 + (4 + 4)! + 30 \\ 40368 &= 8! + 6 + 43 - 0! \\ 40386 &= 8! + 64 + 3 - 0! \\ 40387 &= 8! + 74 - 3! - 0! \\ 40435 &= -5 + (4 + 4)! + (3! - 0!)! \\ 40441 &= (4 + 4)! + (4 + 1)! + 0! \\ 40444 &= 4 + (4 + 4)! + (4 + 0!)! \\ 40445 &= 5 + (4 + 4)! + (4 + 0!)! \\ 40446 &= 6 + (4 + 4)! + (4 + 0!)! \\ 40447 &= 7 + (4 + 4)! + (4 + 0!)! \\ 40448 &= 8 + (4 + 4)! + (4 + 0!)! \\ 40449 &= 9 + (4 + 4)! + (4 + 0!)! \\ 40458 &= 8! + 5! + 4! - (4 - 0!)! \\ 40584 &= 8! + 5! + 4! + (4 + 0!)! \\ 40855 &= 8! - 5 + 540 \\ 41036 &= 6! - 4 + (3! + 1 + 0!)! \\ 41038 &= 8! - 4 + 3!! + 1 + 0! \\ 41040 &= (4 + 4)! + (1 + 0! + 0!)!! \\ 4316 &= (1 + 3)! - 4 - 6! \\ 44637 &= 7! - 6! + (4 + 4)! - 3 \end{aligned}$$

$$\begin{aligned} 45238 &= 8! - 5! + (4+3)! - 2. \\ 45475 &= 7! + 5! - 5 + (4+4)!. \end{aligned}$$

$$\begin{aligned} 80518 &= 8! + 8! - 5! - 1 - 0!. \\ 80635 &= 8! - 6 + (5+3)! + 0!. \end{aligned}$$

$$\begin{aligned} 80658 &= 8! + 8! - 6 + (5-0)!!. \\ 81360 &= 8! + 6! + (3! + 1 + 0)!!. \end{aligned}$$

### 3 Unified Selfie Numbers

According to subsection 1.4, below are examples of *unified Selfie numbers*. The study is limited only up to 6 digits without factorial. It uses only square-root with other basic operations:

$$\begin{aligned} 36 &= 3! \times 6 \\ &= 6 \times 3!. \end{aligned}$$

$$\begin{aligned} 120 &= ((1+2)! - 0)!! \\ &= (-0! + (2+1))! \\ &= (-0! + (1+2))! \\ &= ((2+1)! - 0)!!. \end{aligned}$$

$$\begin{aligned} 143 &= -1 + 4! \times 3! \\ &= 3! \times 4! - 1 \\ &= -1 + 3! \times 4! \\ &= 4! \times 3! - 1. \end{aligned}$$

$$\begin{aligned} 144 &= (1+4)! + 4! \\ &= 4! + (4+1)!. \end{aligned}$$

$$\begin{aligned} 145 &= 1 + 4! + 5! \\ &= 5! + 4! + 1. \end{aligned}$$

$$\begin{aligned} 355 &= 3 \times 5! - 5 \\ &= -5 + 5! \times 3. \end{aligned}$$

$$\begin{aligned} 456 &= 4 \times (5! - 6) \\ &= (-6 + 5!) \times 4. \end{aligned}$$

$$\begin{aligned} 713 &= -7 + 1 \times 3!! \\ &= 3!! - 1 \times 7 \\ &= 1 \times 3!! - 7 \\ &= -7 + 3!! \times 1. \end{aligned}$$

$$\begin{aligned} 720 &= (7 - (2 \times 0))! \\ &= (0! - 2 + 7)!. \end{aligned}$$

$$\begin{aligned} 733 &= 7 + 3!! + 3! \\ &= 3! + 3!! + 7. \end{aligned}$$

$$\begin{aligned} k744 &= (7 + 4!) \times 4! \\ &= 4! \times (4! + 7). \end{aligned}$$

$$\begin{aligned} 1432 &= 1 \times (-4 + 3!!) \times 2 \\ &= 2 \times (3!! - 4) \times 1 \\ &= 1 \times 2 \times (3!! - 4) \\ &= (-4 + 3!!) \times 2 \times 1. \end{aligned}$$

$$\begin{aligned} 1436 &= -1 \times 4 + 3!! + 6! \\ &= 6! + 3!! - 4 \times 1 \\ &= 1 \times 3!! - 4 + 6! \\ &= 6! - 4 + 3!! \times 1. \end{aligned}$$

$$\begin{aligned} 1440 &= (-1 + 4)!! + (4 - 0!!)!! \\ &= (-0! + 4)!! + (4 - 1)!! \\ &= (0! + 1) \times (4!/4)! \\ &= (4!/4)! \times (1 + 0!). \end{aligned}$$

$$\begin{aligned} k1463 &= -1 + 4! + 6! + 3!! \\ &= 3!! + 6! + 4! - 1 \\ &= -1 + 3!! + 4! + 6! \\ &= 6! + 4! + 3!! - 1. \end{aligned}$$

$$\begin{aligned} k1464 &= (-1 + 4)!! + 6! + 4! \\ &= 4! + 6! + (4 - 1)!! \\ &= (-1 + 4)!! + 4! + 6! \\ &= 6! + 4! + (4 - 1)!!. \end{aligned}$$

$$\begin{aligned} 2160 &= (2+1) \times 6! + 0 \\ &= 0 + 6! \times (1+2) \\ &= 0 + (1+2) \times 6! \\ &= 6! \times (2+1) + 0. \end{aligned}$$

$$\begin{aligned} 2161 &= (2+1) \times 6! + 1 \\ &= 1 + 6! \times (1+2) \\ &= 1 + (1+2) \times 6! \\ &= 6! \times (2+1) + 1. \end{aligned}$$

$$\begin{aligned} 2163 &= (2+1) \times 6! + 3 \\ &= 3 + 6! \times (1+2) \\ &= (1+2) + 3 \times 6! \\ &= 6! \times 3 + 2 + 1. \end{aligned}$$

$$\begin{aligned} 2166 &= (2+1) \times 6! + 6 \\ &= 6 + 6! \times (1+2) \\ &= (1+2) \times 6! + 6 \\ &= 6 + 6! \times (2+1). \end{aligned}$$

$$\begin{aligned} 2167 &= (2+1) \times 6! + 7 \\ &= 7 + 6! \times (1+2) \\ &= (1+2) \times 6! + 7 \\ &= 7 + 6! \times (2+1). \end{aligned}$$

$$\begin{aligned} 2168 &= (2+1) \times 6! + 8 \\ &= 8 + 6! \times (1+2) \\ &= (1+2) \times 6! + 8 \\ &= 8 + 6! \times (2+1). \end{aligned}$$

$$\begin{aligned} 169 &= (2+1) \times 6! + 9 \\ &= 9 + 6! \times (1+2) \\ &= (1+2) \times 6! + 9 \\ &= 9 + 6! \times (2+1). \end{aligned}$$

$$\begin{aligned} 2520 &= (5+2)!/2 + 0 \\ &= 0 + (2+5)!/2 \\ &= (-0! + 22) \times 5! \\ &= (2+5)!/2 + 0. \end{aligned}$$

$$\begin{aligned} 3125 &= (3+1 \times 2)^5 \\ &= 5^{2+1 \times 3} \\ &= 1 \times (2+3)^5 \\ &= 5^{3+2 \times 1}. \end{aligned}$$

$$\begin{aligned} 3448 &= 3! \times 4! \times 4! - 8 \\ &= -8 + 4! \times 4! \times 3!. \end{aligned}$$

$$\begin{aligned} 3455 &= (3!! - 4! - 5) \times 5 \\ &= 5 \times (-5 - 4! + 3!!). \end{aligned}$$

$$\begin{aligned} 3456 &= -3! \times 4! + 5 \times 6! \\ &= 6! \times 5 - 4! \times 3!. \end{aligned}$$

$$\begin{aligned} 3586 &= 3!! \times 5 - 8 - 6 \\ &= -8 - 6 + 5 \times 3!! \\ &= 3!! \times 5 - 6 - 8 \\ &= -6 - 8 + 5 \times 3!!!. \end{aligned}$$

$$\begin{aligned} 3590 &= 3!! \times 5 - 9 - 0! \\ &= -0! - 9 + 5 \times 3!! \\ &= -0! + 3!! \times 5 - 9 \\ &= -9 + 5 \times 3!! - 0!. \end{aligned}$$

$$\begin{aligned} 3591 &= 3!! \times 5 - 9 \times 1 \\ &= -1 \times 9 + 5 \times 3!! \\ &= 1 \times 3!! \times 5 - 9 \\ &= -9 + 5 \times 3!! \times 1. \end{aligned}$$

$$\begin{aligned} 3599 &= 3!! \times 5 - (-9 + 9)! \\ &= -(-9 + 9)! + 5 \times 3!! \\ &= 3!! \times 5 - 9/9 \\ &= -9/9 + 5 \times 3!! . \end{aligned}$$

$$\begin{aligned} 3600 &= 3! \times 600 \\ &= 0 + (-0! + 6) \times 3!! \\ &= (-0! + 03)! \times 6! \\ &= 6! \times (3! \times 0! - 0!). \end{aligned}$$

$$\begin{aligned} 3601 &= 3!! \times (6 - 0!) + 1 \\ &= 1 + (-0! + 6) \times 3!! \\ &= 0! + (-1 + 3!) \times 6! \\ &= 6! \times (3! - 1) + 0!. \end{aligned}$$

$$\begin{aligned} 3604 &= 3!! \times (6 - 0!) + 4 \\ &= 4 + (-0! + 6) \times 3!! \\ &= (0! + 3!!) \times 4 + 6! \\ &= 6! + 4 \times (3!! + 0!). \end{aligned}$$

$$\begin{aligned} 3605 &= 3!! \times (6 - 0!) + 5 \\ &= 5 + (-0! + 6) \times 3!! \\ &= -0! + 3! + 5 \times 6! \\ &= 6! \times 5 + 3! - 0!. \end{aligned}$$

$$\begin{aligned} 3606 &= 3!! \times (6 - 0!) + 6 \\ &= 6 + (-0! + 6) \times 3!! \\ &= (-0! + 3!) \times 6! + 6 \\ &= 6 + 6! \times (3! - 0!). \end{aligned}$$

$$\begin{aligned} 3607 &= 3!! \times (6 - 0!) + 7 \\ &= 7 + (-0! + 6) \times 3!! \\ &= (-0! + 3!) \times 6! + 7 \\ &= 7 + 6! \times (3! - 0!). \end{aligned}$$

$$\begin{aligned} 3608 &= 3!! \times (6 - 0!) + 8 \\ &= 8 + (-0! + 6) \times 3!! \\ &= (-0! + 3!) \times 6! + 8 \\ &= 8 + 6! \times (3! - 0!). \end{aligned}$$

$$\begin{aligned} 3609 &= 3!! \times (6 - 0!) + 9 \\ &= 9 + (-0! + 6) \times 3!! \\ &= (-0! + 3!) \times 6! + 9 \\ &= 9 + 6! \times (3! - 0!). \end{aligned}$$

$$\begin{aligned} 3625 &= (3 + 6! + 2) \times 5 \\ &= 5 \times (2 + 6! + 3) \\ &= (2 + 3) \times (5 + 6!) \\ &= (6! + 5) \times (3 + 2). \end{aligned}$$

$$\begin{aligned} 3630 &= (3! + 6!) \times (3! - 0!) \\ &= (-0! + 3!) \times (6! + 3!) \\ &= (-0! + 3!) \times (3! + 6!) \\ &= (6 + 3!!) \times (3! - 0!). \end{aligned}$$

$$\begin{aligned} 3636 &= 3! \times (6 + 3!!) - 6! \\ &= 6 \times (3! + 6!) - 3!! \\ &= -3!! + 3! \times (6 + 6!) \\ &= (6 + 6!) \times 3! - 3!! . \end{aligned}$$

$$\begin{aligned} 4314 &= 4! \times (3!! - 1)/4 \\ &= 4! \times (-1 + 3!!)/4 \\ &= (-1 + 3!!) \times 4!/4 \\ &= 4!/4 \times (3!! - 1). \end{aligned}$$

$$\begin{aligned} 4316 &= -4 + 3! \times 1 \times 6! \\ &= 6 \times 1 \times 3!! - 4 \\ &= (1 + 3!!) - 4 - 6! \\ &= -6! - 4 + (3! + 1)!. \end{aligned}$$

$$\begin{aligned} 4317 &= -4 - 3!! + 1 + 7! \\ &= 7! + 1 - 3!! - 4 \\ &= 1 - 3!! - 4 + 7! \\ &= 7! - 4 - 3!! + 1. \end{aligned}$$

$$\begin{aligned} 4320 &= (4 + 3)! - (2 + 0!!)!! \\ &= -(0! + 2)!! + (3 + 4)!. \end{aligned}$$

$$\begin{aligned} 4332 &= 4! + 3! \times (3!! - 2) \\ &= (-2 + 3!!) \times 3! + 4!. \end{aligned}$$

$$\begin{aligned} 4337 &= (4 + 3!!) \times 3! - 7 \\ &= -7 + 3! \times (3!! + 4) \\ &= 3! \times 3!! + 4! - 7 \\ &= -7 + 4! + 3!! \times 3!. \end{aligned}$$

$$\begin{aligned} 4344 &= 4! \times (3!! + 4)/4 \\ &= 4! \times (4 + 3!!)/4 \\ &= 3! \times (4 + (4!/4)!) \\ &= (4 + (4!/4)!) \times 3!. \end{aligned}$$

$$\begin{aligned} 4464 &= 4! \times (4! + 6!)/4 \\ &= 4! \times (6! + 4!)/4 \\ &= (4! + (4!/4)!) \times 6 \\ &= 6 \times (4! + (4!/4)!). \end{aligned}$$

$$\begin{aligned} 5017 &= -(5 - 0!)! + 1 + 7! \\ &= 7! + 1 - (-0! + 5)! \\ &= 0! - (-1 + 5)! + 7! \\ &= 7! - (5 - 1)! + 0!. \end{aligned}$$

$$\begin{aligned} 5034 &= -5 - 0! + (3 + 4)! \\ &= (4 + 3)! - 0! - 5 \\ &= -0! + (3 + 4)! - 5 \\ &= -5 + (4 + 3)! - 0!. \end{aligned}$$

$$\begin{aligned} 5035 &= (5 - 0! + 3)! - 5 \\ &= (5 + 3 - 0!)! - 5 \\ &= (-0! + 3 + 5)! - 5 \\ &= -5 + (5 + 3 - 0!)!. \end{aligned}$$

$$\begin{aligned} 5037 &= 5 \times 0 - 3 + 7! \\ &= 7! - 3 + 0 \times 5 \\ &= -0! + 3 - 5 + 7! \\ &= 7! - 5 + 3 - 0!. \end{aligned}$$

$$\begin{aligned} 5167 &= 5! + 1 + 6 + 7! \\ &= 7! + 6 + 5! + 1 \\ &= 1 + 6 + 5! + 7! \\ &= 7! + 5! + 6 + 1. \end{aligned}$$

$$\begin{aligned} 5568 &= (-5!/5 + 6!) \times 8 \\ &= 8 \times (6! - 5!/5). \end{aligned}$$

$$\begin{aligned} 5637 &= -5! + 6! - 3 + 7! \\ &= 7! - 3 + 6! - 5! \\ &= -3 - 5! + 7! + 6! \\ &= 7! + 6! - 5! - 3. \end{aligned}$$

$$\begin{aligned} 5765 &= 5 + 7! + 6 \times 5! \\ &= 5! \times 6 + 7! + 5 \\ &= 5 + 5! \times 6 + 7! \\ &= 7! + 6 \times 5! + 5. \end{aligned}$$

$$\begin{aligned} 6399 &= ((6 - 3)!! - 9) \times 9 \\ &= 9 \times (-9 + (-3 + 6)!!) \\ &= ((-3 + 6)!! - 9) \times 9 \\ &= 9 \times (-9 + (6 - 3)!!). \end{aligned}$$

$$\begin{aligned} 6476 &= 6! - 4 + 7! + 6! \\ &= 6! + 7! - 4 + 6! \\ &= -4 + 6! + 6! + 7! \\ &= 7! + 6! + 6! - 4. \end{aligned}$$

$$\begin{aligned} 8632 &= -8 + 6! \times 3! \times 2 \\ &= 2 \times 3! \times 6! - 8. \end{aligned}$$

$$\begin{aligned} 10067 &= -1 + (0! + 0!) \times (-6 + 7!) \\ &= (7! - 6) \times (0! + 0!) - 1 \\ &= -0! + (0! + 1) \times (-6 + 7!) \\ &= (7! - 6) \times (1 + 0!) - 0!. \end{aligned}$$

$$\begin{aligned}10073 &= -1 + (0! + 0!) \times (7! - 3) \\&= (-3 + 7!) \times (0! + 0!) - 1 \\&= -0! + (0! + 1) \times (-3 + 7!) \\&= (7! - 3) \times (1 + 0!) - 0!.\\10074 &= (1 + 0!) \times (0! + 7! - 4) \\&= (-4 + 7! + 0!) \times (0! + 1) \\&= (0! + 0!) \times (1 - 4 + 7!) \\&= (7! - 4 + 1) \times (0! + 0!).\\10077 &= -1 - 0! - 0! + 7! + 7! \\&= 7! + 7! - 0! - 0! - 1 \\&= -0! - 0! - 1 + 7! + 7! \\&= 7! + 7! - 1 - 0! - 0!.\\10080 &= (1 + 0!) \times (-0! + 8)! + 0 \\&= 0 + (8 - 0!)! \times (0! + 1) \\&= (0! + 0!) \times (-01 + 8)! \\&= (8 - 1 \times 0!)! \times (0! + 0!).\\10081 &= (1 + 0!) \times (-0! + 8)! + 1 \\&= 1 + (8 - 0!)! \times (0! + 1) \\&= 0! + (0! + 1) \times (-1 + 8)! \\&= (8 - 1)! \times (1 + 0!) + 0!.\\10087 &= (1 + 0!) \times (-0! + 8)! + 7 \\&= 7 + (8 - 0!)! \times (0! + 1) \\&= -0! + (0! + 1) \times 7! + 8 \\&= 8 + 7! \times (1 + 0!) - 0!.\\10088 &= (1 + 0!) \times (-0! + 8)! + 8 \\&= 8 + (8 - 0!)! \times (0! + 1) \\&= (0! + 0!) \times (-1 + 8)! + 8 \\&= 8 + (8 - 1)! \times (0! + 0!).\\10089 &= (1 + 0!) \times (-0! + 8)! + 9 \\&= 9 + (8 - 0!)! \times (0! + 1) \\&= (0! + 0!) \times (-1 + 8)! + 9 \\&= 9 + (8 - 1)! \times (0! + 0!).\\10097 &= -1 + (0! + 0!) \times (9 + 7!) \\&= (7! + 9) \times (0! + 0!) - 1 \\&= -0! + (0! + 1) \times (7! + 9) \\&= (9 + 7!) \times (1 + 0!) - 0!.\\10785 &= (10! - 7!)/(8!/5!) \\&= 5!/8 \times ((7 - 0!)! - 1) \\&= (-0! + (1 + 5)!) \times (7 + 8) \\&= (8 + 7) \times ((5 + 1)! - 0!).\\11344 &= (-11 + 3!!) \times 4 \times 4 \\&= 4 \times 4 \times (3!! - 11).\end{aligned}$$

$$\begin{aligned}12274 &= ((1 + 2)!! + 2) \times (-7 + 4!) \\&= (4! - 7) \times (2 + (2 + 1)!!) \\&= ((1 + 2)!! + 2) \times (4! - 7) \\&= (-7 + 4!) \times (2! + (2 + 1)!!).\\12288 &= (1 + 2)! \times 2^8 \times 8 \\&= (8 \times 8)^2 \times (2 + 1).\end{aligned}$$

$$\begin{aligned}12923 &= -1 + 2 \times 9 \times (-2 + 3!!) \\&= (3!! - 2) \times (9 \times 2) - 1 \\&= -1 + 2 \times (-2 + 3!!) \times 9 \\&= 9 \times (3!! - 2) \times 2 - 1.\end{aligned}$$

$$\begin{aligned}12933 &= (1 + 2) \times (-9 + 3! \times 3!!) \\&= (3! \times 3!! - 9) \times (2 + 1) \\&= ((1 + 2)!! - 3 + 3!!) \times 9 \\&= 9 \times (3!! - 3 + (2 + 1)!!).\end{aligned}$$

$$\begin{aligned}12960 &= 1 \times 2 \times 9 \times 6! + 0 \\&= 0 + 6! \times 9 \times 2 \times 1 \\&= 01 \times 2 \times 6! \times 9 \\&= 9!/(6 + 21 + 0!).\end{aligned}$$

$$\begin{aligned}12961 &= 1 + 2 \times 9 \times 6! \times 1 \\&= 1 + 6! \times 9 \times 2 \times 1 \\&= (-1 + 1)! + 2 \times 6! \times 9 \\&= 9 \times 6! \times 2 + (-1 + 1)!.\end{aligned}$$

$$\begin{aligned}12962 &= 1 \times 2 + 9 \times 6! \times 2 \\&= 2 + 6! \times 9 \times 2 \times 1 \\&= 1 \times 2 + 2 \times 6! \times 9 \\&= 9 \times 6! \times 2 + 2 \times 1.\end{aligned}$$

$$\begin{aligned}12963 &= 1 \times 2 \times 9 \times 6! + 3 \\&= 3 + 6! \times 9 \times 2 \times 1 \\&= 1 + 2 + (3!! + 6!) \times 9 \\&= 9 \times (6! + 3!!) + 2 + 1.\end{aligned}$$

$$\begin{aligned}12966 &= 1 \times 2 \times 9 \times 6! + 6 \\&= 6 + 6! \times 9 \times 2 \times 1 \\&= (1 + 2)! + (6! + 6!) \times 9 \\&= 9 \times (6! + 6!) + (2 + 1)!.\end{aligned}$$

$$\begin{aligned}12969 &= 1 \times 2 \times 9 \times 6! + 9 \\&= 9 + 6! \times 9 \times 2 \times 1 \\&= 1 \times 2 \times 6! \times 9 + 9 \\&= 9 + 9 \times 6! \times 2 \times 1.\end{aligned}$$

$$\begin{aligned}13555 &= (-1 - 3! + 5!) \times 5! - 5 \\&= -5 + 5! \times (5! - 3! - 1).\end{aligned}$$

$$\begin{aligned}13557 &= -1 \times 3 + 5! \times (5! - 7) \\&= (-7 + 5!) \times 5! - 3 \times 1.\end{aligned}$$

$$\begin{aligned}13560 &= (-1 + 3!)! \times (5! - 6 - 0!) \\&= (-0! - 6 + 5!) \times (3! - 1)! \\&= (-0! + (-1 + 3)!)! \times 5! - 6! \\&= -6! + 5! \times ((3! - 1)! - 0!).\\13566 &= ((1 + 3)! - 5) \times (6! - 6) \\&= (-6 + 6!) \times (-5 + (3 + 1)!).\\13824 &= 1 \times (3 \times 8)^2 \times 4! \\&= (-4 + 28)^3 \times 1 \\&= (1 + 23)^{4!/8} \\&= (8 - 4)!^3 \times (2 - 1).\end{aligned}$$

$$\begin{aligned}14335 &= (-1 + 4 \times (-3 + 3!!)) \times 5 \\&= 5 \times ((3!! - 3) \times 4 - 1) \\&= (-13 + 3!! \times 4) \times 5 \\&= 5 \times (4 \times (3!! - 3) - 1).\end{aligned}$$

$$\begin{aligned}14515 &= (1 + 4)! \times (5! + 1) - 5 \\&= 5! \times (1 + 5!) - 4 - 1 \\&= (1 + (1 + 4)!) \times 5! - 5 \\&= -5 + 5! \times ((4 + 1)! + 1).\end{aligned}$$

$$\begin{aligned}14567 &= -1 + 4! \times (-5! + 6! + 7) \\&= (7 + 6! - 5!) \times 4! - 1.\end{aligned}$$

$$\begin{aligned}15120 &= (1 + 5)! \times (1 + 20) \\&= (0! + 2) \times (1 + 5 + 1)! \\&= (0! + 1 + 1) \times (2 + 5)! \\&= (5 + 2)! \times (1 + 1 + 0!).\end{aligned}$$

$$\begin{aligned}15585 &= 1 \times (5^5 - 8) \times 5 \\&= 5 \times (-8 + 5^5) \times 1 \\&= 1 \times 5 \times (5^5 - 8) \\&= -8 \times 5 + 5^{5+1}.\end{aligned}$$

$$\begin{aligned}15625 &= 1 \times 5^{(6+2-5)!} \\&= 5^{2 \times 6 - 5 - 1} \\&= 1 \times (25/5)^6 \\&= (6 - 5) \times 5^{2+1}!.\end{aligned}$$

$$\begin{aligned}15631 &= 1 + 5^6 + 3! - 1 \\&= (-1 + 3!)^6 + 5 + 1 \\&= (1 - 1 + 3)! + 5^6 \\&= 6 + 5^{(3-1+1)!}.\end{aligned}$$

$$\begin{aligned}15635 &= -1 + 5^6 + 3! + 5 \\&= 5^{3!} + 6 + 5 - 1 \\&= (-1 + 3) \times 5 + 5^6 \\&= 6 + 5 + 5^{3!} - 1.\end{aligned}$$

$$\begin{aligned} 15655 &= 1 \times 5 \times (6 + 5^5) \\ &= (5^5 + 6) \times 5 \times 1 \\ &= (1 + 5) \times 5 + 5^6 \\ &= 6 \times 5 + 5^{5+1}. \end{aligned}$$

$$\begin{aligned} 16384 &= 16^3 \times (8 - 4) \\ &= (8/(6 - 4))^{3!+1} \\ &= (1 - 3 + 4)^{6+8} \\ &= ((4 + 8)/3)^{6+1}. \end{aligned}$$

$$\begin{aligned} 16464 &= -1 \times 6! + (-4 + 6!) \times 4! \\ &= 4! \times (6! - 4) - 6! \times 1 \\ &= 1 \times 4! \times (-4 + 6!) - 6! \\ &= -6! + (6! - 4) \times 4! \times 1. \end{aligned}$$

$$\begin{aligned} 16537 &= (-1 + 6!) \times (5 \times 3! - 7) \\ &= (-7 + 3! \times 5) \times (6! - 1) \\ &= (-1 + 3!!) \times (5 \times 6 - 7) \\ &= (-7 + 6 \times 5) \times (3!! - 1). \end{aligned}$$

$$\begin{aligned} 16944 &= (-1 + 6! - 9 - 4) \times 4! \\ &= 4! \times (-4 - 9 + 6! - 1) \\ &= -(1 + 4)! + 4! \times (6! - 9) \\ &= (-9 + 6!) \times 4! - (4 + 1)!. \end{aligned}$$

$$\begin{aligned} 16945 &= 1 + (6! - 9) \times 4! - 5! \\ &= -5! + 4! \times (-9 + 6!) + 1 \\ &= 1 - 4! \times (5 - 6! + 9) \\ &= (-9 + 6! - 5) \times 4! + 1. \end{aligned}$$

$$\begin{aligned} 17232 &= ((1 + 7)/2)! \times (3!! - 2) \\ &= (-2 + 3!)! \times (-2 + (7 - 1)!!) \\ &= ((1 + 2)!! - 2) \times (-3 + 7)! \\ &= (7 - 3)! \times (-2 + (2 + 1)!!). \end{aligned}$$

$$\begin{aligned} 17303 &= -1 + (7 - 3)! \times (0! + 3!!) \\ &= (3!! + 0!) \times (-3 + 7)! - 1 \\ &= -0! + (1 + 3!!) \times (-3 + 7)! \\ &= (7 - 3)! \times (3!! + 1) - 0!. \end{aligned}$$

$$\begin{aligned} 17346 &= ((-1 + 7)! + 3) \times 4! - 6 \\ &= -6 + (4! \times (3 + (7 - 1)!!)) \\ &= (1 + 3!!) \times 4! + 6 \times 7 \\ &= 7 \times 6 + 4! \times (3!! + 1). \end{aligned}$$

$$\begin{aligned} 19368 &= 1 \times 9 \times (3 \times 6! - 8) \\ &= (-8 + 6! \times 3) \times 9 \times 1 \\ &= (1 \times 3 \times 6! - 8) \times 9 \\ &= 9 \times (-8 + 6! \times 3 \times 1). \end{aligned}$$

$$\begin{aligned} 20144 &= (((2 + 0)!! + 1)! - 4) \times 4 \\ &= 4 \times (-4 + (1 + (0! + 2)!!)!!) \\ &= ((0! + (1 + 2)!!)!! - 4) \times 4 \\ &= 4 \times (-4 + ((2 + 1)! + 0)!!). \end{aligned}$$

$$\begin{aligned} 21456 &= (2 + 1)! \times (-4! + 5 \times 6!) \\ &= (6! \times 5 - 4!) \times (1 + 2)! \\ &= 12^4 + 5! \times 6 \\ &= (6! \times 5 - 4!) \times (2 + 1)!. \end{aligned}$$

$$\begin{aligned} 23324 &= 2 \times (-2 + 3!^{3!}/4) \\ &= -4 + 3!^{3 \times 2}/2 \\ &= (2 \times 3)^{3!}/2 - 4 \\ &= -4 + (2 \times 3)^{3!}/2. \end{aligned}$$

$$\begin{aligned} 23328 &= (2 \times 3^3)^2 \times 8 \\ &= (8 - 2)^{3+3}/2 \\ &= 2 \times 2 \times 3^{3!} \times 8 \\ &= 8 \times (3^3 \times 2)^2. \end{aligned}$$

$$\begin{aligned} 23334 &= 2 \times (3 + 3!^{3!}/4) \\ &= (4 \times 3 + 3!^{3!})/2. \end{aligned}$$

$$\begin{aligned} 23424 &= (2 \times 3!! + 4!) \times 2^4 \\ &= 4^2 \times (4! + 3!! \times 2) \\ &= (2 \times 2)! \times (3!! + 4^4) \\ &= (4^4 + 3!!) \times (2 + 2)!. \end{aligned}$$

$$\begin{aligned} 23694 &= (-2 + (-3 + 6)!!) \times (9 + 4!) \\ &= (4! + 9) \times ((6 - 3)!! - 2) \\ &= (2 - 3!!) \times (-4 \times 6 - 9) \\ &= (9 + 6 \times 4) \times (3!! - 2). \end{aligned}$$

$$\begin{aligned} 23755 &= -2 \times 3!! + 7! \times 5 - 5 \\ &= -5 + 5 \times 7! - 3!! \times 2 \\ &= -2 \times 3!! - 5 + 5 \times 7! \\ &= 7! \times 5 - 5 - 3!! \times 2. \end{aligned}$$

$$\begin{aligned} 25167 &= 2 + 5 \times ((1 + 6)! - 7) \\ &= (7! - 6 - 1) \times 5 + 2 \\ &= -1 - 2 + 5 \times (-6 + 7)! \\ &= (7! - 6) \times 5 - 2 - 1. \end{aligned}$$

$$\begin{aligned} 25173 &= -2 + 5 \times (1 + 7! - 3!!) \\ &= (-3! + 7! + 1) \times 5 - 2 \\ &= -(1 + 2)^3 + 5 \times 7! \\ &= 7! \times 5 - 3^{2+1}. \end{aligned}$$

$$\begin{aligned} 25174 &= -4! + 7! \times 1 \times 5 - 2 \\ &= -2 + 5 \times 1 \times 7! - 4! \\ &= -1 \times 2 - 4! + 5 \times 7! \\ &= 7! \times 5 - 4! - 2 \times 1. \end{aligned}$$

$$\begin{aligned} 25175 &= 25 \times (-1 + 7!/5) \\ &= 5 \times 7! - 1 \times 5^2 \\ &= -1 \times 25 + 5 \times 7! \\ &= (7! - 5) \times 5 \times (2 - 1). \end{aligned}$$

$$\begin{aligned} 25200 &= (2 + 5)! \times ((2 + 0)!! - 0!!) \\ &= (-0! + (0! + 2)!!) \times (5 + 2)! \\ &= (-0! + (0! + 2)!!) \times (2 + 5)! \\ &= 5 \times ((2 + 2^0)! + 0)!. \end{aligned}$$

$$\begin{aligned} 25205 &= ((2 + 5)! + 2 - 0!) \times 5 \\ &= 5 \times (-0! + 2 + (5 + 2)!!) \\ &= ((0 \times 2)!! + (2 + 5)!!) \times 5 \\ &= 5 \times ((5 + 2)!! + (2 \times 0)!!). \end{aligned}$$

$$\begin{aligned} 25215 &= ((2 + 5)! + 2 + 1) \times 5 \\ &= 5 \times (1 + 2 + (5 + 2)!!) \\ &= (1 + 2 + (2 + 5)!!) \times 5 \\ &= 5 \times ((5 + 2)!! + 2 + 1)!. \end{aligned}$$

$$\begin{aligned} 25758 &= -2 + 5 \times (7! + 5! - 8) \\ &= (-8 + 5! + 7!) \times 5 - 2 \\ &= -2 + 5 \times (5! + 7! - 8) \\ &= (-8 + 7! + 5!) \times 5 - 2. \end{aligned}$$

$$\begin{aligned} 30234 &= 3! \times (0! - 2 + (3 + 4)!!) \\ &= ((4 + 3)!! - (2 \times 0)!!) \times 3! \\ &= -(0! + 2)! + 3! \times (3 + 4)! \\ &= (4 + 3)! \times 3! - (2 + 0)!. \end{aligned}$$

$$\begin{aligned} 30235 &= 3! \times (0! + 2 \times 3)! - 5 \\ &= -5 + 3 \times 2 \times (0! + 3)!! \\ &= (0! + 2 \times 3)!! \times 3! - 5 \\ &= -5 + 3! \times (3 \times 2 + 0)!. \end{aligned}$$

$$\begin{aligned} 30237 &= 7! \times 3 \times 2 - 0 - 3 \\ &= -3 + 0 + 2 \times 3 \times 7! \\ &= 0 \times 2 - 3 + 3! \times 7! \\ &= 7! \times 3! - 3 + 2 \times 0. \end{aligned}$$

$$\begin{aligned} 30243 &= 3! \times (0! + 2 + 4)! + 3 \\ &= 3 + 42 \times (0 + 3)!! \\ &= (0! + 2) + 3! \times (3 + 4)! \\ &= (4 + 3)! \times 3! + 2 + 0!. \end{aligned}$$

$$\begin{aligned} 30264 &= 3! \times (((0/2)! + 6)! + 4) \\ &= (4 + (6 + (2 \times 0)!)) \times 3! \\ &= ((0! + 2 \times 3)! + 4) \times 6 \\ &= 6 \times (4 + (3 \times 2 + 0!)!). \end{aligned}$$

$$\begin{aligned} 30267 &= 3^{0!+2} + 6 \times 7! \\ &= 7! \times 6 + (2 + 0!)^3 \\ &= (0! + 2)^3 + 6 \times 7! \\ &= 7! \times 6 + 3^{2+0!}. \end{aligned}$$

$$\begin{aligned} 30273 &= 3! \times ((0! + 2)! + 7!) - 3 \\ &= ((3! + 7!) \times 2 - 0!) \times 3 \\ &= -0! - 2 + 3! \times (3! + 7!) \\ &= 7! \times 3! + 32 + 0!. \end{aligned}$$

$$\begin{aligned} 30276 &= (6 + 7!) \times 2 \times (0 + 3) \\ &= 3 \times (0 + 2) \times (7! + 6) \\ &= 02 \times 3 \times (6 + 7!) \\ &= (7! + 6) \times 3 \times 2 \times 0!. \end{aligned}$$

$$\begin{aligned} 30297 &= 3 \times (0! + 2 \times (9 + 7!)) \\ &= ((7! + 9) \times 2 + 0!) \times 3 \\ &= 0! + 2 + 3! \times (7! + 9) \\ &= (9 + 7!) \times 3! + 2 + 0!. \end{aligned}$$

$$\begin{aligned} 30355 &= 3! \times (0! + 3!)! + 5! - 5 \\ &= 5! - 5 + 3! \times (0! + 3!)! \\ &= (0! + 3!)! \times 3! - 5 + 5! \\ &= 5! - 5 + 3! \times (3! + 0!)!. \end{aligned}$$

$$\begin{aligned} 30366 &= (3! + 0!) \times (3 + 6!) \times 6 \\ &= 6 \times (6! + 3) \times (0! + 3!) \\ &= (0! + 3!) \times (3 + 6!) \times 6 \\ &= 6 \times (6! + 3) \times (3! + 0!). \end{aligned}$$

$$\begin{aligned} 31668 &= -(3!! + 1) \times (6 + 6) + 8! \\ &= 8! - (6 + 6) \times (1 + 3!!) \\ &= -(1 + 3!!) \times (6 + 6) + 8! \\ &= 8! - (6 + 6) \times (3!! + 1). \end{aligned}$$

$$\begin{aligned} 32395 &= 3!! \times (2 + 3) \times 9 - 5 \\ &= 5 \times 9 \times 3!! - 2 - 3 \\ &= -2 - 3 + 3!! \times 5 \times 9 \\ &= 9 \times 5 \times 3!! - 3 - 2. \end{aligned}$$

$$\begin{aligned} 32748 &= -3! \times (2 + 7!/4) + 8! \\ &= 8! - (4 + 7!/2) \times 3 \\ &= 2 \times (-3! + 4^7) - 8 \\ &= (8 + 7)!/(5 + 3!)! - 2. \end{aligned}$$

$$\begin{aligned} 32768 &= (3 - 2 + 7)^6/8 \\ &= ((8 - 6)^{7-2})^3 \\ &= 2^{3!-6+7+8} \\ &= (8 \times (7 - 6))^{3+2}. \end{aligned}$$

$$\begin{aligned} 33408 &= 3! \times (3!! - 4!) \times (0 + 8) \\ &= 8 \times (0 - 4! + 3!!) \times 3! \\ &= (-0! + 3)! + 3!! \times 48 \\ &= 8 \times (-4! + 3!!) \times 3! \times 0!. \end{aligned}$$

$$\begin{aligned} 33558 &= (3!! - 3!) \times (55 - 8) \\ &= (-8 + 55) \times (-3! + 3!!). \end{aligned}$$

$$\begin{aligned} 33648 &= -3!! + 3! \times (6! - 4) \times 8 \\ &= 8 \times (-4 + 6!) \times 3! - 3!! \\ &= -3!! + (3!! - 4) \times 6 \times 8 \\ &= 8 \times 6 \times (-4 + 3!!) - 3!!. \end{aligned}$$

$$\begin{aligned} 33835 &= 3!! \times 3! \times 8 - 3!! - 5 \\ &= -5 + 3!! \times 8 \times 3! - 3!! \\ &= -3 \times 3 \times 3!! - 5 + 8! \\ &= 8! - 5 - 3 \times 3 \times 3!! . \end{aligned}$$

$$\begin{aligned} 33837 &= -3 - 3!! + 8! \times 3!/7 \\ &= (7! - 3!!) \times 8 - 3!! - 3 \\ &= -3!! - 3!! - 3 - 7! + 8! \\ &= 8! - 7! - 3 - 3!! - 3!! . \end{aligned}$$

$$\begin{aligned} 33864 &= -3!! + 3! \times (8 \times 6! + 4) \\ &= (4 + 6! \times 8) \times 3! - 3!! \\ &= -3!! + 3! \times (4 + 6! \times 8) \\ &= (8 \times 6! + 4) \times 3! - 3!! . \end{aligned}$$

$$\begin{aligned} 34266 &= -3! + 4! \times 2 \times (6! - 6) \\ &= (6! - 6) \times 2 \times 4! - 3! \\ &= 2 \times (-3 + 4! \times (-6 + 6!)) \\ &= ((-6 + 6!) \times 4! - 3) \times 2!. \end{aligned}$$

$$\begin{aligned} 34368 &= 3! \times (-4!/3! + 6!) \times 8 \\ &= 8 \times ((6 - 3)!! - 4) \times 3! \\ &= ((3 + 3)! - 4) \times 6 \times 8 \\ &= 8 \times 6 \times (-4 + (3 + 3)!!). \end{aligned}$$

$$\begin{aligned} 34386 &= (3 - (4 - 3!!) \times 8) \times 6 \\ &= 6 \times (8 \times (3!! - 4) + 3) \\ &= 3! \times (3 + (-4 + 6!) \times 8) \\ &= (8 \times (6! - 4) + 3) \times 3!. \end{aligned}$$

$$\begin{aligned} 34464 &= 3!! \times 4! + (-4 + 6!) \times 4! \\ &= (-4 + 6!) \times 4! + 4! \times 3!! \\ &= 3!! \times 4! + 4! \times (-4 + 6!) \\ &= (6! - 4) \times 4! + 4! \times 3!! . \end{aligned}$$

$$\begin{aligned} 34497 &= 3!! \times (4! + 4!) - 9 \times 7 \\ &= -7 \times 9 + (4! + 4!) \times 3!! \\ &= 3!! \times (4! + 4!) - 7 \times 9 \\ &= -9 \times 7 + (4! + 4!) \times 3!! . \end{aligned}$$

$$\begin{aligned} 34542 &= (3!! \times 4! - 5 - 4) \times 2 \\ &= 2 \times (-4 - 5 + 4! \times 3!!) \\ &= 2 \times (3!! \times 4! - 4 - 5) \\ &= (-5 - 4 + 4! \times 3!!) \times 2. \end{aligned}$$

$$\begin{aligned} 34545 &= 3 \times (4 \times 5! \times 4! - 5) \\ &= (-5 + 4 \times 5! \times 4!) \times 3 \\ &= 3 \times (4! \times 4 \times 5! - 5) \\ &= (-5 + 5! \times 4 \times 4!) \times 3. \end{aligned}$$

$$\begin{aligned} 34555 &= 3!! \times (4! + 5!/5) - 5 \\ &= -5 + (5!/5 + 4!) \times 3!! . \end{aligned}$$

$$\begin{aligned} 34557 &= -3 + 4! \times 5! \times (5 + 7) \\ &= (7 + 5) \times 5! \times 4! - 3. \end{aligned}$$

$$\begin{aligned} 34632 &= 3! \times (4 \times 6! + 3!) \times 2 \\ &= 2 \times (36 + 4! \times 3!!) \\ &= (2 \times 3!! + 3) \times 4 \times 6 \\ &= 6 \times 4 \times (3 + 3!! \times 2). \end{aligned}$$

$$\begin{aligned} 34668 &= (8 \times 6! - 6 + 4!) \times 3! \\ &= 3! \times (4! - 6 + 6! \times 8). \end{aligned}$$

$$\begin{aligned} 34688 &= (3! \times (4 + 6!) - 8) \times 8 \\ &= 8 \times (-8 + (6! + 4) \times 3!). \end{aligned}$$

$$\begin{aligned} 34773 &= (-3 \times 4! + 7!) \times 7 - 3 \\ &= -3 + 7 \times (7! - 4! \times 3) \\ &= -3 + (-3 \times 4! + 7!) \times 7 \\ &= 7 \times (7! - 4! \times 3) - 3. \end{aligned}$$

$$\begin{aligned} 34777 &= -3!! + (4! + 7 + 7!) \times 7 \\ &= 7 \times (7! + 7 + 4!) - 3!! . \end{aligned}$$

$$\begin{aligned} 35077 &= (-3! \times 5 + 0! + 7!) \times 7 \\ &= 7 \times (7! + 0! - 5 \times 3!) \\ &= (-(0! + 3)! - 5 + 7!) \times 7 \\ &= 7 \times (7! - 5 - (3 + 0!)!). \end{aligned}$$

$$\begin{aligned} 35268 &= 3! \times (5! - 2 + 6! \times 8) \\ &= (8 \times 6! - 2 + 5!) \times 3! \\ &= (-2 - 3!! - 5!) \times 6 + 8! \\ &= 8! - 6 \times (5! + 3!! + 2). \end{aligned}$$

$$\begin{aligned} 35275 &= (-3 + 5 \times 2) \times 7! - 5 \\ &= -5 + 7 \times (2 \times 5 - 3!) \\ &= (2 + 3!!/5!)! - 5 - 7! \\ &= -7! - 5 + (5 + 3!/2)!. \end{aligned}$$

$$\begin{aligned} 35276 &= (3 + 5)! + 2 - 7! - 6 \\ &= -6 - 7! + 2 + (5 + 3)! \\ &= 2 + (3 + 5)! - 6 - 7! \\ &= -7! - 6 + (5 + 3)! + 2. \end{aligned}$$

$$\begin{aligned} 35277 &= 3! + 5 + (-2 + 7!) \times 7 \\ &= 7 \times (7! - 2) + 5 + 3! \\ &= -2^3 + 5 + 7 \times 7! \\ &= 7 \times (7! - 5) + 32. \end{aligned}$$

$$\begin{aligned} 35278 &= 3! + (5 + 2) \times 7! - 8 \\ &= -8 + 7! \times (2 + 5) + 3! \\ &= -2 + 3!! \times (57 - 8) \\ &= -8! + 7! \times 5 \times 3 - 2. \end{aligned}$$

$$\begin{aligned} 35477 &= -3! + (5 + 4! + 7!) \times 7 \\ &= 7 \times (7! + 4! + 5) - 3! \\ &= -3! + (4! + 5 + 7!) \times 7 \\ &= 7 \times (7! + 5 + 4!) - 3!. \end{aligned}$$

$$\begin{aligned} 35488 &= (-3!! + 5! - 4) \times 8 + 8! \\ &= 8! + 8 \times (-4 + 5! - 3!!) \\ &= (-3!! - 4 + 5!) \times 8 + 8! \\ &= 8! + 8 \times (5! - 4 - 3!!). \end{aligned}$$

$$\begin{aligned} 35875 &= 3!! - 5! + 8! - 7! - 5 \\ &= -5 - 7! + 8! - 5! + 3!! \\ &= -35 \times (5! + 7) + 8! \\ &= 8! - 7! - 5 - 5! + 3!!. \end{aligned}$$

$$\begin{aligned} 36477 &= (3 + (4! + 6!) \times 7) \times 7 \\ &= 7 \times (7 \times (6! + 4!) + 3) \\ &= (3 + (6! + 4!) \times 7) \times 7 \\ &= 7 \times (7 \times (4! + 6!) + 3). \end{aligned}$$

$$\begin{aligned} 36678 &= 3!! - 6 \times (6! + 7) + 8! \\ &= 8! - (7 + 6!) \times 6 + 3!!. \end{aligned}$$

$$\begin{aligned} 36748 &= -3!! - (6! - 7) \times 4 + 8! \\ &= 8! - 4 \times (-7 + 6!) - 3!! \\ &= -3!! - 4 \times (6! - 7) + 8! \\ &= 8! + (7 - 6!) \times 4 - 3!!. \end{aligned}$$

$$\begin{aligned} 36758 &= 3 - (6! - 7) \times 5 + 8! \\ &= 8! - 5 \times (-7 + 6!) + 3 \\ &= 3 - 5 \times (6! - 7) + 8! \\ &= 8! + (7 - 6!) \times 5 + 3. \end{aligned}$$

$$\begin{aligned} 36864 &= -3 \times 6! + 8! - 6^4 \\ &= (4 \times 6 \times 8)^{6/3} \\ &= 3! \times (4! \times 6 - 6!) + 8! \\ &= 8! - (6 + 6)^4 / 3!. \end{aligned}$$

$$\begin{aligned} 37434 &= -3! + 7! \times 4 + 3!! \times 4! \\ &= 4! \times 3!! + 4 \times 7! - 3! \\ &= -3! + 3!! \times (4! + 4 \times 7) \\ &= (7 \times 4 + 4!) \times 3!! - 3!. \end{aligned}$$

$$\begin{aligned} 37444 &= 3!! \times (7 \times 4 + 4!) + 4 \\ &= 4 + (4! + 4 \times 7) \times 3!! \\ &= 3!! \times 4! + 4 + 4 \times 7! \\ &= 7! \times 4 + 4 + 4! \times 3!!.. \end{aligned}$$

$$\begin{aligned} 37464 &= (3! + 7) \times 4 \times 6! + 4! \\ &= 4! + 6! \times 4 \times (7 + 3!) \\ &= 3!! \times 4! + 4 \times (6 + 7!) \\ &= (7! + 6) \times 4 + 4! \times 3!!.. \end{aligned}$$

$$\begin{aligned} 37805 &= -3 + 7! + 8^{05} \\ &= 5 \times (0! + (8! + 7!)/3!) \\ &= 0 \times 3 + 5^7 - 8! \\ &= -8 \times 7! + 5^{31+0!}. \end{aligned}$$

$$\begin{aligned} 38664 &= (3! + 8 \times 6) \times (6! - 4) \\ &= (-4 + 6!) \times (6 \times 8 + 3!) \\ &= -3! \times 46 \times 6 + 8! \\ &= (8 \times 6 + 6) \times (-4 + 3!!).. \end{aligned}$$

$$\begin{aligned} 38736 &= -(3 + 8)!/7! + 3!^6 \\ &= 6! + 3!^7 - 8! \times 3! \\ &= (-33 \times 6 + 7!) \times 8 \\ &= 8 \times (7! - 6 \times 33). \end{aligned}$$

$$\begin{aligned} 38753 &= -3!! + 8! - 7 - 5! - 3!! \\ &= -3!! - 5! - 7 + 8! - 3!! \\ &= -3!! - 3!! - 5! - 7 + 8! \\ &= 8! - 7 - 5! - 3!! - 3!!.. \end{aligned}$$

$$\begin{aligned} 38755 &= -3!! + 8! - 7 \times 5! - 5 \\ &= -5 - 5! \times 7 + 8! - 3!! \\ &= -3!! - 5 - 5! \times 7 + 8! \\ &= 8! - 7 \times 5! - 5 - 3!!.. \end{aligned}$$

$$\begin{aligned} 38799 &= -3^8 + 7! + 9!/9 \\ &= -9 + 9 \times (7! - 8 - 3!!) \\ &= (-3!! + 7! - 8) \times 9 - 9 \\ &= -9 + 9 \times (-8 + 7! - 3!!).. \end{aligned}$$

$$\begin{aligned} 38832 &= -2 \times 3!! + 8! - 8 \times 3! \\ &= -3! \times 8 + 8! - 3!! \times 2 \\ &= -2 \times (3!! + 3 \times 8) + 8! \\ &= 8! - (8 \times 3 + 3!!) \times 2. \end{aligned}$$

$$\begin{aligned} 38864 &= -3!! + 8! + 8 - 6! - 4! \\ &= -4! - 6! + 8 + 8! - 3!! \\ &= -3!! - 4! - 6! + 8 + 8! \\ &= 8! + (8 + 6!) \times (4 - 3!). \end{aligned}$$

$$\begin{aligned} 38866 &= -3!! + 8! - 8 - 6! - 6 \\ &= -6! - 6! - 8 + 8! - 3!! \\ &= -3!! - 6! - 6 - 8 + 8! \\ &= 8! - 8 - 6 - 6! - 3!!.. \end{aligned}$$

$$\begin{aligned} 38889 &= (-3!! + (8 + 8!)/8) \times 9 \\ &= 9 \times ((8 + 8!)/8 - 3!!).. \end{aligned}$$

$$\begin{aligned} 39339 &= (3! \times 9^3 - 3) \times 9 \\ &= -9 \times (3 - 3! \times 9^3) \\ &= (-3 + 3! \times (3!! + 9)) \times 9 \\ &= 9 \times (9^3 \times 3! - 3).. \end{aligned}$$

$$\begin{aligned} 39363 &= 3^6 \times 3! \times 9 - 3 \\ &= 3^9/3 \times 6 - 3 \\ &= -3 + 3! \times 3^6 \times 9 \\ &= 9 \times 6 \times 3^{31} - 3.. \end{aligned}$$

$$\begin{aligned} 39366 &= 3^9 \times (3 - 6/6) \\ &= 6 \times (6 - 3)^9/3 \\ &= 3! \times (3 - 6)^6 \times 9 \\ &= 9 \times 6 \times (6 - 3)^{31}. \end{aligned}$$

$$\begin{aligned} 39369 &= 3 + 9^3 \times 6 \times 9 \\ &= (9 + 6 \times 3^9)/3 \\ &= 3 + 3! \times (6! + 9) \times 9 \\ &= 9 \times (9 + 6!) \times 3! + 3.. \end{aligned}$$

$$\begin{aligned} 39369 &= 3 + 9^3 \times 6 \times 9 \\ &= (9 + 6 \times 3^9)/3 \\ &= 3 + 3! \times (6! + 9) \times 9 \\ &= 9 \times (9 + 6!) \times 3! + 3.. \end{aligned}$$

$$\begin{aligned} 39456 &= (3!! \times 9 - 4! + 5!) \times 6 \\ &= 6 \times (5! - 4! + 9 \times 3!!) \\ &= 3! \times (-4! + 5! + 6! \times 9) \\ &= (9 \times 6! + 5! - 4!) \times 3!. \end{aligned}$$

$$\begin{aligned} 39588 &= -3 - 9^{-5+8} + 8! \\ &= 8! - 8 + 5 - 9^3 \\ &= -3!! + (5 - 8 + 8! - 9) \\ &= -9 - 8 + 8! + 5 - 3!!.. \end{aligned}$$

$\begin{aligned} 39600 &= 3!! \times (9 \times 6 + 0!) + 0 \\ &= 0 + (0! + 6 \times 9) \times 3!! \\ &= (0! + 0! + 3!)! - (-6 + 9)!! \\ &= -(9 - 6)!! + (3! + 0! + 0!)!. \end{aligned}$	$\begin{aligned} 40248 &= (-4 + 0!) \times 24 + 8! \\ &= (8!/4! - 2 - 0!) \times 4! \\ &= -02 \times 4! - 4! + 8! \\ &= 8! + 4! \times (-4 + 2^0). \end{aligned}$	$\begin{aligned} 40314 &= -(4 - 0!)! + (3 + 1 + 4)! \\ &= -(4 - 1)! + (3 + 0! + 4)! \\ &= -01 \times 3! + (4 + 4)! \\ &= (4 + 4)! - (3 - 1 + 0!)!. \end{aligned}$
$\begin{aligned} 39608 &= 3!! \times (9 \times 6 + 0!) + 8 \\ &= 8 + (0! + 6 \times 9) \times 3!! \\ &= -0! - (-3 + 6)!! + 8! + 9 \\ &= 9 + 8! - (6 - 3)!! - 0!. \end{aligned}$	$\begin{aligned} 40278 &= -40 - 2 + 7! \times 8 \\ &= 8! - 7 \times (2 + 0 + 4) \\ &= -(02 + 4) \times 7 + 8! \\ &= 8 \times 7! - 42 \times 0!. \end{aligned}$	$\begin{aligned} 40315 &= (40/(3! - 1))! - 5 \\ &= -5 + (13 - 0! - 4)! \\ &= (-0! + 13 - 4)! - 5 \\ &= -5 + (4 \times (3 - 1))! \times 0!. \end{aligned}$
$\begin{aligned} 39624 &= -(-3 + 9)! + (6 + 2)! + 4! \\ &= 4! + (2 + 6)! - (9 - 3)! \\ &= (2^3)! + 4! - (-6 + 9)!! \\ &= -(9 - 6)!! + 4! + (3! + 2)!. \end{aligned}$	$\begin{aligned} 40284 &= -4!/02 + 8! - 4! \\ &= -4 + 8! - 2^{0!+4} \\ &= (-0! - 2 \times 4) \times 4 + 8! \\ &= 8! - 4 \times 4 - 20. \end{aligned}$	$\begin{aligned} 40317 &= 4 \times 0 - 3 + (1 + 7)! \\ &= (7 + 1)! - 3 + 0 \times 4 \\ &= (0! + 1 + 3!)! + 4 - 7 \\ &= 7 + (4!/3)! - 10. \end{aligned}$
$\begin{aligned} 39636 &= 3!! + (9 \times 6! + 3!) \times 6 \\ &= 6 \times (3! + 6! \times 9) + 3!! \\ &= 3!! + 3! \times (6 + 6! \times 9) \\ &= (9 \times 6! + 6) \times 3! + 3!!. \end{aligned}$	$\begin{aligned} 40285 &= -4! - (0! + 2)! + 8! - 5 \\ &= 8! + 5 \times (-4 \times 2 + 0!) \\ &= (0! - 2 \times 4) \times 5 + 8! \\ &= -5 + 8! - (2 + 0!)! - 4!. \end{aligned}$	$\begin{aligned} 40318 &= 4 \times 0 - 3 + 1 + 8! \\ &= 8! - 1 + 3 + 0 - 4 \\ &= -0! - 1^3 4 + 8! \\ &= 8! - 4 \times 3 + 10. \end{aligned}$
$\begin{aligned} 39744 &= (3! + 9 \times 7) \times 4! \times 4! \\ &= 4! \times 4! \times (7 \times 9 + 3!) \\ &= (-3!! + 4 \times 4! + 7!) \times 9 \\ &= 9 \times (7! + 4 \times 4! - 3!!). \end{aligned}$	$\begin{aligned} 40287 &= -4! - 02 + 8! - 7 \\ &= -7 + 8! - 2 - 04! \\ &= -02 - 4! - 7 + 8! \\ &= 8! - 7 - 4! - 2 \times 0!. \end{aligned}$	$\begin{aligned} 40320 &= (40 - 32)! + 0 \\ &= 0 + ((2 + 30)/4)! \\ &= ((0! + (0 \times 23)!) \times 4)! \\ &= (4!/3)! + 20 \times 0. \end{aligned}$
$\begin{aligned} 39754 &= -3! + (9! - 7!)/(5 + 4) \\ &= ((4 + 5)! - 7!)/9 - 3! \\ &= -3! + ((4 + 5)! - 7!)/9 \\ &= (9! - 7!)/(5 + 4) - 3!. \end{aligned}$	$\begin{aligned} 40288 &= 4 \times (0 \times 2 - 8) + 8! \\ &= 8! - 8 - 20 - 4 \\ &= -024 - 8 + 8! \\ &= 8! - 8 - 4 - 20. \end{aligned}$	$\begin{aligned} 40321 &= (40 - 32)! + 1 \\ &= 1 + ((2 + 30)/4)! \\ &= ((0! + (0 \times 23)!) \times 4)! \\ &= (4!/3)! + 20 \times 0 \\ &= 0! + (12/3 + 4)! \\ &= 4 - 3 + (-2 + 10)!. \end{aligned}$
$\begin{aligned} 39763 &= ((3 + 6)! - 7!)/9 + 3 \\ &= 3 + (9! - 7!)/(6 + 3) \\ &= 3 + ((3 + 6)! - 7!)/9 \\ &= (9! - 7!)/(6 + 3) + 3. \end{aligned}$	$\begin{aligned} 40289 &= -4! + 02 + 8! - 9 \\ &= -9 + 8! + 2 - 04! \\ &= 02 - 4! + 8! - 9 \\ &= -9 + 8! - 4! + 2 \times 0!. \end{aligned}$	$\begin{aligned} 40322 &= (40 - 32)! + 2 \\ &= 2 + ((2 + 30)/4)! \\ &= -02 + (2^3)! + 4 \\ &= (-4! + 32)! + 2 \times 0!. \end{aligned}$
$\begin{aligned} 40128 &= (-4! + (0! + (1 + 2)!!)) \times 8 \\ &= 8! + (2 - 10) \times 4! \\ &= ((0! + (1 + 2)!!)! - 4!) \times 8 \\ &= 8! + 4! \times (2 - 10). \end{aligned}$	$\begin{aligned} 40295 &= -4! - 0! + (2 \times (9 - 5))! \\ &= ((9 - 6) \times 2)! - 0! - 4! \\ &= -0! + (2 \times 4)! - (-5 + 9)! \\ &= -(9 - 5)! + (4 \times 2)! - 0!. \end{aligned}$	$\begin{aligned} 40323 &= (40 - 32)! + 3 \\ &= 3 + ((2 + 30)/4)! \\ &= -0! + (2 + 3 + 3)! + 4 \\ &= (4!/3)! + 3 + 2 \times 0. \end{aligned}$
$\begin{aligned} 40199 &= -(4 + 0!)! - 1 + 9!/9 \\ &= 9!/9 - 1 - (0! + 4)! \\ &= -0! - (1 + 4)! + 9!/9 \\ &= 9!/9 - (4 + 1)! - 0!. \end{aligned}$	$\begin{aligned} 40299 &= -4! + 0! + 2 + 9!/9 \\ &= 9!/9 + 2 + 0! - 4! \\ &= 0! + 2 - 4! + 9!/9 \\ &= 9!/9 - 4! + 2 + 0!. \end{aligned}$	$\begin{aligned} 40332 &= 4 \times (0 + 3) + (3! + 2)! \\ &= (2^3)! + 3 \times (0 + 4) \\ &= (02^3)! + 3 \times 4 \\ &= 4 \times 3 + (3! + 2 \times 0!)!. \end{aligned}$
$\begin{aligned} 40228 &= -4 \times (0! + 22) + 8! \\ &= 8! - (22 + 0!) \times 4 \\ &= -(0! + 22) \times 4 + 8! \\ &= 8! - 4 \times (22 + 0!). \end{aligned}$	$\begin{aligned} 40308 &= 4 \times (0 - 3) - 0 + 8! \\ &= 8! + 0 + 3 \times (0 - 4) \\ &= -003 \times 4 + 8! \\ &= 8! - 4 \times 3 \times 0! \times 0!. \end{aligned}$	$\begin{aligned} 40337 &= 4! + (-0! + 3 \times 3)! - 7 \\ &= -7 + (3 \times 3 - 0!)! + 4! \\ &= (-0! + 3 \times 3)! + 4! - 7 \\ &= -7 + 4! + (3 \times 3 - 0!)!. \end{aligned}$

$$\begin{aligned} 40338 &= (4 + 0!) \times 3 + (3 + 8!) \\ &= 8! + 3! + 3 \times 04 \\ &= -03 - 3 + 4! + 8! \\ &= 8! - 4 \times 3 + 30. \end{aligned}$$

$$\begin{aligned} 40342 &= 4! + 0! - 3 + (4 \times 2)! \\ &= (2 \times 4)! - 3 + 0! + 4! \\ &= -0! + 23 + (4 + 4)! \\ &= 4! + (4!/3)! - 2 \times 0!. \end{aligned}$$

$$\begin{aligned} 40343 &= 4! - 0! + ((3! - 4)^3)! \\ &= ((3! - 4)^3)! - 0! + 4! \\ &= -0! + (3! + 3! - 4)! + 4! \\ &= 4! + (4!/3)! - (3 \times 0)!.. \end{aligned}$$

$$\begin{aligned} 40344 &= 4! - 0/3 + (4 + 4)! \\ &= (4 + 4)! + 3! \times (0 + 4) \\ &= (03 \times 4 - 4)! + 4! \\ &= (4 + 4)! + 4 \times 3! \times 0!. \end{aligned}$$

$$\begin{aligned} 40348 &= 40 - 3 \times 4 + 8! \\ &= 8! + (4 + 3) \times 04 \\ &= (03 + 4) \times 4 + 8! \\ &= 8! + 4 \times (4 + 3 \times 0!). \end{aligned}$$

$$\begin{aligned} 40358 &= 40 + 3 - 5 + 8! \\ &= 8! + 5 \times 3 - 0! + 4! \\ &= -0! + 34 + 5 + 8! \\ &= 8! - 5 + 43 \times 0!. \end{aligned}$$

$$\begin{aligned} 40368 &= ((4 - 0 + 3)! + 6) \times 8 \\ &= 8 \times (6 + (3 + 0 + 4)!) \\ &= -0! + 3 + 46 + 8! \\ &= 8! + 6 + 43 - 0!. \end{aligned}$$

$$\begin{aligned} 40383 &= -3! + 8! + 3 \times (-0! + 4!) \\ &= (4! - 0!) \times 3 + 8! - 3! \\ &= 03 \times (-3 + 4!) + 8! \\ &= 8! + 4^3 - (3 \times 0)!.. \end{aligned}$$

$$\begin{aligned} 40386 &= 4! \times 03 + 8! - 6 \\ &= -6 + 8! + 3 \times 04! \\ &= 03 \times 4! - 6 + 8! \\ &= 8! + 64 + 3 - 0!. \end{aligned}$$

$$\begin{aligned} 40408 &= 4 \times (-0! + 4! - 0!) + 8! \\ &= 8! + (-0! + 4! - 0!) \times 4 \\ &= (0! + 0!) \times 44 + 8! \\ &= 8! + 44 \times (0! + 0!). \end{aligned}$$

$$\begin{aligned} 40428 &= (4 \times (0! + (4! + 2))) + 8! \\ &= 8! + (2 + 4! + 0!) \times 4 \\ &= (0! + 2 + 4!) \times 4 + 8! \\ &= 8! + 4 \times (4! + 2 + 0!). \end{aligned}$$

$$\begin{aligned} 40440 &= (4 + 0 + 4)! + (4 + 0!)! \\ &= 0 + (4 + 4)! + (0! + 4)! \\ &= ((0 \times 0)! + 4)! + (4 + 4)! \\ &= (4 + 4)! + (4 \times 0! + 0!)!. \end{aligned}$$

$$\begin{aligned} 40441 &= (4 + 0!)! + (4 + 4)! + 1 \\ &= 1 + (4 + 4)! + (0! + 4)! \\ &= 0! + (1 + 4)! + (4 + 4)! \\ &= (4 + 4)! + (4 + 1)! + 0!. \end{aligned}$$

$$\begin{aligned} 40444 &= (4 + 0!)! + (4 + 4)! + 4 \\ &= 4 + (4 + 4)! + (0! + 4)! \\ &= (0! + 4)! + 4 + (4 + 4)! \\ &= 4 + (4 + 4)! + (4 + 0!)!. \end{aligned}$$

$$\begin{aligned} 40445 &= (4 + 0!)! + (4 + 4)! + 5 \\ &= 5 + (4 + 4)! + (0! + 4)! \\ &= 0! + 4 + (4 + 4)! + 5! \\ &= 5 + (4 + 4)! + (4 + 0!)!. \end{aligned}$$

$$\begin{aligned} 40446 &= (4 + 0!)! + (4 + 4)! + 6 \\ &= 6 + (4 + 4)! + (0! + 4)! \\ &= (0! + 4)! + (4 + 4)! + 6 \\ &= 6 + (4 + 4)! + (4 + 0!)!. \end{aligned}$$

$$\begin{aligned} 40447 &= (4 + 0!)! + (4 + 4)! + 7 \\ &= 7 + (4 + 4)! + (0! + 4)! \\ &= (0! + 4)! + (4 + 4)! + 7 \\ &= 7 + (4 + 4)! + (4 + 0!)!. \end{aligned}$$

$$\begin{aligned} 40448 &= (4 + 0!)! + (4 + 4)! + 8 \\ &= 8 + (4 + 4)! + (0! + 4)! \\ &= (0! + 4)! + 4 + 4 + 8! \\ &= 8 + (4 + 4)! + (4 + 0!)!. \end{aligned}$$

$$\begin{aligned} 40449 &= (4 + 0!)! + (4 + 4)! + 9 \\ &= 9 + (4 + 4)! + (0! + 4)! \\ &= (0! + 4)! + (4 + 4)! + 9 \\ &= 9 + (4 + 4)! + (4 + 0!)!. \end{aligned}$$

$$\begin{aligned} 40458 &= -(4 - 0!)! + 4! + 5! + 8! \\ &= 8! + 5! - (4 - 0!)! + 4! \\ &= -(-0! + 4)! + 4! + 5! + 8! \\ &= 8! + 5! + 4! - (4 - 0!)!. \end{aligned}$$

$$\begin{aligned} 40464 &= (4 - 0 + 4)! + 6 \times 4! \\ &= 4! \times 6 + (4 + 04)! \\ &= (04 + 4)! + 4! \times 6 \\ &= 6 \times 4! + (4 + 4 - 0)!. \end{aligned}$$

$$\begin{aligned} 40468 &= 4 - 0 + 4! \times 6 + 8! \\ &= 8! + 6 \times 4! + 04 \\ &= 04 + 4! \times 6 + 8! \\ &= 8! + 6 \times 4! + 4 \times 0!. \end{aligned}$$

$$\begin{aligned} 40584 &= (4 + 0!)! + 5! + 8! + 4! \\ &= 4! + 8! + 5! + (0! + 4)! \\ &= (0! + 4)! + 4! + 5! + 8! \\ &= 8! + 5! + 4! + (4 + 0!)!. \end{aligned}$$

$$\begin{aligned} 40585 &= 4! + 0! + 5! + 8! + 5! \\ &= 5! + 8! + 5! + 0! + 4! \\ &= 0! + 4! + 5! + 5! + 8! \\ &= 8! + 5 \times (54 - 0!). \end{aligned}$$

$$\begin{aligned} 40848 &= (4 - 0!)!! + 8! - 4! \times 8 \\ &= -8 \times 4! + 8! + (-0! + 4)!! \\ &= (-0! + 4)!! - 4! \times 8 + 8! \\ &= 8! - 8 \times 4! + (4 - 0!)!!. \end{aligned}$$

$$\begin{aligned} 41036 &= -4 + ((1 + 0!)^3)! + 6! \\ &= 6! + (3! + 0! + 1)! - 4 \\ &= (0! + 1 + 3)! - 4 + 6! \\ &= 6! - 4 + (3! + 1 + 0!)!. \end{aligned}$$

$$\begin{aligned} 41038 &= (4 - 1)!! + 0! - 3 + 8! \\ &= 8! + 3!! + 0! + 1 - 4 \\ &= 0! + 1 + 3!! - 4 + 8! \\ &= 8! - 4 + 3!! + 1 + 0!. \end{aligned}$$

$$\begin{aligned} 41064 &= (4 \times (1 + 0!)!! + 6! + 4! \\ &= 4! + 6! + ((0! + 1) \times 4)! \\ &= ((0! + 1) \times 4)! + 4! + 6! \\ &= 6! + 4! + (4 \times (1 + 0!)!!). \end{aligned}$$

$$\begin{aligned} 41448 &= -4! + 1 \times 4!^4 / 8 \\ &= 8! + 4! \times (4! - 1 + 4!) \\ &= -1 \times 4! + 4!^4 / 8 \\ &= 8! + 4! \times (4! + 4! - 1). \end{aligned}$$

$$\begin{aligned} 41448 &= -4! + 1 \times 4!^4 / 8 \\ &= 8! + 4! \times (4! - 1 + 4!) \\ &= -1 \times 4! + 4!^4 / 8 \\ &= 8! + 4! \times (4! + 4! - 1). \end{aligned}$$

$$\begin{aligned} 41472 &= 4! \times 1 \times 4! \times 72 \\ &= 2 \times (7 + 4 + 1)^4 \\ &= (1 + 2) \times 4!^{-4+7} \\ &= (7 - 4) \times 4!^{2+1}. \end{aligned}$$

$$\begin{aligned} 41616 &= (4 - 1)!^6 - (1 + 6)! \\ &= -(6 + 1)! + 6^{-1+4!} \\ &= -(11 - 4)! + 6^6 \\ &= 6^6 - (-4 + 11)!. \end{aligned}$$

$$\begin{aligned} 41617 &= (4 - 1)!^6 + 1 - 7! \\ &= -7! + 1 + 6^{-1+4!} \\ &= 1 + (-1 + 4)!^6 - 7! \\ &= -7! + 6^{4-1!} + 1. \end{aligned}$$

$$\begin{aligned} 42048 &= 4!^2 \times (-0! + 4) + 8! \\ &= 8! + 4! \times (0! + 2) \times 4! \\ &= (0! + 2) \times 4! \times 4! + 8! \\ &= 8! + 4! \times 4! \times (2 + 0!). \end{aligned}$$

$$\begin{aligned} 42336 &= (4 + 2)^{3!} - 3! \times 6! \\ &= 63 \times (3!! - 2 \times 4!) \\ &= (2^3)! + 3!^4 + 6! \\ &= 6^4 + 3!! + (3! + 2)!. \end{aligned}$$

$$\begin{aligned} 43188 &= (4 \times (3!! - 1) + 8!) - 8 \\ &= 8! - 8 + (-1 + 3!!) \times 4 \\ &= (-1 + 3!!) \times 4 - 8 + 8! \\ &= 8! - 8 + 4 \times (3!! - 1). \end{aligned}$$

$$\begin{aligned} 43199 &= 4 \times 3!! - 1 + 9!/9 \\ &= 9!/9 - 1 + 3!! \times 4 \\ &= -1 + 3!! \times 4 + 9!/9 \\ &= 9!/9 + 4 \times 3!! - 1. \end{aligned}$$

$$\begin{aligned} 43208 &= 4 \times (3!! + 2) - 0 + 8! \\ &= 8! + (0 + 2 + 3!!) \times 4 \\ &= (02 + 3!!) \times 4 + 8! \\ &= 8! + 4 \times (3!! + 2 \times 0!). \end{aligned}$$

$$\begin{aligned} 43584 &= ((4! + 3) \times 5! + 8!) + 4! \\ &= 4! + 8! + 5! \times (3 + 4!) \\ &= 34 \times (-4! + 5!) + 8! \\ &= 8! + 544 \times 3!. \end{aligned}$$

$$\begin{aligned} 43688 &= 4^{3!} - 6! + 8! - 8 \\ &= (8 + 8^6)/3! - 4 \\ &= -3!! + 4^6 - 8 + 8! \\ &= (8 + 8^6 - 4!)/3!. \end{aligned}$$

$$\begin{aligned} 44544 &= 4! \times 4 \times (5! - 4) \times 4 \\ &= 4! \times 4 \times (5! - 4) \times 4 \\ &= 4 \times 4 \times 4! \times (-4 + 5!) \\ &= (5! - 4) \times 4 \times 4 \times 4!. \end{aligned}$$

$$\begin{aligned} 44628 &= (4!/4) \times (6! - 2) + 8! \\ &= 8! - (2 - 6!) \times 4!/4 \\ &= (-2 + (4!/4)!) \times 6 + 8! \\ &= 8! + 6 \times ((4!/4)! - 2). \end{aligned}$$

$$\begin{aligned} 44637 &= (4 + 4)! - 6! - 3 + 7! \\ &= 7! - 3 - 6! + (4 + 4)! \\ &= -3 + (4 + 4)! - 6! + 7! \\ &= 7! - 6! + (4 + 4)! - 3. \end{aligned}$$

$$\begin{aligned} 44664 &= (4 + 4)! + 6 \times (6! + 4) \\ &= (4 + 6!) \times 6 + (4 + 4)! \\ &= 4! + (4 + 4)! + 6 \times 6! \\ &= 6 \times (6! + 4) + (4 + 4)!. \end{aligned}$$

$$\begin{aligned} 44668 &= 4! + 4 + 6 \times 6! + 8! \\ &= 8! + 6 \times 6! + 4 + 4!. \end{aligned}$$

$$\begin{aligned} 44688 &= 4!/4 \times (6! + 8) + 8! \\ &= 8! + (8 + 6!) \times 4!/4. \end{aligned}$$

$$\begin{aligned} 44782 &= -4! \times 4! + 7! + 8! - 2 \\ &= -2 + 8! + 7! - 4! \times 4! \\ &= -2! - 4! \times 4! + 7! + 8! \\ &= 8! + 7! - 4! \times 4! - 2. \end{aligned}$$

$$\begin{aligned} 44928 &= 4^4 \times 9 \times 2 + 8! \\ &= 8! + 2 \times 9 \times 4^4 \\ &= (2 + 4!) \times 4! \times 8 \times 9 \\ &= 9 \times 8 \times 4! \times (4! + 2). \end{aligned}$$

$$\begin{aligned} 45297 &= (4 + 5) \times (2 - 9 + 7!) \\ &= (7! - 9 + 2) \times (5 + 4) \\ &= (2 - 4 - 5 + 7!) \times 9 \\ &= 9 \times (7! - 5 - 4 + 2). \end{aligned}$$

$$\begin{aligned} 45342 &= (4 + 5) \times ((3 + 4)! - 2) \\ &= (-2 + (4 + 3)!) \times (5 + 4) \\ &= (-2 + (3 + 4)!) \times (4 + 5) \\ &= (5 + 4) \times ((4 + 3)! - 2). \end{aligned}$$

$$\begin{aligned} 45379 &= 4 + 5 \times 3 + 7! \times 9 \\ &= 9 \times 7! + 3 \times 5 + 4 \\ &= 3! \times 4 - 5 + 7! \times 9 \\ &= 9 \times (7! - 5) + 4^3. \end{aligned}$$

$$\begin{aligned} 45384 &= (4! - 5 \times 3)!/8 + 4! \\ &= 4! + 8! + (3! + 5 - 4)! \\ &= 3! \times 4 + (4 + 5)!/8 \\ &= (85 - 4!) \times (4! + 3!!). \end{aligned}$$

$$\begin{aligned} 45387 &= (4 + 5) \times 3 + 8! + 7! \\ &= 7! + 8! + 3 \times (5 + 4) \\ &= 3 \times (4 + 5) + 7! + 8! \\ &= 8! + 7! + (5 + 4) \times 3. \end{aligned}$$

$$\begin{aligned} 45679 &= 4 + (5 + 6!) \times 7 \times 9 \\ &= 9 \times 7 \times (6! + 5) + 4. \end{aligned}$$

$$\begin{aligned} 45837 &= 4 \times 5! + 8! - 3 + 7! \\ &= 7! - 3 + 8! + 5! \times 4 \\ &= -3 + 4 \times 5! + 7! + 8! \\ &= 8! + 7! + 5! \times 4 - 3. \end{aligned}$$

$$\begin{aligned} 45888 &= 4! \times (5! \times (8 + 8) - 8) \\ &= (-8 + (8 + 8) \times 5!) \times 4!. \end{aligned}$$

$$\begin{aligned} 45936 &= (45 - 9)^3 - 6! \\ &= -6! + 3!^{(9-5)!/4} \\ &= (3!! - 4!) \times (5! - 6 \times 9) \\ &= (-9 \times 6 + 5!) \times (-4! + 3!!). \end{aligned}$$

$$\begin{aligned} 46288 &= (4! + 6! + 2) \times 8 + 8! \\ &= 8! + 8 \times (2 + 6! + 4!) \\ &= (2 + 4! + 6! \times 8) \times 8 \\ &= 8! + 8 \times (6! + 4! + 2). \end{aligned}$$

$$\begin{aligned} 46536 &= -4 \times 6 \times 5 + 3!^6 \\ &= 6^{3!} - 5 \times 6 \times 4 \\ &= (3 - 4) \times 5! + 6^6 \\ &= 6^6 - (-5 + 4 + 3!!). \end{aligned}$$

$$\begin{aligned} 46566 &= (-4! + 6) \times 5 + 6^6 \\ &= 6^6 + 5 \times (6 - 4!) \\ &= 4! - 5! + 6 + 6^6 \\ &= 6^6 + 6 - 5! + 4!. \end{aligned}$$

$$\begin{aligned} 46624 &= -4! + 6^6 - 2 \times 4 \\ &= -4 \times 2 + 6^6 - 4! \\ &= -2 \times 4 \times 4 + 6^6 \\ &= 6^6 - 4 \times 4 \times 2. \end{aligned}$$

$$\begin{aligned} 46625 &= -4! + 6^6 - 2 - 5 \\ &= -5 - 2 + 6^6 - 4! \\ &= -2 - 4! - 5 + 6^6 \\ &= 6^6 - 5 - 4! - 2. \end{aligned}$$

$$\begin{aligned} 46627 &= -4! + 6^6 + 2 - 7 \\ &= -7 + 2 + 6^6 - 4! \\ &= 2 - 4! + 6^6 - 7 \\ &= -7 + 6^6 - 4! + 2. \end{aligned}$$

$$\begin{aligned} 46631 &= -4! + (6 \times 6)^3 - 1 \\ &= -1^3 + 6^6 - 4! \\ &= -1^3 - 4! + 6^6 \\ &= 6^6 - 4 \times 3! - 1. \end{aligned}$$

$$\begin{aligned} 46632 &= -4 \times 6 + 6^{3 \times 2} \\ &= (2 \times 3)^6 - 6 \times 4 \\ &= (2 - 3) \times 4! + 6^6 \\ &= 6^6 - 4! \times (3 - 2). \end{aligned}$$

$$\begin{aligned} 46633 &= 4 + 6^6 - 3^3 \\ &= 3/3 + 6^6 - 4! \\ &= (-3 + 3)! - 4! + 6^6 \\ &= 6^6 - 4! + (-3 + 3)! . \end{aligned}$$

$$\begin{aligned} 46634 &= -4 + 6^6 + 3! - 4! \\ &= -4 + 3! + 6^6 - 4! \\ &= -3! - 4 \times 4 + 6^6 \\ &= 6^6 - 4 \times 4 - 3!. \end{aligned}$$

$$\begin{aligned} 46638 &= -4 - 6 + 6^{3!} - 8 \\ &= -8 - 3! + 6^6 - 4 \\ &= -3! - 4 + 6^6 - 8 \\ &= -8 + 6^6 - 4 - 3!. \end{aligned}$$

$$\begin{aligned} 46644 &= -4 \times 4 + 6^6 + 4 \\ &= 4 + 6^6 - 4 \times 4 \\ &= -4 \times 4 + 4 + 6^6 \\ &= 6^6 - 4 \times 4 + 4. \end{aligned}$$

$$\begin{aligned} 46648 &= 4 \times 6^6 / 4 - 8 \\ &= -8 + 4 + 6^6 - 4 \\ &= 4 - 4 + 6^6 - 8 \\ &= 8 + 6^6 - 4 \times 4. \end{aligned}$$

$$\begin{aligned} 46651 &= -4 + 6 \times 6^5 - 1 \\ &= -1^5 + 6^6 - 4 \\ &= 1^4 \times (5 + 6^6) \\ &= 6 \times 6^5 - 4 - 1. \end{aligned}$$

$$\begin{aligned} 46653 &= -4 + 6^6 - 5 + 3! \\ &= 3! - 5 + 6^6 - 4 \\ &= 3 \times (4 - 5) + 6^6 \\ &= 6^6 \times (5 - 4) - 3. \end{aligned}$$

$$\begin{aligned} 46655 &= 4 + 6 \times 6^5 - 5 \\ &= -5 \times 5 + 6^6 + 4! \\ &= (4 - 5)^5 + 6^6 \\ &= 6 \times 6^5 - 5 + 4. \end{aligned}$$

$$\begin{aligned} 46656 &= ((4 \times 6 + 6)/5)^6 \\ &= 6^{5 \times 6 - 6 \times 4} \\ &= (-4 + 5)^6 \times 6^6 \\ &= 6^6 \times (6 - 5)^4. \end{aligned}$$

$$\begin{aligned} 46667 &= 4! + 6^6 - 6 - 7 \\ &= -7 - 6 + 6^6 + 4!. \end{aligned}$$

$$\begin{aligned} 46673 &= 4 + 6^6 + 7 + 3! \\ &= 3 \times 7 + 6^6 - 4 \\ &= 3! + 4 + 6^6 + 7 \\ &= 7 + 6^6 + 4 + 3!. \end{aligned}$$

$$\begin{aligned} 46684 &= -4 + 6^6 + 8 \times 4 \\ &= 4 \times 8 + 6^6 - 4 \\ &= 4! - 4 + 6^6 + 8 \\ &= 8 + 6^6 - 4 + 4!. \end{aligned}$$

$$\begin{aligned} 46690 &= 4! + 6^6 + 9 + 0! \\ &= 0! + 9 + 6^6 + 4 \\ &= 0! + 4! + 6^6 + 9 \\ &= 9 + 6^6 + 4! + 0!. \end{aligned}$$

$$\begin{aligned} 46796 &= -4 + 6! + 7! \times 9 + 6! \\ &= 6! + 9 \times 7! + 6! - 4 \\ &= -4 + 6! + 6! + 7! \times 9 \\ &= 9 \times 7! + 6! + 6! - 4. \end{aligned}$$

$$\begin{aligned} 48969 &= 4 \times (8 + 9) \times 6! + 9 \\ &= 9 + 6! \times (9 \times 8 - 4) \\ &= 4 \times 6! \times (8 + 9) + 9 \\ &= 9 + (9 + 8) \times 6! \times 4. \end{aligned}$$

$$\begin{aligned} 50688 &= ((5 + 0!)^6 - 8!) \times 8 \\ &= 8 \times (-8! + 6^{0!+5}) \\ &= ((0! + 5)^6 - 8!) \times 8 \\ &= 8 \times (-8! + 6^{(5+0!)}) . \end{aligned}$$

$$\begin{aligned} 50769 &= (-5! + 0! + 7! + 6!) \times 9 \\ &= 9 \times (6! + 7! + 0! - 5!) \\ &= (0! - 5! + 6! + 7!) \times 9 \\ &= 9 \times (7! + 6! - 5! + 0!). \end{aligned}$$

$$\begin{aligned} 53658 &= (5! - 3) \times (-6 + 5!) + 8! \\ &= 8! + (5! - 6) \times (-3 + 5!) \\ &= (-3 + 5!) \times (5! - 6) + 8! \\ &= 8! - (6 - 5!) \times (5! - 3). \end{aligned}$$

$$\begin{aligned} 55296 &= (5!/5)^2 \times 96 \\ &= 6 \times 9 \times 2^{5+5} \\ &= 2^{5+5} \times 6 \times 9 \\ &= 96 \times (5!/5)^2. \end{aligned}$$

$$\begin{aligned} 56448 &= (5! + 6) \times 448 \\ &= 8! \times (4/4 + 6)/5 \\ &= ((4!/4)^5 - 6!) \times 8 \\ &= 8 \times (6^5 - (4!/4)!). \end{aligned}$$

$$\begin{aligned} 56544 &= (5! - 6) \times (5! + 4) \times 4 \\ &= 4 \times (4 + 5!) \times (-6 + 5!) \\ &= 4 \times (4 + 5!) \times (5! - 6) \\ &= (-6 + 5!) \times (5! + 4) \times 4. \end{aligned}$$

$$\begin{aligned} 56544 &= (5! - 6) \times (5! + 4) \times 4 \\ &= 4 \times (4 + 5!) \times (-6 + 5!) \\ &= 4 \times (4 + 5!) \times (5! - 6) \\ &= (-6 + 5!) \times (5! + 4) \times 4. \end{aligned}$$

$$\begin{aligned} 57600 &= 5 \times (7! + 6!) \times (0! + 0!) \\ &= (0! + 0!) \times (6! + 7!) \times 5 \\ &= (0! + 0!) \times 5 \times (6! + 7!) \\ &= (7! + 6!) \times 5 \times (0! + 0!). \end{aligned}$$

$$\begin{aligned} 57648 &= (-5 + 7 + 6!) \times 4! + 8! \\ &= 8! + 4! \times (6! + 7 - 5) \\ &= 4! \times (-5 + 6! + 7) + 8! \\ &= 8! + (7 + 6! - 5) \times 4!. \end{aligned}$$

$$\begin{aligned} 59755 &= -5 + 9 \times 7! + 5! \times 5! \\ &= 5! \times 5! + 7! \times 9 - 5 \\ &= 5! \times 5! - 5 + 7! \times 9 \\ &= 9 \times 7! - 5 + 5! \times 5!. \end{aligned}$$

$$\begin{aligned} 60473 &= -6 - 0! + 4 \times 7! \times 3 \\ &= 3 \times 7! \times 4 - 0! - 6 \\ &= (-0! + 3 \times 4 \times 6!) \times 7 \\ &= 7 \times (6! \times 4 \times 3 - 0!). \end{aligned}$$

$$\begin{aligned} 60487 &= (6 + 0!)! \times (4 + 8) + 7 \\ &= 7 + 84 \times (0 + 6!) \\ &= (0! + 4 \times 6!) \times 7 + 8! \\ &= 8! + 7 \times (6! \times 4 + 0!). \end{aligned}$$

$$\begin{aligned} 64776 &= (6! - 4 + 7! + 7!) \times 6 \\ &= (6! + 7! + 7! - 4) \times 6 \\ &= -4! - 6! + (6 + 7) \times 7! \\ &= 7! \times (7 + 6) - 6! - 4!. \end{aligned}$$

$$\begin{aligned} 65544 &= 6! \times (5! - 5 - 4!) + 4! \\ &= 4! + (-4! - 5 + 5!) \times 6! \\ &= 4! - (4! + 5 - 5!) \times 6! \\ &= 6! \times (5! - 5 - 4!) + 4!. \end{aligned}$$

$$\begin{aligned} 65664 &= 6! \times 5! - (6 + 6)^4 \\ &= (-4! \times 6 + 6!) \times (5! - 6) \\ &= (-4! + 5!) \times (-6 \times 6 + 6!) \\ &= (-6 \times 6 + 6!) \times (5! - 4!). \end{aligned}$$

$$\begin{aligned} 66784 &= 6^6 + (7! - 8) \times 4 \\ &= 4 \times (-8 + 7!) + 6^6 \\ &= (3!! + 4) \times 6 \times 6 + 8! \\ &= 8! + 6 \times 6 \times (4 + 3!!). \end{aligned}$$

$$\begin{aligned} 69255 &= (6! + 9) \times (-25 + 5!) \\ &= (5! - 5^2) \times (9 + 6!) \\ &= (-25 + 5!) \times (6! + 9) \\ &= (9 + 6!) \times (5! - 5^2). \end{aligned}$$

$$\begin{aligned} 69777 &= -6! + (-9 + 7! + 7!) \times 7 \\ &= 7 \times (7! + 7! - 9) - 6! \\ &= -6! + 7 \times (7! + 7! - 9) \\ &= (-9 + 7! + 7!) \times 7 - 6!. \end{aligned}$$

$$\begin{aligned} 69966 &= -6! + 99 \times (6! - 6) \\ &= (6! - 6) \times 99 - 6! \\ &= -6! + (-6 + 6!) \times 99 \\ &= 99 \times (6! - 6) - 6!. \end{aligned}$$

$$\begin{aligned} 73389 &= (7! - 3 - 3!!) \times (8 + 9) \\ &= -(9 + 8) \times (3!! + 3 - 7!) \\ &= (-3!! - 3 + 7!) \times (8 + 9) \\ &= (9 + 8) \times (7! - 3 - 3!!). \end{aligned}$$

$$\begin{aligned} 73464 &= (-7! + 3!! \times 4!) \times 6 + 4! \\ &= 4! + 6 \times (4! \times 3!! - 7!) \\ &= 3! \times (4 + 4! \times 6! - 7!) \\ &= (-7! + 6! \times 4! + 4) \times 3!. \end{aligned}$$

$$\begin{aligned} 74431 &= 7^4 \times (4! + 3! + 1) \\ &= (1 + 3!)^4 \times (4! + 7). \end{aligned}$$

$$\begin{aligned} 74688 &= (7! - 4! - 6!) \times 8 + 8! \\ &= 8! - 8 \times (6! + 4! - 7!) \\ &= (-4! - 6! + 7!) \times 8 + 8! \\ &= 8! + 8 \times (7! - 6! - 4!). \end{aligned}$$

$$\begin{aligned} 75525 &= (7! - 5) \times (5 - 2) \times 5 \\ &= 5 \times (-2 + 5) \times (-5 + 7!) \\ &= (-2 + 5) \times 5 \times (-5 + 7!) \\ &= (7! - 5) \times 5 \times (5 - 2). \end{aligned}$$

$$\begin{aligned} 75543 &= (7! \times 5 + 5 - 4!) \times 3 \\ &= 3 \times (-4! + 5 + 5 \times 7!). \end{aligned}$$

$$\begin{aligned} 75565 &= (-7 + 5! \times (5! + 6)) \times 5 \\ &= 5 \times ((6 + 5!) \times 5! - 7) \\ &= 5 \times (5! \times 5! + 6! - 7) \\ &= (-7 + (6 + 5!) \times 5!) \times 5. \end{aligned}$$

$$\begin{aligned} 76356 &= -7! + (6! - 3!) \times (5! - 6) \\ &= (-6 + 5!) \times (-3! + 6!) - 7! \\ &= (-3! + 5!) \times (-6 + 6!) - 7! \\ &= -7! + (-6 + 6!) \times (5! - 3!). \end{aligned}$$

$$\begin{aligned} 77634 &= (-7 + 7! - 6!) \times (-3! + 4!) \\ &= (4! - 3!) \times (-6! - 7 + 7!) \\ &= (-3! + 4!) \times (-6! - 7 + 7!) \\ &= (7! - 7 - 6!) \times (4! - 3!). \end{aligned}$$

$$\begin{aligned} 80400 &= (8! - (0! + 4!)) \times (0! + 0!) \\ &= (0! + 0!)! \times (-(4 + 0!)! + 8!) \\ &= (0! + 0!)! \times (-(0! + 4)! + 8!) \\ &= (8! - (4 + 0!)!) \times (0! + 0!). \end{aligned}$$

$$\begin{aligned} 80518 &= 8! - 0! - 5! - 1 + 8! \\ &= (8! - 1 - (5! + 0!)) + 8! \\ &= -0! - 1 - 5! + 8! + 8! \\ &= 8! + 8! - 5! - 1 - 0!. \end{aligned}$$

$$\begin{aligned} 80622 &= (8! - 0! - 6 - 2) \times 2 \\ &= 2 \times ((2 + 6)! - 0! - 8) \\ &= -(0! + 2)! + 2 \times (-6 + 8!) \\ &= (8! - 6) \times 2 - (2 + 0)!.. \end{aligned}$$

$$\begin{aligned} 80623 &= (8! - 0! - 6) \times 2 - 3 \\ &= -3 + 2 \times (-6 - 0! + 8!) \\ &= 0! + 2 \times (-3 - 6 + 8!) \\ &= (8! - 6 - 3) \times 2 + 0!. \end{aligned}$$

$$\begin{aligned} 80623 &= (8! - 0! - 6) \times 2 - 3 \\ &= -3 + 2 \times (-6 - 0! + 8!) \\ &= 0! + 2 \times (-3 - 6 + 8!) \\ &= (8! - 6 - 3) \times 2 + 0!. \end{aligned}$$

$$\begin{aligned} 80628 &= 8! + 0 - 6 \times 2 + 8! \\ &= 8! - 2 \times 6 - 0 + 8! \\ &= -02 \times 6 + 8! + 8! \\ &= 8! + 8! - 6 \times 2 \times 0!. \end{aligned}$$

$$\begin{aligned} 80634 &= (8! - 0!) \times 6/3 - 4 \\ &= (4!/3)! - 6 + 08! \\ &= -03! + (-4 + 6) \times 8! \\ &= 8! \times (6 - 4) - 3! \times 0!. \end{aligned}$$

$$\begin{aligned} 80635 &= (5 + 3)! - 6 + 0! + 8! \\ &= 8! \times (0 + 6/3) - 5 \\ &= 0! + (3 + 5)! - 6 + 8! \\ &= 8! - 6 + (5 + 3)! + 0!. \end{aligned}$$

$$\begin{aligned} 80635 &= 8! \times (0 + 6/3) - 5 \\ &= (5 + 3)! - 6 + 0! + 8! \\ &= 0! + (3 + 5)! - 6 + 8! \\ &= 8! - 6 + (5 + 3)! + 0!. \end{aligned}$$

$$\begin{aligned} 80638 &= 8! + 0! - 6 + 3 + 8! \\ &= 8! + 3 - 6 + 0! + 8! \\ &= 0! + 3 - 6 + 8! + 8! \\ &= 8! + 8! - 6 + 3 + 0!. \end{aligned}$$

$$\begin{aligned} 80638 &= 8! + 0 - 6/3 + 8! \\ &= 8! + 3 - 6 + 0! + 8! \\ &= 0! + 3 - 6 + 8! + 8! \\ &= 8! + 8! - 6/3 \times 0!. \end{aligned}$$

$$\begin{aligned} 80639 &= 8! - 0! + (6 + 3)!/9 \\ &= 9!/3 - (6 \times 0)! - 8! \\ &= -0! + 3 \times 6 \times 8!/9 \\ &= 9! \times 8/(6 \times 3!) - 0!. \end{aligned}$$

$$\begin{aligned} 80647 &= 8! \times (0 + 6 - 4) + 7 \\ &= 7 + (-4 + 6) \times (0 + 8!) \\ &= (0! + 4! \times 6!) \times 7 - 8! \\ &= -8! + 7 \times (6! \times 4! + 0!). \end{aligned}$$

$$\begin{aligned} 80652 &= (8! + (0/6)! + 5) \times 2 \\ &= 2 \times (5 + (6 \times 0)! + 8!) \\ &= (-0! - 2 + 5) \times (6 + 8!) \\ &= (8! + 6) \times ((5 - 2) - 0!). \end{aligned}$$

$$\begin{aligned} 80688 &= 8! + 8 \times 6 + 0 + 8! \\ &= 8 \times (0 + 6) + (8! + 8!) \\ &= 06 \times 8 + 8! + 8! \\ &= 8! + 8! + 8 \times 6 \times 0!. \end{aligned}$$

$$\begin{aligned} 81360 &= 8! \times (-1 + 3) + 6! + 0 \\ &= 0 + 6! + (3 - 1) \times 8! \\ &= (0! + 1 + 3!)! + 6! + 8! \\ &= 8! + 6! + (3! + 1 + 0!)!. \end{aligned}$$

$$\begin{aligned} 81384 &= 8! + (1 \times 3)!! + 8! + 4! \\ &= 4! + 8! + 3!! + 1 \times 8! \\ &= 1 \times 3!! + 4! + 8! + 8! \\ &= 8! + 8! + 4! \times 31. \end{aligned}$$

$$\begin{aligned} 82944 &= 8 \times 2 \times 9 \times 4! \times 4! \\ &= 4! \times 4! \times 9 \times 2 \times 8 \\ &= 2 \times 4! \times 4! \times 8 \times 9 \\ &= 9 \times 8 \times 4! \times 4 \times 2. \end{aligned}$$

$$\begin{aligned} 83157 &= -8 + (3! + 1)! + 5^7 \\ &= 7! + 5^{1+3!} - 8 \\ &= (1 + 3!)! + 5^7 - 8 \\ &= -8 + 7! + 5^{3!+1}. \end{aligned}$$

$$\begin{aligned} 83534 &= (-4! + 3!!) \times 5! + 3! + 8 \\ &= 8 + 3! + 5! \times (3!! - 4!) \\ &= 3! + 3!! \times (-4 + 5!) + 8 \\ &= 8 + (5! - 4) \times 3!! + 3!. \end{aligned}$$

$$\begin{aligned} 85568 &= 8 + 5! + 5! \times (6! - 8) \\ &= (-8 + 6!) \times 5! + 5! + 8 \\ &= 5! + 5! \times (6! - 8) + 8 \\ &= 8 + (-8 + 6!) \times 5! + 5!. \end{aligned}$$

$$\begin{aligned} 85664 &= 8 + 5! \times (6! - 6) - 4! \\ &= -4! + (6! - 6) \times 5! + 8 \\ &= -4! + 5! \times (-6 + 6!) + 8 \\ &= 8 + (-6 + 6!) \times 5! - 4!. \end{aligned}$$

$$\begin{aligned} 85666 &= -8 + 5! \times (6! - 6) - 6 \\ &= -6 + (6! - 6) \times 5! - 8 \\ &= 5! \times (-6 + 6!) - 6 - 8 \\ &= -8 - 6 + (-6 + 6!) \times 5!. \end{aligned}$$

$$\begin{aligned} 85679 &= 8! + 5 - 6 + 7! \times 9 \\ &= 9 \times 7! - 6 + 5 + 8! \\ &= 5 - 6 + 7! \times (8 + 9) \\ &= (9 + 8) \times 7! - 6 + 5. \end{aligned}$$

$$\begin{aligned} 85795 &= 8! + 5! + 7! \times 9 - 5 \\ &= 5! + 9 \times 7! - 5 + 8! \\ &= 5! - 5 + 7! \times (8 + 9) \\ &= (9 + 8) \times 7! - 5 + 5!. \end{aligned}$$

$$\begin{aligned} 86151 &= (-8 + 6!) \times (1 + 5!) - 1 \\ &= -1 + (5! + 1) \times (6! - 8) \\ &= -1 + (1 + 5!) \times (6! - 8) \\ &= (-8 + 6!) \times (5! + 1) - 1. \end{aligned}$$

$$\begin{aligned} 86152 &= (-8 + 6!) \times (-1 + 5! + 2) \\ &= (2 + 5! - 1) \times (6! - 8) \\ &= (-1 + 2 + 5!) \times (6! - 8) \\ &= (-8 + 6!) \times (5! + 2 - 1). \end{aligned}$$

$$\begin{aligned} 86256 &= 8! - 6! + (-2 + 5!)^6 \\ &= 6^{5-2}! - 6! + 8! \\ &= -(-2 + 5)!! + 6^6 + 8! \\ &= 8! + 6^6 - (5 - 2)!!. \end{aligned}$$

$$\begin{aligned} 86351 &= -8 \times 6 + 3!! \times 5! - 1 \\ &= -1 + 5! \times 3!! - 6 \times 8 \\ &= -1 + 3!! \times 5! - 6 \times 8 \\ &= -8 \times 6 + 5! \times 3!! - 1. \end{aligned}$$

$$\begin{aligned} 86356 &= -8 - 6 \times 3! + 5! \times 6! \\ &= 6! \times 5! - 36 - 8 \\ &= 3!! \times 5! - 6 \times 6 - 8 \\ &= -8 - 6 \times 6 + 5! \times 3!!. \end{aligned}$$

$$\begin{aligned} 86395 &= 8 \times 6! \times (3! + 9) - 5 \\ &= -5 + (9 + 3!) \times 6! \times 8 \\ &= 3!! \times 5! - 6 - 8 + 9 \\ &= 9 - 8 - 6 + 5! \times 3!!. \end{aligned}$$

$$\begin{aligned} 86397 &= 8! + 6! - 3 + 9 \times 7! \\ &= 7! \times 9 + (-3 + 6!) + 8! \\ &= -3 + 6! + 7! \times (8 + 9) \\ &= (9 + 8) \times 7! + 6! - 3. \end{aligned}$$

$$\begin{aligned} 86400 &= (8! + 6! \times 4) \times (0! + 0!) \\ &= (0! + 0!) \times (4 \times 6! + 8!). \end{aligned}$$

$$\begin{aligned} 86440 &= (8 + 6! \times 4!) \times (4 + 0!) \\ &= (0! + 4) \times (4! \times 6! + 8.). \end{aligned}$$

$$\begin{aligned} 86584 &= -8 + (6! \times 5 + 8) \times 4! \\ &= 4! \times (8 + 5 \times 6!) - 8 \\ &= 4! \times (5 \times 6! + 8) - 8 \\ &= -8 + (8 + 6! \times 5) \times 4!. \end{aligned}$$

$$\begin{aligned} 86632 &= -8 + 6!/6 \times (3!! + 2) \\ &= (2 + 3!!) \times 6!/6 - 8. \end{aligned}$$

$$\begin{aligned} 86640 &= (8 - 6 + 6!) \times (4 + 0!) \\ &= (0! + 4)! \times (6! - 6 + 8). \end{aligned}$$

$$\begin{aligned} 86976 &= 8! + (6/(9 - 7))!^6 \\ &= 6^7/(9 - 6)! + 8! \\ &= 6^6 + (7 - 8 + 9)! \\ &= (9 - 8 + 7)! + 6^6. \end{aligned}$$

$$\begin{aligned} 90702 &= 9 \times ((0 + 7)! - 0!) \times 2 \\ &= 2 \times ((0 + 7)! - 0!) \times 9 \\ &= (-0! - 0! + 2 \times 7!) \times 9 \\ &= 9 \times (7! \times 2 - 0! - 0!). \end{aligned}$$

$$\begin{aligned} 90711 &= 9 \times (-0! + 7! \times (1 + 1)) \\ &= ((1 + 1) \times 7! - 0!) \times 9 \\ &= (-0! + (1 + 1) \times 7!) \times 9 \\ &= 9 \times (7! \times (1 + 1) - 0!). \end{aligned}$$

$$\begin{aligned} 90720 &= 9 \times (0 + 7)! \times 2 + 0 \\ &= 0 + 2 \times 7! \times (0 + 9) \\ &= (0 \times 0 + 2) \times 7! \times 9 \\ &= 9!/(7 - 2 \times 0! - 0!). \end{aligned}$$

$$\begin{aligned} 90721 &= 9 \times (0 + 7)! \times 2 + 1 \\ &= 1 + 2 \times 7! \times (0 + 9) \\ &= 0 + 1 + 2 \times 7! \times 9 \\ &= 9!/(7 - 2 - 1) + 0!. \end{aligned}$$

$$\begin{aligned} 90722 &= 9 \times (0 + 7)! \times 2 + 2 \\ &= 2 + 2 \times 7! \times (0 + 9) \\ &= 0 + 2 + 2 \times 7! \times 9 \\ &= 9 \times 7! \times 2 + 2 \times 0!. \end{aligned}$$

$$\begin{aligned} 90728 &= 9 \times (0 + 7)! \times 2 + 8 \\ &= 8 + 2 \times 7! \times (0 + 9) \\ &= -0! + 2 \times (7! + 8!) + 9 \\ &= 9 + (8! + 7!) \times 2 - 0!. \end{aligned}$$

$$\begin{aligned} 90729 &= 9 + 2 \times 7! \times (0 + 9) \\ &= 9 \times (0 + 7)! \times 2 + 9 \\ &= 02 \times 7! \times 9 + 9 \\ &= 9 + 9 \times 7! \times 2 \times 0!. \end{aligned}$$

$$\begin{aligned} 90732 &= (9 \times (0 + 7)! + 3!) \times 2 \\ &= 2 \times (3! + 7! \times (-0 + 9)) \\ &= 02 \times (3! + 7! \times 9) \\ &= (9 \times 7! + 3!) \times 2 \times 0!. \end{aligned}$$

$$\begin{aligned} 90738 &= 9 \times (0! + 7!) \times (-3! + 8) \\ &= (8 - 3!) \times (7! + 0!) \times 9 \\ &= (-0! + 3) \times (7! + 8! + 9) \\ &= (9 + 8! + 7!) \times (3 - 0!). \end{aligned}$$

$$\begin{aligned} 90747 &= 9 \times (-0! + 7! + 4 + 7!) \\ &= (7! + 4 + 7! - 0!) \times 9 \\ &= (-0! + 4 + 7! + 7!) \times 9 \\ &= 9 \times (7! + 7! + 4 - 0!). \end{aligned}$$

$$\begin{aligned} 90747 &= 9 \times (-0! + 7! + 4 + 7!) \\ &= (7! + 4 + 7! - 0!) \times 9 \\ &= (-0! + 4 + 7! + 7!) \times 9 \\ &= 9 \times (7! + 7! + 4 - 0!). \end{aligned}$$

$$\begin{aligned} 93303 &= -9 + 3!^{3!+0!}/3 \\ &= (3 - 0!) \times 3!^{3!} - 9 \\ &= (-0! + 3) \times 3!^{3!} - 9 \\ &= -9 + 3!^{3!} \times (3 - 0!). \end{aligned}$$

$$\begin{aligned} 93312 &= (9 - 3)^{3!} \times (1 \times 2) \\ &= 2 \times 1 \times 3!^{-3+9} \\ &= 12^3 \times 3! \times 9 \\ &= (9 - 3)^{3!} \times 2 \times 1. \end{aligned}$$

$$\begin{aligned} 93320 &= 9 + 3!^{3!} \times 2 - 0! \\ &= -0! + 2 \times 3!^{3!} + 9. \end{aligned}$$

$$\begin{aligned} 93321 &= 9 + 3!^{3!} \times 2 \times 1 \\ &= 1 \times 2 \times 3!^{3!} + 9. \end{aligned}$$

$$\begin{aligned} 93321 &= 9 + 3!^{3!} \times 2 \times 1 \\ &= 1 \times 2 \times 3!^{3!} + 9. \end{aligned}$$

$$\begin{aligned} 93330 &= (9 + 3!^{3!}) \times (3 - 0!) \\ &= (-0! + 3) \times (3!^{3!} + 9). \end{aligned}$$

$$\begin{aligned} 93342 &= (-9 + 3!^{3!} + 4!) \times 2 \\ &= 2 \times (4! + 3!^{3!} - 9) \\ &= 2 \times (3!^{3!} + 4! - 9) \\ &= (-9 + 4! + 3!^{3!}) \times 2. \end{aligned}$$

$$\begin{aligned} 98503 &= (9 + 8 + 5!) \times (-0! + 3!!) \\ &= (3!! - 0!) \times (5! + 8 + 9) \\ &= (-0! + 3!!) \times (5! + 8 + 9) \\ &= (9 + 8 + 5!) \times (3!! - 0!). \end{aligned}$$

## 4 Sequential Representations of Selfie Numbers

### 4.1 Sequential Representations in Both Ways – In Order of Digits and Reverse

$$2160 = (2 + 1) \times 6! + 0 = 0 + 6! \times (1 + 2).$$

$$2161 = (2 + 1) \times 6! + 1 = 1 + 6! \times (1 + 2).$$

$$2162 = (2 + 1) \times 6! + 2 = 2 + 6! \times (1 + 2).$$

$$2163 = (2 + 1) \times 6! + 3 = 3 + 6! \times (1 + 2).$$

$$2164 = (2 + 1) \times 6! + 4 = 4 + 6! \times (1 + 2).$$

$$2165 = (2 + 1) \times 6! + 5 = 5 + 6! \times (1 + 2).$$

$$2166 = (2 + 1) \times 6! + 6 = 6 + 6! \times (1 + 2).$$

$$2167 = (2 + 1) \times 6! + 7 = 7 + 6! \times (1 + 2).$$

$$2168 = (2 + 1) \times 6! + 8 = 8 + 6! \times (1 + 2).$$

$$2169 = (2 + 1) \times 6! + 9 = 9 + 6! \times (1 + 2).$$

$$2520 = (2 + 5)!/2 + 0 = 0 + (2 + 5)!/2.$$

$$2521 = (2 + 5)!/2 + 1 = 1 + (2 + 5)!/2.$$

$$2522 = (2 + 5)!/2 + 2 = 2 + (2 + 5)!/2.$$

$$2523 = (2 + 5)!/2 + 3 = 3 + (2 + 5)!/2.$$

$$2524 = (2 + 5)!/2 + 4 = 4 + (2 + 5)!/2.$$

$$2525 = (2 + 5)!/2 + 5 = 5 + (2 + 5)!/2.$$

$$2526 = (2 + 5)!/2 + 6 = 6 + (2 + 5)!/2.$$

$$2527 = (2 + 5)!/2 + 7 = 7 + (2 + 5)!/2.$$

$$2528 = (2 + 5)!/2 + 8 = 8 + (2 + 5)!/2.$$

$$2529 = (2 + 5)!/2 + 9 = 9 + (2 + 5)!/2.$$

$$3600 = 3!! \times (6 - 0!) + 0 = 0 + (-0! + 6) \times 3!!.$$

$$3601 = 3!! \times (6 - 0!) + 1 = 1 + (-0! + 6) \times 3!!.$$

$$3602 = 3!! \times (6 - 0!) + 2 = 2 + (-0! + 6) \times 3!!.$$

$$3603 = 3!! \times (6 - 0!) + 3 = 3 + (-0! + 6) \times 3!!.$$

$$3604 = 3!! \times (6 - 0!) + 4 = 4 + (-0! + 6) \times 3!!.$$

$$3605 = 3!! \times (6 - 0!) + 5 = 5 + (-0! + 6) \times 3!!.$$

$$3606 = 3!! \times (6 - 0!) + 6 = 6 + (-0! + 6) \times 3!!.$$

$$3607 = 3!! \times (6 - 0!) + 7 = 7 + (-0! + 6) \times 3!!.$$

$$3608 = 3!! \times (6 - 0!) + 8 = 8 + (-0! + 6) \times 3!!.$$

$$3609 = 3!! \times (6 - 0!) + 9 = 9 + (-0! + 6) \times 3!!.$$

$$5160 = 5! + (1 + 6)! + 0 = 0 + (6 + 1)! + 5!.$$

$$5161 = 5! + (1 + 6)! + 1 = 1 + (6 + 1)! + 5!.$$

$$5162 = 5! + (1 + 6)! + 2 = 2 + (6 + 1)! + 5!.$$

$$5163 = 5! + (1 + 6)! + 3 = 3 + (6 + 1)! + 5!.$$

$$5164 = 5! + (1 + 6)! + 4 = 4 + (6 + 1)! + 5!.$$

$$5165 = 5! + (1 + 6)! + 5 = 5 + (6 + 1)! + 5!.$$

$$5166 = 5! + (1 + 6)! + 6 = 6 + (6 + 1)! + 5!.$$

$$5167 = 5! + (1 + 6)! + 7 = 7 + (6 + 1)! + 5!.$$

$$5168 = 5! + (1 + 6)! + 8 = 8 + (6 + 1)! + 5!.$$

$$5169 = 5! + (1 + 6)! + 9 = 9 + (6 + 1)! + 5!.$$

$$10080 = (1 + 0!) \times (-0! + 8)! + 0 = 0 + (8 - 0!) \times (0! + 1).$$

$$10081 = (1 + 0!) \times (-0! + 8)! + 1 = 1 + (8 - 0!) \times (0! + 1).$$

$$10082 = (1 + 0!) \times (-0! + 8)! + 2 = 2 + (8 - 0!) \times (0! + 1).$$

$$10083 = (1 + 0!) \times (-0! + 8)! + 3 = 3 + (8 - 0!) \times (0! + 1).$$

$$10084 = (1 + 0!) \times (-0! + 8)! + 4 = 4 + (8 - 0!) \times (0! + 1).$$

$$10085 = (1 + 0!) \times (-0! + 8)! + 5 = 5 + (8 - 0!) \times (0! + 1).$$

$$10086 = (1 + 0!) \times (-0! + 8)! + 6 = 6 + (8 - 0!) \times (0! + 1).$$

$$10087 = (1 + 0!) \times (-0! + 8)! + 7 = 7 + (8 - 0!) \times (0! + 1).$$

$$10088 = (1 + 0!) \times (-0! + 8)! + 8 = 8 + (8 - 0!) \times (0! + 1).$$

$$10089 = (1 + 0!) \times (-0! + 8)! + 9 = 9 + (8 - 0!) \times (0! + 1).$$

$$12960 = 1 \times 2 \times 9 \times 6! + 0 = 0 + 6! \times 9 \times 2 \times 1.$$

$$12961 = 1 + 2 \times 9 \times 6! \times 1 = 1 + 6! \times 9 \times 2 \times 1.$$

$$12962 = 1 \times 2 + 9 \times 6! \times 2 = 2 + 6! \times 9 \times 2 \times 1.$$

$$12963 = 1 \times 2 \times 9 \times 6! + 3 = 3 + 6! \times 9 \times 2 \times 1.$$

$$12964 = 1 \times 2 \times 9 \times 6! + 4 = 4 + 6! \times 9 \times 2 \times 1.$$

$$12965 = 1 \times 2 \times 9 \times 6! + 5 = 5 + 6! \times 9 \times 2 \times 1.$$

$$12966 = 1 \times 2 \times 9 \times 6! + 6 = 6 + 6! \times 9 \times 2 \times 1.$$

$$12967 = 1 \times 2 \times 9 \times 6! + 7 = 7 + 6! \times 9 \times 2 \times 1.$$

$$12968 = 1 \times 2 \times 9 \times 6! + 8 = 8 + 6! \times 9 \times 2 \times 1.$$

$$12969 = 1 \times 2 \times 9 \times 6! + 9 = 9 + 6! \times 9 \times 2 \times 1.$$

$$14400 = (1 + 4)! \times (4 + 0!)! + 0 = 0 + (0! + 4)! \times (4 + 1)!.$$

$$14401 = (1 + 4)! \times (4 + 0!)! + 1 = 1 + (0! + 4)! \times (4 + 1)!.$$

$$14402 = (1 + 4)! \times (4 + 0!)! + 2 = 2 + (0! + 4)! \times (4 + 1)!.$$

$$14403 = (1 + 4)! \times (4 + 0!)! + 3 = 3 + (0! + 4)! \times (4 + 1)!.$$

$$14404 = (1 + 4)! \times (4 + 0!)! + 4 = 4 + (0! + 4)! \times (4 + 1)!.$$

$$14405 = (1 + 4)! \times (4 + 0!)! + 5 = 5 + (0! + 4)! \times (4 + 1)!.$$

$$14406 = (1 + 4)! \times (4 + 0!)! + 6 = 6 + (0! + 4)! \times (4 + 1)!.$$

$$14407 = (1 + 4)! \times (4 + 0!)! + 7 = 7 + (0! + 4)! \times (4 + 1)!.$$

$$14408 = (1+4)! \times (4+0!)! + 8 = 8 + (0!+4)! \times (4+1)!.$$

$$14409 = (1+4)! \times (4+0!)! + 9 = 9 + (0!+4)! \times (4+1)!.$$

$$30240 = 3! \times (0!+2+4)! + 0 = 0 + 42 \times 03!!.$$

$$30241 = 3! \times (0!+2+4)! + 1 = 1 + 42 \times 03!!.$$

$$30242 = 3! \times (0!+2+4)! + 2 = 2 + 42 \times 03!!.$$

$$30243 = 3! \times (0!+2+4)! + 3 = 3 + 42 \times 03!!.$$

$$30244 = 3! \times (0!+2+4)! + 4 = 4 + 42 \times 03!!.$$

$$30245 = 3! \times (0!+2+4)! + 5 = 5 + 42 \times 03!!.$$

$$30246 = 3! \times (0!+2+4)! + 6 = 6 + 42 \times 03!!.$$

$$30247 = 3! \times (0!+2+4)! + 7 = 7 + 42 \times 03!!.$$

$$30248 = 3! \times (0!+2+4)! + 8 = 8 + 42 \times 03!!.$$

$$30249 = 3! \times (0!+2+4)! + 9 = 9 + 42 \times 03!!.$$

$$34560 = (3+45) \times 6! + 0 = 0 + 6! \times (5+43).$$

$$34561 = (3+45) \times 6! + 1 = 1 + 6! \times (5+43).$$

$$34562 = (3+45) \times 6! + 2 = 2 + 6! \times (5+43).$$

$$34563 = (3+45) \times 6! + 3 = 3 + 6! \times (5+43).$$

$$34564 = (3+45) \times 6! + 4 = 4 + 6! \times (5+43).$$

$$34565 = (3+45) \times 6! + 5 = 5 + 6! \times (5+43).$$

$$34566 = (3+45) \times 6! + 6 = 6 + 6! \times (5+43).$$

$$34567 = (3+45) \times 6! + 7 = 7 + 6! \times (5+43).$$

$$34568 = (3+45) \times 6! + 8 = 8 + 6! \times (5+43).$$

$$34569 = (3+45) \times 6! + 9 = 9 + 6! \times (5+43).$$

$$35280 = -3!! \times (5+2) + 8! + 0 = 0 + 8! - (2 \times 5 - 3)!.$$

$$35281 = -3!! \times (5+2) + 8! + 1 = 1 + 8! - (2 \times 5 - 3)!.$$

$$35282 = -3!! \times (5+2) + 8! + 2 = 2 + 8! - (2 \times 5 - 3)!.$$

$$35283 = -3!! \times (5+2) + 8! + 3 = 3 + 8! - (2 \times 5 - 3)!.$$

$$35284 = -3!! \times (5+2) + 8! + 4 = 4 + 8! - (2 \times 5 - 3)!.$$

$$35285 = -3!! \times (5+2) + 8! + 5 = 5 + 8! - (2 \times 5 - 3)!.$$

$$35286 = -3!! \times (5+2) + 8! + 6 = 6 + 8! - (2 \times 5 - 3)!.$$

$$35287 = -3!! \times (5+2) + 8! + 7 = 7 + 8! - (2 \times 5 - 3)!.$$

$$35288 = -3!! \times (5+2) + 8! + 8 = 8 + 8! - (2 \times 5 - 3)!.$$

$$35289 = -3!! \times (5+2) + 8! + 9 = 9 + 8! - (2 \times 5 - 3)!.$$

$$37440 = 3!! \times (7 \times 4 + 4!) + 0 = 0 + (4! + 4 \times 7) \times 3!!.$$

$$37441 = 3!! \times (7 \times 4 + 4!) + 1 = 1 + (4! + 4 \times 7) \times 3!!.$$

$$37442 = 3!! \times (7 \times 4 + 4!) + 2 = 2 + (4! + 4 \times 7) \times 3!!.$$

$$37443 = 3!! \times (7 \times 4 + 4!) + 3 = 3 + (4! + 4 \times 7) \times 3!!.$$

$$37444 = 3!! \times (7 \times 4 + 4!) + 4 = 4 + (4! + 4 \times 7) \times 3!!.$$

$$37445 = 3!! \times (7 \times 4 + 4!) + 5 = 5 + (4! + 4 \times 7) \times 3!!.$$

$$37446 = 3!! \times (7 \times 4 + 4!) + 6 = 6 + (4! + 4 \times 7) \times 3!!.$$

$$37447 = 3!! \times (7 \times 4 + 4!) + 7 = 7 + (4! + 4 \times 7) \times 3!!.$$

$$37448 = 3!! \times (7 \times 4 + 4!) + 8 = 8 + (4! + 4 \times 7) \times 3!!.$$

$$37449 = 3!! \times (7 \times 4 + 4!) + 9 = 9 + (4! + 4 \times 7) \times 3!!.$$

$$39480 = -3!! - (9-4)! + 8! + 0 = 0 + 8! - (-4+9)! - 3!!.$$

$$39481 = -3!! - (9-4)! + 8! + 1 = 1 + 8! - (-4+9)! - 3!!.$$

$$39482 = -3!! - (9-4)! + 8! + 2 = 2 + 8! - (-4+9)! - 3!!.$$

$$39483 = -3!! - (9-4)! + 8! + 3 = 3 + 8! - (-4+9)! - 3!!.$$

$$39484 = -3!! - (9-4)! + 8! + 4 = 4 + 8! - (-4+9)! - 3!!.$$

$$39485 = -3!! - (9-4)! + 8! + 5 = 5 + 8! - (-4+9)! - 3!!.$$

$$39486 = -3!! - (9-4)! + 8! + 6 = 6 + 8! - (-4+9)! - 3!!.$$

$$39487 = -3!! - (9-4)! + 8! + 7 = 7 + 8! - (-4+9)! - 3!!.$$

$$39488 = -3!! - (9-4)! + 8! + 8 = 8 + 8! - (-4+9)! - 3!!.$$

$$39489 = -3!! - (9-4)! + 8! + 9 = 9 + 8! - (-4+9)! - 3!!.$$

$$39600 = 3!! \times (9 \times 6 + 0!) + 0 = 0 + (0! + 6 \times 9) \times 3!!.$$

$$39601 = 3!! \times (9 \times 6 + 0!) + 1 = 1 + (0! + 6 \times 9) \times 3!!.$$

$$39602 = 3!! \times (9 \times 6 + 0!) + 2 = 2 + (0! + 6 \times 9) \times 3!!.$$

$$39603 = 3!! \times (9 \times 6 + 0!) + 3 = 3 + (0! + 6 \times 9) \times 3!!.$$

$$39604 = 3!! \times (9 \times 6 + 0!) + 4 = 4 + (0! + 6 \times 9) \times 3!!.$$

$$39605 = 3!! \times (9 \times 6 + 0!) + 5 = 5 + (0! + 6 \times 9) \times 3!!.$$

$$39606 = 3!! \times (9 \times 6 + 0!) + 6 = 6 + (0! + 6 \times 9) \times 3!!.$$

$$39607 = 3!! \times (9 \times 6 + 0!) + 7 = 7 + (0! + 6 \times 9) \times 3!!.$$

$$39608 = 3!! \times (9 \times 6 + 0!) + 8 = 8 + (0! + 6 \times 9) \times 3!!.$$

$$39609 = 3!! \times (9 \times 6 + 0!) + 9 = 9 + (0! + 6 \times 9) \times 3!!.$$

$$39680 = 3!!/9 - 6! + 8! + 0 = 0 + 8! + 6!/9 - 3!!.$$

$$39681 = 3!!/9 - 6! + 8! + 1 = 1 + 8! + 6!/9 - 3!!.$$

$$39682 = 3!!/9 - 6! + 8! + 2 = 2 + 8! + 6!/9 - 3!!.$$

$$39683 = 3!!/9 - 6! + 8! + 3 = 3 + 8! + 6!/9 - 3!!.$$

$$39684 = 3!!/9 - 6! + 8! + 4 = 4 + 8! + 6!/9 - 3!!.$$

$$39685 = 3!!/9 - 6! + 8! + 5 = 5 + 8! + 6!/9 - 3!!.$$

$$39686 = 3!!/9 - 6! + 8! + 6 = 6 + 8! + 6!/9 - 3!!.$$

$$39687 = 3!!/9 - 6! + 8! + 7 = 7 + 8! + 6!/9 - 3!!.$$

$$39688 = 3!!/9 - 6! + 8! + 8 = 8 + 8! + 6!/9 - 3!!.$$

$$39689 = 3!!/9 - 6! + 8! + 9 = 9 + 8! + 6!/9 - 3!!.$$

$$40320 = (40-32)! + 0 = 0 + ((2+30)/4)!.$$

$$40321 = (40-32)! + 1 = 1 + ((2+30)/4)!.$$

$$40322 = (40-32)! + 2 = 2 + ((2+30)/4)!.$$

$$40323 = (40-32)! + 3 = 3 + ((2+30)/4)!.$$

$$40324 = (40-32)! + 4 = 4 + ((2+30)/4)!.$$

$$40325 = (40-32)! + 5 = 5 + ((2+30)/4)!.$$

$$40326 = (40-32)! + 6 = 6 + ((2+30)/4)!.$$

$$40327 = (40-32)! + 7 = 7 + ((2+30)/4)!.$$

$$40328 = (40-32)! + 8 = 8 + ((2+30)/4)!.$$

$$40329 = (40-32)! + 9 = 9 + ((2+30)/4)!.$$

$$40440 = (4+0!)! + (4+4)! + 0 = 0 + (4+4)! + (0!+4)!.$$

$$40441 = (4+0!)! + (4+4)! + 1 = 1 + (4+4)! + (0!+4)!.$$

$$40442 = (4+0!)! + (4+4)! + 2 = 2 + (4+4)! + (0!+4)!.$$

$$40443 = (4+0!)! + (4+4)! + 3 = 3 + (4+4)! + (0!+4)!.$$

$$40444 = (4+0!)! + (4+4)! + 4 = 4 + (4+4)! + (0!+4)!.$$

$$40445 = (4+0!)! + (4+4)! + 5 = 5 + (4+4)! + (0!+4)!.$$

$$40446 = (4+0!)! + (4+4)! + 6 = 6 + (4+4)! + (0!+4)!.$$

$$40447 = (4+0!)! + (4+4)! + 7 = 7 + (4+4)! + (0!+4)!.$$

$$40448 = (4+0!)! + (4+4)! + 8 = 8 + (4+4)! + (0!+4)!.$$

$$40449 = (4+0!)! + (4+4)! + 9 = 9 + (4+4)! + (0!+4)!.$$

$$40480 = 40 \times 4 + 8! + 0 = 0 + 8! + 40 \times 4.$$

$$40481 = 40 \times 4 + 8! + 1 = 1 + 8! + 40 \times 4.$$

$$40482 = 40 \times 4 + 8! + 2 = 2 + 8! + 40 \times 4.$$

$$40483 = 40 \times 4 + 8! + 3 = 3 + 8! + 40 \times 4.$$

$$40484 = 40 \times 4 + 8! + 4 = 4 + 8! + 40 \times 4.$$

$$40485 = 40 \times 4 + 8! + 5 = 5 + 8! + 40 \times 4.$$

$$40486 = 40 \times 4 + 8! + 6 = 6 + 8! + 40 \times 4.$$

$$40487 = 40 \times 4 + 8! + 7 = 7 + 8! + 40 \times 4.$$

$$40488 = 40 \times 4 + 8! + 8 = 8 + 8! + 40 \times 4.$$

$$40489 = 40 \times 4 + 8! + 9 = 9 + 8! + 40 \times 4.$$

$$48960 = 4 \times (8+9) \times 6! + 0 = 0 + 6! \times (9 \times 8 - 4).$$

$$48961 = 4 \times (8+9) \times 6! + 1 = 1 + 6! \times (9 \times 8 - 4).$$

$$48962 = 4 \times (8+9) \times 6! + 2 = 2 + 6! \times (9 \times 8 - 4).$$

$$48963 = 4 \times (8+9) \times 6! + 3 = 3 + 6! \times (9 \times 8 - 4).$$

$$48964 = 4 \times 6! \times (9+8) + 4 = 4 \times (8+9) \times 6! + 4.$$

$$\begin{aligned}48965 &= 4 \times (8 + 9) \times 6! + 5 = 5 + 6! \times (9 \times 8 - 4). \\48966 &= 4 \times (8 + 9) \times 6! + 6 = 6 + 6! \times (9 \times 8 - 4). \\48967 &= 4 \times (8 + 9) \times 6! + 7 = 7 + 6! \times (9 \times 8 - 4). \\48968 &= 4 \times (8 + 9) \times 6! + 8 = 8 + 6! \times (9 \times 8 - 4). \\48969 &= 4 \times (8 + 9) \times 6! + 9 = 9 + 6! \times (9 \times 8 - 4).\end{aligned}$$

$$\begin{aligned}49680 &= (4 + 9) \times 6! + 8! + 0 = 0 + 8! + 6! \times (9 + 4). \\49681 &= (4 + 9) \times 6! + 8! + 1 = 1 + 8! + 6! \times (9 + 4). \\49682 &= (4 + 9) \times 6! + 8! + 2 = 2 + 8! + 6! \times (9 + 4). \\49683 &= (4 + 9) \times 6! + 8! + 3 = 3 + 8! + 6! \times (9 + 4). \\49684 &= (4 + 9) \times 6! + 8! + 4 = 4 + 8! + 6! \times (9 + 4). \\49685 &= (4 + 9) \times 6! + 8! + 5 = 5 + 8! + 6! \times (9 + 4). \\49686 &= (4 + 9) \times 6! + 8! + 6 = 6 + 8! + 6! \times (9 + 4). \\49687 &= (4 + 9) \times 6! + 8! + 7 = 7 + 8! + 6! \times (9 + 4). \\49688 &= (4 + 9) \times 6! + 8! + 8 = 8 + 8! + 6! \times (9 + 4). \\49689 &= (4 + 9) \times 6! + 8! + 9 = 9 + 8! + 6! \times (9 + 4).\end{aligned}$$

$$\begin{aligned}60480 &= (6 + 0!)! \times (4 + 8) + 0 = 0 + 84 \times (-0 + 6!). \\60481 &= (6 + 0!)! \times (4 + 8) + 1 = 1 + 84 \times (-0 + 6!). \\60482 &= (6 + 0!)! \times (4 + 8) + 2 = 2 + 84 \times (-0 + 6!). \\60483 &= (6 + 0!)! \times (4 + 8) + 3 = 3 + 84 \times (0 + 6!). \\60484 &= (6 + 0!)! \times (4 + 8) + 4 = 4 + 84 \times (0 + 6!). \\60485 &= (6 + 0!)! \times (4 + 8) + 5 = 5 + 84 \times (0 + 6!). \\60486 &= (6 + 0!)! \times (4 + 8) + 6 = 6 + 84 \times (0 + 6!). \\60487 &= (6 + 0!)! \times (4 + 8) + 7 = 7 + 84 \times (0 + 6!). \\60488 &= (6 + 0!)! \times (4 + 8) + 8 = 8 + 84 \times (0 + 6!). \\60489 &= (6 + 0!)! \times (4 + 8) + 9 = 9 + 84 \times (0 + 6!).\end{aligned}$$

$$\begin{aligned}64840 &= -6! + 4^8 + 4! + 0 = 0 + 4^8 + 4! - 6!. \\64841 &= -6! + 4^8 + 4! + 1 = 1 + 4^8 + 4! - 6!. \\64842 &= -6! + 4^8 + 4! + 2 = 2 + 4^8 + 4! - 6!. \\64843 &= -6! + 4^8 + 4! + 3 = 3 + 4^8 + 4! - 6!. \\64844 &= -6! + 4^8 + 4! + 4 = 4 + 4^8 + 4! - 6!. \\64845 &= -6! + 4^8 + 4! + 5 = 5 + 4^8 + 4! - 6!. \\64846 &= -6! + 4^8 + 4! + 6 = 6 + 4^8 + 4! - 6!. \\64847 &= -6! + 4^8 + 4! + 7 = 7 + 4^8 + 4! - 6!.\end{aligned}$$

$$\begin{aligned}64848 &= -6! + 4^8 + 4! + 8 = 8 + 4^8 + 4! - 6!. \\64849 &= -6! + 4^8 + 4! + 9 = 9 + 4^8 + 4! - 6!.\end{aligned}$$

$$\begin{aligned}80640 &= 8! \times (0 + 6 - 4) + 0 = 0 + (-4 + 6) \times 08!. \\80641 &= 8! \times (0 + 6 - 4) + 1 = 1 + (-4 + 6) \times 08!. \\80642 &= 8! \times (0 + 6 - 4) + 2 = 2 + (-4 + 6) \times 08!. \\80643 &= 8! \times (0 + 6 - 4) + 3 = 3 + (-4 + 6) \times 08!. \\80644 &= 8! \times (0 + 6 - 4) + 4 = 4 + (-4 + 6) \times 08!. \\80645 &= 8! \times (0 + 6 - 4) + 5 = 5 + (-4 + 6) \times 08!. \\80646 &= 8! \times (0 + 6 - 4) + 6 = 6 + (-4 + 6) \times 08!. \\80647 &= 8! \times (0 + 6 - 4) + 7 = 7 + (-4 + 6) \times 08!. \\80648 &= 8! \times (0 + 6 - 4) + 8 = 8 + (-4 + 6) \times 08!. \\80649 &= 8! \times (0 + 6 - 4) + 9 = 9 + (-4 + 6) \times 08!.\end{aligned}$$

$$\begin{aligned}81360 &= 8! \times (-1 + 3) + 6! + 0 = 0 + 6! + (3 - 1) \times 8!. \\81361 &= 8! \times (-1 + 3) + 6! + 1 = 1 + 6! + (3 - 1) \times 8!. \\81362 &= 8! \times (-1 + 3) + 6! + 2 = 2 + 6! + (3 - 1) \times 8!. \\81363 &= 8! \times (-1 + 3) + 6! + 3 = 3 + 6! + (3 - 1) \times 8!. \\81364 &= 8! \times (-1 + 3) + 6! + 4 = 4 + 6! + (3 - 1) \times 8!. \\81365 &= 8! \times (-1 + 3) + 6! + 5 = 5 + 6! + (3 - 1) \times 8!. \\81366 &= 8! \times (-1 + 3) + 6! + 6 = 6 + 6! + (3 - 1) \times 8!. \\81367 &= 8! \times (-1 + 3) + 6! + 7 = 7 + 6! + (3 - 1) \times 8!. \\81368 &= 8! \times (-1 + 3) + 6! + 8 = 8 + 6! + (3 - 1) \times 8!. \\81369 &= 8! \times (-1 + 3) + 6! + 9 = 9 + 6! + (3 - 1) \times 8!.\end{aligned}$$

$$\begin{aligned}90720 &= 9 \times 07! \times 2 + 0 = 0 + 2 \times 7! \times 09. \\90721 &= 9 \times 07! \times 2 + 1 = 1 + 2 \times 7! \times 09. \\90722 &= 9 \times 07! \times 2 + 2 = 2 + 2 \times 7! \times 09. \\90723 &= 9 \times 07! \times 2 + 3 = 3 + 2 \times 7! \times 09. \\90724 &= 9 \times 07! \times 2 + 4 = 4 + 2 \times 7! \times 09. \\90725 &= 9 \times 07! \times 2 + 5 = 5 + 2 \times 7! \times 09. \\90726 &= 9 \times 07! \times 2 + 6 = 6 + 2 \times 7! \times 09. \\90727 &= 9 \times 07! \times 2 + 7 = 7 + 2 \times 7! \times 09. \\90728 &= 9 \times 07! \times 2 + 8 = 8 + 2 \times 7! \times 09. \\90729 &= 9 \times 07! \times 2 + 9 = 9 + 2 \times 7! \times 09.\end{aligned}$$

## 4.2 Sequential Representations in Both Ways – Increasing and Decreasing Order of Digits

$$\begin{aligned}2166 &= (1 + 2) \times 6! + 6 = 6 + 6! \times (2 + 1). \\2167 &= (1 + 2) \times 6! + 7 = 7 + 6! \times (2 + 1). \\2168 &= (1 + 2) \times 6! + 8 = 8 + 6! \times (2 + 1). \\2169 &= (1 + 2) \times 6! + 9 = 9 + 6! \times (2 + 1). \\3606 &= (-0! + 3!) \times 6! + 6 = 6 + 6! \times (3! - 0!). \\3607 &= (-0! + 3!) \times 6! + 7 = 7 + 6! \times (3! - 0!). \\3608 &= (-0! + 3!) \times 6! + 8 = 8 + 6! \times (3! - 0!). \\3609 &= (-0! + 3!) \times 6! + 9 = 9 + 6! \times (3! - 0!).\end{aligned}$$

$$\begin{aligned}5760 &= 0 + 5! \times 6 + 7! = 7! + 6 \times 5! + 0. \\5761 &= 1 + 5! \times 6 + 7! = 7! + 6 \times 5! + 1. \\5762 &= 2 + 5! \times 6 + 7! = 7! + 6 \times 5! + 2. \\5763 &= 3 + 5! \times 6 + 7! = 7! + 6 \times 5! + 3. \\5764 &= 4 + 5! \times 6 + 7! = 7! + 6 \times 5! + 4. \\5765 &= 5 + 5! \times 6 + 7! = 7! + 6 \times 5! + 5. \\5766 &= 5! \times 6 + 6 + 7! = 7! + 6 + 6 \times 5!. \\5767 &= 5! \times 6 + 7 + 7! = 7! + 7 + 6 \times 5!. \\5768 &= 5! \times 6 + 8 + 7! = 8 + 7! + 6 \times 5!.\end{aligned}$$

$$5769 = 5! \times 6 + 9 + 7! = 9 + 7! + 6 \times 5!.$$

$$\begin{aligned}15636 &= -1 + 3! + 5^6 + 6 = 6 + 6 + 5^{3!} - 1. \\15637 &= -1 + 3! + 5^6 + 7 = 7 + 6 + 5^{3!} - 1. \\15638 &= -1 + 3! + 5^6 + 8 = 8 + 6 + 5^{3!} - 1. \\15639 &= -1 + 3! + 5^6 + 9 = 9 + 6 + 5^{3!} - 1.\end{aligned}$$

$$\begin{aligned}16566 &= (-1 + 5)! \times 6! - 6! + 6 = 6 - 6! + 6! \times (5 - 1)! . \\16567 &= (-1 + 5)! \times 6! - 6! + 7 = 7 - 6! + 6! \times (5 - 1)! . \\16568 &= (-1 + 5)! \times 6! - 6! + 8 = 8 - 6! + 6! \times (5 - 1)! . \\16569 &= (-1 + 5)! \times 6! - 6! + 9 = 9 - 6! + 6! \times (5 - 1)! .\end{aligned}$$

$$\begin{aligned}25921 &= 1 + (2 \times 2)! \times 5! \times 9 = 9! / ((5 + 2) \times 2) + 1. \\25922 &= 2 + (2 \times 2)! \times 5! \times 9 = 9! / ((5 + 2) \times 2) + 2.\end{aligned}$$

$$\begin{aligned}30244 &= (0! + 2)! \times (3 + 4)! + 4 = 4 + (4 + 3)! \times (2 + 0)! . \\30245 &= (0! + 2)! \times (3 + 4)! + 5 = 5 + (4 + 3)! \times (2 + 0)! . \\30246 &= (0! + 2)! \times (3 + 4)! + 6 = 6 + (4 + 3)! \times (2 + 0)! . \\30247 &= (0! + 2)! \times (3 + 4)! + 7 = 7 + (4 + 3)! \times (2 + 0)! . \\30248 &= (0! + 2)! \times (3 + 4)! + 8 = 8 + (4 + 3)! \times (2 + 0)! .\end{aligned}$$

$$30249 = (0! + 2)! \times (3 + 4)! + 9 = 9 + (4 + 3)! \times (2 + 0!)!.$$

$$34560 = 0 + (3 + 45) \times 6! = 6! \times (5 + 43) + 0.$$

$$34561 = 1 + (3 + 45) \times 6! = 6! \times (5 + 43) + 1.$$

$$34562 = 2 + (3 + 45) \times 6! = 6! \times (5 + 43) + 2.$$

$$34563 = 3 + (3 + 45) \times 6! = 6! \times (5 + 43) + 3.$$

$$34566 = (3 + 45) \times 6! + 6 = 6 + 6! \times (5 + 43).$$

$$34567 = (3 + 45) \times 6! + 7 = 7 + 6! \times (5 + 43).$$

$$34568 = (3 + 45) \times 6! + 8 = 8 + 6! \times (5 + 43).$$

$$34569 = (3 + 45) \times 6! + 9 = 9 + 6! \times (5 + 43).$$

$$35285 = -(2 \times 3! - 5)! + 5 + 8! = 8! + 5 - (-5 + 3! \times 2)!.$$

$$35286 = -(2 \times 3! - 5)! + 6 + 8! = 8! + 6 - (-5 + 3! \times 2)!.$$

$$35287 = -(2 \times 3! - 5)! + 7 + 8! = 8! + 7 - (-5 + 3! \times 2)!.$$

$$35288 = -(2 \times 3! - 5)! + 8 + 8! = 8! + 8 - (-5 + 3! \times 2)!.$$

$$35289 = -(2 \times 3! - 5)! + 8! + 9 = 9 + 8! - (-5 + 3! \times 2)!.$$

$$37440 = 0 + 3!! \times (4! + 4 \times 7) = (7 \times 4 + 4!) \times 3!! + 0.$$

$$37441 = 1 + 3!! \times (4! + 4 \times 7) = (7 \times 4 + 4!) \times 3!! + 1.$$

$$37442 = 2 + 3!! \times (4! + 4 \times 7) = (7 \times 4 + 4!) \times 3!! + 2.$$

$$37443 = 3 + 3!! \times (4! + 4 \times 7) = (7 \times 4 + 4!) \times 3!! + 3.$$

$$37447 = 3!! \times (4! + 4 \times 7) + 7 = 7 + (7 \times 4 + 4!) \times 3!!.$$

$$37448 = 3!! \times (4! + 4 \times 7) + 8 = 8 + (7 \times 4 + 4!) \times 3!!.$$

$$37449 = 3!! \times (4! + 4 \times 7) + 9 = 9 + (7 \times 4 + 4!) \times 3!!.$$

$$38160 = 0 \times 1 - 3 \times 6! + 8! = 8! - 6! \times 3 + 1 \times 0.$$

$$38161 = 1 \times 1 - 3 \times 6! + 8! = 8! - 6! \times 3 + 1 \times 1.$$

$$38162 = 1 \times 2 - 3 \times 6! + 8! = 8! - 6! \times 3 + 2 \times 1.$$

$$38162 = 1 \times 2 - 3 \times 6! + 8! = 8! - 6! \times 3 + 2 \times 1.$$

$$38163 = 1 \times 3 - 3 \times 6! + 8! = 8! - 6! \times 3 + 3 \times 1.$$

$$38163 = 1 \times 3 - 3 \times 6! + 8! = 8! - 6! \times 3 + 3 \times 1.$$

$$38166 = -1 \times 3 \times 6! + 6 + 8! = 8! + 6 - 6! \times 3 \times 1.$$

$$38167 = -1 \times 3 \times 6! + 7 + 8! = 8! + 7 - 6! \times 3 \times 1.$$

$$38168 = -1 \times 3 \times 6! + 8 + 8! = 8! + 8 - 6! \times 3 \times 1.$$

$$38169 = -1 \times 3 \times 6! + 8! + 9 = 9 + 8! - 6! \times 3 \times 1.$$

$$39760 = 0 + ((3 + 6)! - 7!)/9 = (9! - 7!)/(6 + 3) + 0.$$

$$39761 = 1 + ((3 + 6)! - 7!)/9 = (9! - 7!)/(6 + 3) + 1.$$

$$39762 = 2 + ((3 + 6)! - 7!)/9 = (9! - 7!)/(6 + 3) + 2.$$

$$39763 = 3 + ((3 + 6)! - 7!)/9 = (9! - 7!)/(6 + 3) + 3.$$

$$40324 = (-0! + 2 + 3 + 4)! + 4 = 4 + (-4 \times 3 + 20)!.$$

$$40325 = (-0! + 2 + 3 + 4)! + 5 = 5 + (-4 \times 3 + 20)!.$$

$$40326 = (-0! + 2 + 3 + 4)! + 6 = 6 + (-4 \times 3 + 20)!.$$

$$40327 = (-0! + 2 + 3 + 4)! + 7 = 7 + (-4 \times 3 + 20)!.$$

$$40328 = (-0! + 2 + 3 + 4)! + 8 = 8 + (-4 \times 3 + 20)!.$$

$$40329 = (-0! + 2 + 3 + 4)! + 9 = 9 + (-4 \times 3 + 20)!.$$

$$40484 = (0! + 4)! + 44 + 8! = 8! + 4 + 4 \times 40.$$

$$40485 = (0! + 4)! + 45 + 8! = 8! + 5 + 4 \times 40.$$

$$40486 = (0! + 4)! + 46 + 8! = 8! + 6 + 4 \times 40.$$

$$40487 = (0! + 4)! + 47 + 8! = 8! + 7 + 4 \times 40.$$

$$40488 = (0! + 4)! + 48 + 8! = 8! + 8 + 4 \times 40.$$

$$46086 = (0! + 4)! \times 6! + 6 - 8! = -8! + 6 + 6! \times (4 + 0!)!.$$

$$46087 = (0! + 4)! \times 6! + 7 - 8! = -8! + 7 + 6! \times (4 + 0!)!.$$

$$46088 = (0! + 4)! \times 6! + 8 - 8! = -8! + 8 + 6! \times (4 + 0!)!.$$

$$46089 = (0! + 4)! \times 6! - 8! + 9 = 9 - 8! + 6! \times (4 + 0!)!.$$

$$46560 = 0 + 4! - 5! + 6^6 = 6^6 - 5! + 4! + 0.$$

$$46561 = 1 + 4! - 5! + 6^6 = 6^6 - 5! + 4! + 1.$$

$$46562 = 2 + 4! - 5! + 6^6 = 6^6 - 5! + 4! + 2.$$

$$46563 = 3 + 4! - 5! + 6^6 = 6^6 - 5! + 4! + 3.$$

$$46564 = 4 + 4! - 5! + 6^6 = 6^6 - 5! + 4! + 4.$$

$$46565 = 4! - 5! + 5 + 6^6 = 6^6 + 5 - 5! + 4!.$$

$$46566 = 4! - 5! + 6 + 6^6 = 6^6 + 6 - 5! + 4!.$$

$$46567 = 4! - 5! + 6^6 + 7 = 7 + 6^6 - 5! + 4!.$$

$$46568 = 4! - 5! + 6^6 + 8 = 8 + 6^6 - 5! + 4!.$$

$$46569 = 4! - 5! + 6^6 + 9 = 9 + 6^6 - 5! + 4!.$$

$$46640 = 0 - 4 \times 4 + 6^6 = 6^6 - 4 \times 4 + 0.$$

$$46641 = 1 - 4 \times 4 + 6^6 = 6^6 - 4 \times 4 + 1.$$

$$46642 = 2 - 4 \times 4 + 6^6 = 6^6 - 4 \times 4 + 2.$$

$$46643 = 3 - 4 \times 4 + 6^6 = 6^6 - 4 \times 4 + 3.$$

$$46644 = -4 \times 4 + 4 + 6^6 = 6^6 + 4 - 4 \times 4.$$

$$46645 = -4 \times 4 + 5 + 6^6 = 6^6 + 5 - 4 \times 4.$$

$$46646 = -4 \times 4 + 6 + 6^6 = 6^6 + 6 - 4 \times 4.$$

$$46647 = -4 \times 4 + 6^6 + 7 = 7 + 6^6 - 4 \times 4.$$

$$46648 = -4 \times 4 + 6^6 + 8 = 8 + 6^6 - 4 \times 4.$$

$$46649 = -4 \times 4 + 6^6 + 9 = 9 + 6^6 - 4 \times 4.$$

$$48960 = 0 + 4 \times 6! \times (8 + 9) = (9 + 8) \times 6! \times 4 + 0.$$

$$48961 = 1 + 4 \times 6! \times (8 + 9) = (9 + 8) \times 6! \times 4 + 1.$$

$$48962 = 2 + 4 \times 6! \times (8 + 9) = (9 + 8) \times 6! \times 4 + 2.$$

$$48963 = 3 + 4 \times 6! \times (8 + 9) = (9 + 8) \times 6! \times 4 + 3.$$

$$48964 = 4 + 4 \times 6! \times (8 + 9) = (9 + 8) \times 6! \times 4 + 4.$$

$$80640 = 00 + (-4 + 6) \times 8! = 8! \times (6 - 4) + 0 \times 0!.$$

$$80641 = 01 + (-4 + 6) \times 8! = 8! \times (6 - 4) + 1 \times 0!.$$

$$80642 = 02 + (-4 + 6) \times 8! = 8! \times (6 - 4) + 2 \times 0!.$$

$$80643 = 03 + (-4 + 6) \times 8! = 8! \times (6 - 4) + 3 \times 0!.$$

$$80644 = 04 + (-4 + 6) \times 8! = 8! \times (6 - 4) + 4 \times 0!.$$

$$80648 = (-04 + 6) \times 8! + 8 = 8 + 8! \times (6 - 4 \times 0!).$$

$$80649 = (-04 + 6) \times 8! + 9 = 9 + 8! \times (6 - 4 \times 0!).$$

$$83520 = 0 + 2 \times 3!! \times 58 = 8! + 5! \times 3!!/2 + 0.$$

$$83521 = 1 + 2 \times 3!! \times 58 = 8! + 5! \times 3!!/2 + 1.$$

$$83522 = 2 + 2 \times 3!! \times 58 = 8! + 5! \times 3!!/2 + 2.$$

$$83528 = 2 \times 3!! \times 58 + 8 = 8! + 8 + 5! \times 3!!/2.$$

$$83529 = 2 \times 3!! \times 58 + 9 = 9 + 8! + 5! \times 3!!/2.$$

$$85560 = 0 + 5! + 5! \times (6! - 8) = (-8 + 6!) \times 5! + 5! + 0.$$

$$85561 = 1 + 5! + 5! \times (6! - 8) = (-8 + 6!) \times 5! + 5! + 1.$$

$$85562 = 2 + 5! + 5! \times (6! - 8) = (-8 + 6!) \times 5! + 5! + 2.$$

$$85563 = 3 + 5! + 5! \times (6! - 8) = (-8 + 6!) \times 5! + 5! + 3.$$

$$85564 = 4 + 5! + 5! \times (6! - 8) = (-8 + 6!) \times 5! + 5! + 4.$$

$$85565 = 5 + 5! + 5! \times (6! - 8) = (-8 + 6!) \times 5! + 5! + 5.$$

$$85568 = 5! + 5! \times (6! - 8) + 8 = 8 + (-8 + 6!) \times 5! + 5!.$$

$$85569 = 5! + 5! \times (6! - 8) + 9 = 9 + (-8 + 6!) \times 5! + 5!.$$

### 4.3 Sequential Representations Order of Digits

$3780 = 3! \times 7!/8 + 0.$	$38447 = (3! + 8)^4 + 4! + 7.$	$59763 = 5! + (9! - 7!)/6 + 3.$
$3781 = 3! \times 7!/8 + 1.$	$38448 = (3! + 8)^4 + 4! + 8.$	$59764 = 5! + (9! - 7!)/6 + 4.$
$3782 = 3! \times 7!/8 + 2.$	$38449 = (3! + 8)^4 + 4! + 9.$	$59765 = 5! + (9! - 7!)/6 + 5.$
$3783 = 3! \times 7!/8 + 3.$	$38760 = -3!! + 8! - 7!/6 + 0.$	$59766 = 5! + (9! - 7!)/6 + 6.$
$3784 = 3! \times 7!/8 + 4.$	$38761 = -3!! + 8! - 7!/6 + 1.$	$59767 = 5! + (9! - 7!)/6 + 7.$
$3785 = 3! \times 7!/8 + 5.$	$38762 = -3!! + 8! - 7!/6 + 2.$	$59768 = 5! + (9! - 7!)/6 + 8.$
$3786 = 3! \times 7!/8 + 6.$	$38763 = -3!! + 8! - 7!/6 + 3.$	$59769 = 5! + (9! - 7!)/6 + 9.$
$3787 = 3! \times 7!/8 + 7.$	$38764 = -3!! + 8! - 7!/6 + 4.$	
$3788 = 3! \times 7!/8 + 8.$	$38765 = -3!! + 8! - 7!/6 + 5.$	$83520 = 8! + 3 \times 5!^2 + 0.$
$3789 = 3! \times 7!/8 + 9.$	$38766 = -3!! + 8! - 7!/6 + 6.$	$83521 = 8! + 3 \times 5!^2 + 1.$
$14520 = (1+4)! + 5!^2 + 0.$	$38767 = -3!! + 8! - 7!/6 + 7.$	$83522 = 8! + 3 \times 5!^2 + 2.$
$14521 = (1+4)! + 5!^2 + 1.$	$38768 = -3!! + 8! - 7!/6 + 8.$	$83523 = 8! + 3 \times 5!^2 + 3.$
$14522 = (1+4)! + 5!^2 + 2.$	$38769 = -3!! + 8! - 7!/6 + 9.$	$83524 = 8! + 3 \times 5!^2 + 4.$
$14523 = (1+4)! + 5!^2 + 3.$	$46660 = 4!/6 + 6^6 + 0.$	$83525 = 8! + 3 \times 5!^2 + 5.$
$14524 = (1+4)! + 5!^2 + 4.$	$46661 = 4!/6 + 6^6 + 1.$	$83526 = 8! + 3 \times 5!^2 + 6.$
$14525 = (1+4)! + 5!^2 + 5.$	$46662 = 4!/6 + 6^6 + 2.$	$83527 = 8! + 3 \times 5!^2 + 7.$
$14526 = (1+4)! + 5!^2 + 6.$	$46663 = 4!/6 + 6^6 + 3.$	$83528 = 8! + 3 \times 5!^2 + 8.$
$14527 = (1+4)! + 5!^2 + 7.$	$46664 = 4!/6 + 6^6 + 4.$	$83529 = 8! + 3 \times 5!^2 + 9.$
$14528 = (1+4)! + 5!^2 + 8.$	$46665 = 4!/6 + 6^6 + 5.$	
$14529 = (1+4)! + 5!^2 + 9.$	$46666 = 4!/6 + 6^6 + 6.$	$87360 = 8! \times (7+3!)/6 + 0.$
$15630 = -1 + 5^6 + 3! + 0.$	$46667 = 4!/6 + 6^6 + 7.$	$87361 = 8! \times (7+3!)/6 + 1.$
$15631 = -1 + 5^6 + 3! + 1.$	$46668 = 4!/6 + 6^6 + 8.$	$87362 = 8! \times (7+3!)/6 + 2.$
$15632 = -1 + 5^6 + 3! + 2.$	$46669 = 4!/6 + 6^6 + 9.$	$87363 = 8! \times (7+3!)/6 + 3.$
$15633 = -1 + 5^6 + 3! + 3.$	$51840 = 5! \times 18 \times 4! + 0.$	$87364 = 8! \times (7+3!)/6 + 4.$
$15634 = -1 + 5^6 + 3! + 4.$	$51841 = 5! \times 18 \times 4! + 1.$	$87365 = 8! \times (7+3!)/6 + 5.$
$15635 = -1 + 5^6 + 3! + 5.$	$51842 = 5! \times 18 \times 4! + 2.$	$87366 = 8! \times (7+3!)/6 + 6.$
$15636 = -1 + 5^6 + 3! + 6.$	$51843 = 5! \times 18 \times 4! + 3.$	$87367 = 8! \times (7+3!)/6 + 7.$
$15637 = -1 + 5^6 + 3! + 7.$	$51844 = 5! \times 18 \times 4! + 4.$	$87368 = 8! \times (7+3!)/6 + 8.$
$15638 = -1 + 5^6 + 3! + 8.$	$51845 = 5! \times 18 \times 4! + 5.$	$87369 = 8! \times (7+3!)/6 + 9.$
$15639 = -1 + 5^6 + 3! + 9.$	$51846 = 5! \times 18 \times 4! + 6.$	
$38440 = (3! + 8)^4 + 4! + 0.$	$51847 = 5! \times 18 \times 4! + 7.$	$90540 = (9! - (0! + 5)!)/4 + 0.$
$38441 = (3! + 8)^4 + 4! + 1.$	$51848 = 5! \times 18 \times 4! + 8.$	$90541 = (9! - (0! + 5)!)/4 + 1.$
$38442 = (3! + 8)^4 + 4! + 2.$	$51849 = 5! \times 18 \times 4! + 9.$	$90542 = (9! - (0! + 5)!)/4 + 2.$
$38443 = (3! + 8)^4 + 4! + 3.$	$59760 = 5! + (9! - 7!)/6 + 0.$	$90543 = (9! - (0! + 5)!)/4 + 3.$
$38444 = (3! + 8)^4 + 4! + 4.$	$59761 = 5! + (9! - 7!)/6 + 1.$	$90544 = (9! - (0! + 5)!)/4 + 4.$
$38445 = (3! + 8)^4 + 4! + 5.$	$59762 = 5! + (9! - 7!)/6 + 2.$	$90545 = (9! - (0! + 5)!)/4 + 5.$
$38446 = (3! + 8)^4 + 4! + 6.$		$90546 = (9! - (0! + 5)!)/4 + 6.$

### 4.4 Sequential Representations Reverse Order of Digits

$7920 = 0 + (2+9)!/7!.$	$13443 = 3 + (4+4)!/3 \times 1.$	$13686 = 6 + (8! + 6!)/3 \times 1.$
$7921 = 1 + (2+9)!/7!.$	$13444 = 4 + (4+4)!/3 \times 1.$	$13687 = 7 + (8! + 6!)/3 \times 1.$
$7922 = 2 + (2+9)!/7!.$	$13445 = 5 + (4+4)!/3 \times 1.$	$13688 = 8 + (8! + 6!)/3 \times 1.$
$7923 = 3 + (2+9)!/7!.$	$13446 = 6 + (4+4)!/3 \times 1.$	$13689 = 9 + (8! + 6!)/3 \times 1.$
$7924 = 4 + (2+9)!/7!.$	$13447 = 7 + (4+4)!/3 \times 1.$	$15120 = 0 + 21 \times (5+1)!.$
$7925 = 5 + (2+9)!/7!.$	$13448 = 8 + (4+4)!/3 \times 1.$	$15121 = 1 + 21 \times (5+1)!.$
$7926 = 6 + (2+9)!/7!.$	$13449 = 9 + (4+4)!/3 \times 1.$	$15122 = 2 + 21 \times (5+1)!.$
$7927 = 7 + (2+9)!/7!.$	$13680 = 0 + (8! + 6!)/3 \times 1.$	$15123 = 3 + 21 \times (5+1)!.$
$7928 = 8 + (2+9)!/7!.$	$13681 = 1 + (8! + 6!)/3 \times 1.$	$15124 = 4 + 21 \times (5+1)!.$
$7929 = 9 + (2+9)!/7!.$	$13682 = 2 + (8! + 6!)/3 \times 1.$	$15125 = 5 + 21 \times (5+1)!.$
$13440 = 0 + (4+4)!/3 \times 1.$	$13683 = 3 + (8! + 6!)/3 \times 1.$	$15126 = 6 + 21 \times (5+1)!.$
$13441 = 1 + (4+4)!/3 \times 1.$	$13684 = 4 + (8! + 6!)/3 \times 1.$	$15127 = 7 + 21 \times (5+1)!.$
$13442 = 2 + (4+4)!/3 \times 1.$	$13685 = 5 + (8! + 6!)/3 \times 1.$	$15128 = 8 + 21 \times (5+1)!.$

$15129 = 9 + 21 \times (5 + 1)!$ .	$26886 = 6 + 8 \times 8!/(6 \times 2)$ .	$53883 = 3 + 8! + 8!/3 + 5!$ .
$17280 = 0 + (8/2)! \times (7 - 1)!$ .	$26887 = 7 + 8 \times 8!/(6 \times 2)$ .	$53884 = 4 + 8! + 8!/3 + 5!$ .
$17281 = 1 + (8/2)! \times (7 - 1)!$ .	$26888 = 8 + 8 \times 8!/(6 \times 2)$ .	$53885 = 5 + 8! + 8!/3 + 5!$ .
$17282 = 2 + (8/2)! \times (7 - 1)!$ .	$26889 = 9 + 8 \times 8!/(6 \times 2)$ .	$53886 = 6 + 8! + 8!/3 + 5!$ .
$17283 = 3 + (8/2)! \times (7 - 1)!$ .	$33840 = 0 + 48 \times 3!! - 3!!.$	$53887 = 7 + 8! + 8!/3 + 5!$ .
$17284 = 4 + (8/2)! \times (7 - 1)!$ .	$33841 = 1 + 48 \times 3!! - 3!!.$	$53888 = 8 + 8! + 8!/3 + 5!$ .
$17285 = 5 + (8/2)! \times (7 - 1)!$ .	$33842 = 2 + 48 \times 3!! - 3!!.$	$53889 = 9 + 8! + 8!/3 + 5!$ .
$17286 = 6 + (8/2)! \times (7 - 1)!$ .	$33843 = 3 + 48 \times 3!! - 3!!.$	$57960 = 0 + 69 \times 7 \times 5!$ .
$17287 = 7 + (8/2)! \times (7 - 1)!$ .	$33844 = 4 + 48 \times 3!! - 3!!.$	$57961 = 1 + 69 \times 7 \times 5!$ .
$17288 = 8 + (8/2)! \times (7 - 1)!$ .	$33845 = 5 + 48 \times 3!! - 3!!.$	$57962 = 2 + 69 \times 7 \times 5!$ .
$17289 = 9 + (8/2)! \times (7 - 1)!$ .	$33846 = 6 + 48 \times 3!! - 3!!.$	$57963 = 3 + 69 \times 7 \times 5!$ .
$20160 = 0 + (6 + 1 + 0!)!/2$ .	$33847 = 7 + 48 \times 3!! - 3!!.$	$57964 = 4 + 69 \times 7 \times 5!$ .
$20161 = 1 + (6 + 1 + 0!)!/2$ .	$33848 = 8 + 48 \times 3!! - 3!!.$	$57965 = 5 + 69 \times 7 \times 5!$ .
$20162 = 2 + (6 + 1 + 0!)!/2$ .	$33849 = 9 + 48 \times 3!! - 3!!.$	$57966 = 6 + 69 \times 7 \times 5!$ .
$20163 = 3 + (6 + 1 + 0!)!/2$ .	$38160 = 0 + (61 - 8) \times 3!!.$	$57967 = 7 + 69 \times 7 \times 5!$ .
$20164 = 4 + (6 + 1 + 0!)!/2$ .	$38161 = 1 + (61 - 8) \times 3!!.$	$57968 = 8 + 69 \times 7 \times 5!$ .
$20165 = 5 + (6 + 1 + 0!)!/2$ .	$38162 = 2 + (61 - 8) \times 3!!.$	$57969 = 9 + 69 \times 7 \times 5!$ .
$20166 = 6 + (6 + 1 + 0!)!/2$ .	$38163 = 3 + (61 - 8) \times 3!!.$	$59050 = 0 + (5 \times 0)! + 9^5$ .
$20167 = 7 + (6 + 1 + 0!)!/2$ .	$38164 = 4 + (61 - 8) \times 3!!.$	$59051 = 1 + (5 \times 0)! + 9^5$ .
$20168 = 8 + (6 + 1 + 0!)!/2$ .	$38165 = 5 + (61 - 8) \times 3!!.$	$59052 = 2 + (5 \times 0)! + 9^5$ .
$20169 = 9 + (6 + 1 + 0!)!/2$ .	$38166 = 6 + (61 - 8) \times 3!!.$	$59053 = 3 + (5 \times 0)! + 9^5$ .
$23040 = 0 + (4 - 0!)!! \times 32$ .	$38167 = 7 + (61 - 8) \times 3!!.$	$59054 = 4 + (5 \times 0)! + 9^5$ .
$23041 = 1 + (4 - 0!)!! \times 32$ .	$38168 = 8 + (61 - 8) \times 3!!.$	$59055 = 5 + (5 \times 0)! + 9^5$ .
$23042 = 2 + (4 - 0!)!! \times 32$ .	$38169 = 9 + (61 - 8) \times 3!!.$	$59056 = 6 + (5 \times 0)! + 9^5$ .
$23043 = 3 + (4 - 0!)!! \times 32$ .	$39840 = 0 + 4! + 8! - 9!/3!!.$	$59057 = 7 + (5 \times 0)! + 9^5$ .
$23044 = 4 + (4 - 0!)!! \times 32$ .	$39841 = 1 + 4! + 8! - 9!/3!!.$	$59058 = 8 + (5 \times 0)! + 9^5$ .
$23045 = 5 + (4 - 0!)!! \times 32$ .	$39842 = 2 + 4! + 8! - 9!/3!!.$	$59059 = 9 + (5 \times 0)! + 9^5$ .
$23046 = 6 + (4 - 0!)!! \times 32$ .	$39843 = 3 + 4! + 8! - 9!/3!!.$	$69120 = 0 + (2 + 1)!! \times 96$ .
$23047 = 7 + (4 - 0!)!! \times 32$ .	$39844 = 4 + 4! + 8! - 9!/3!!.$	$69121 = 1 + (2 + 1)!! \times 96$ .
$23048 = 8 + (4 - 0!)!! \times 32$ .	$39845 = 5 + 4! + 8! - 9!/3!!.$	$69122 = 2 + (2 + 1)!! \times 96$ .
$23049 = 9 + (4 - 0!)!! \times 32$ .	$39846 = 6 + 4! + 8! - 9!/3!!.$	$69123 = 3 + (2 + 1)!! \times 96$ .
$23340 = 0 + (4! + 3!^{3!})/2$ .	$39847 = 7 + 4! + 8! - 9!/3!!.$	$69124 = 4 + (2 + 1)!! \times 96$ .
$23341 = 1 + (4! + 3!^{3!})/2$ .	$39848 = 8 + 4! + 8! - 9!/3!!.$	$69125 = 5 + (2 + 1)!! \times 96$ .
$23342 = 2 + (4! + 3!^{3!})/2$ .	$39849 = 9 + 4! + 8! - 9!/3!!.$	$69126 = 6 + (2 + 1)!! \times 96$ .
$23343 = 3 + (4! + 3!^{3!})/2$ .	$53240 = 0 + (4! - 2)^3 \times 5$ .	$69127 = 7 + (2 + 1)!! \times 96$ .
$23344 = 4 + (4! + 3!^{3!})/2$ .	$53241 = 1 + (4! - 2)^3 \times 5$ .	$69128 = 8 + (2 + 1)!! \times 96$ .
$23345 = 5 + (4! + 3!^{3!})/2$ .	$53242 = 2 + (4! - 2)^3 \times 5$ .	$69129 = 9 + (2 + 1)!! \times 96$ .
$23346 = 6 + (4! + 3!^{3!})/2$ .	$53243 = 3 + (4! - 2)^3 \times 5$ .	$72590 = 0 + 9!/5 + 2 \times 7$ .
$23347 = 7 + (4! + 3!^{3!})/2$ .	$53244 = 4 + (4! - 2)^3 \times 5$ .	$72591 = 1 + 9!/5 + 2 \times 7$ .
$23348 = 8 + (4! + 3!^{3!})/2$ .	$53245 = 5 + (4! - 2)^3 \times 5..$	$72592 = 2 + 9!/5 + 2 \times 7$ .
$23349 = 9 + (4! + 3!^{3!})/2$ .	$53246 = 6 + (4! - 2)^3 \times 5$ .	$72593 = 3 + 9!/5 + 2 \times 7$ .
$26880 = 0 + 8 \times 8!/(6 \times 2)$ .	$53247 = 7 + (4! - 2)^3 \times 5$ .	$72594 = 4 + 9!/5 + 2 \times 7$ .
$26881 = 1 + 8 \times 8!/(6 \times 2)$ .	$53248 = 8 + (4! - 2)^3 \times 5$ .	$72595 = 5 + 9!/5 + 2 \times 7$ .
$26882 = 2 + 8 \times 8!/(6 \times 2)$ .	$53249 = 9 + (4! - 2)^3 \times 5$ .	$72596 = 6 + 9!/5 + 2 \times 7$ .
$26883 = 3 + 8 \times 8!/(6 \times 2)$ .	$53880 = 0 + 8! + 8!/3 + 5!$ .	$72597 = 7 + 9!/5 + 2 \times 7$ .
$26884 = 4 + 8 \times 8!/(6 \times 2)$ .	$53881 = 1 + 8! + 8!/3 + 5!$ .	$72598 = 8 + 9!/5 + 2 \times 7$ .
$26885 = 5 + 8 \times 8!/(6 \times 2)$ .	$53882 = 2 + 8! + 8!/3 + 5!$ .	$72599 = 9 + 9!/5 + 2 \times 7$ .

#### 4.5 Sequential Representations in Increasing Order of Digits

$2160 = 0 + (1 + 2) \times 6!$ .	$3781 = 1 + 3! \times 7!/8$ .	$3786 = 3! + 6 \times 7!/8$ .
$2161 = 1 + (1 + 2) \times 6!$ .	$3782 = 2 + 3! \times 7!/8$ .	$3788 = 3! \times 7!/8 + 8$ .
$3780 = 0 + 3! \times 7!/8$ .	$3783 = 3 + 3! \times 7!/8$ .	

$3789 = 3! \times 7!/8 + 9.$	$34626 = 2 \times 3!! \times 4! + 66.$	$57467 = 4 \times 5^6 + 7 - 7!.$
$5171 = 11 + 5! + 7!.$	$34627 = 2 \times 3!! \times 4! + 67.$	$57468 = 4 \times 5^6 - 7! + 8.$
$5172 = 12 + 5! + 7!.$	$34628 = 2 \times 3!! \times 4! + 68.$	$57469 = 4 \times 5^6 - 7! + 9.$
$5173 = 13 + 5! + 7!.$	$34629 = 2 \times 3!! \times 4! + 69.$	$66240 = 0 + 2 \times 46 \times 6!.$
$5174 = 14 + 5! + 7!.$	$39793 = 33 - (7! - 9!)/9.$	$66241 = 1 + 2 \times 46 \times 6!.$
$5175 = 15 + 5! + 7!.$	$39794 = 34 - (7! - 9!)/9.$	$66242 = 2 + 2 \times 46 \times 6!.$
$10067 = -0! + (0! + 1) \times (-6 + 7!).$	$39795 = 35 - (7! - 9!)/9.$	$66246 = 2 \times 46 \times 6! + 6.$
$10073 = -0! + (0! + 1) \times (-3 + 7!).$	$39796 = 36 - (7! - 9!)/9.$	$66247 = 2 \times 46 \times 6! + 7.$
$10088 = (0! + 0!) \times (-1 + 8)! + 8.$	$39797 = 37 - (7! - 9!)/9.$	$66248 = 2 \times 46 \times 6! + 8.$
$10089 = (0! + 0!) \times (-1 + 8)! + 9.$	$46660 = 0 + 4!/6 + 6^6.$	$66249 = 2 \times 46 \times 6! + 9.$
$15506 = 01 - 5! + 5^6.$	$46661 = 1 + 4!/6 + 6^6.$	$67540 = 0 + 4 \times 5^6 + 7!.$
$15516 = 11 - 5! + 5^6.$	$46662 = 2 + 4!/6 + 6^6.$	$67541 = 1 + 4 \times 5^6 + 7!.$
$25942 = 22 + 4! \times 5! \times 9.$	$46663 = 3 + 4!/6 + 6^6.$	$67542 = 2 + 4 \times 5^6 + 7!.$
$25943 = 23 + 4! \times 5! \times 9.$	$46664 = 4 + 4!/6 + 6^6.$	$67543 = 3 + 4 \times 5^6 + 7!.$
$25944 = 24 + 4! \times 5! \times 9.$	$46666 = 4!/6 + 6^6 + 6.$	$67544 = 4 + 4 \times 5^6 + 7!.$
$33840 = 0 - 3!! + 3!! \times 48.$	$46667 = 4!/6 + 6^6 + 7.$	$67546 = 4 \times 5^6 + 6 + 7!.$
$33841 = 1 - 3!! + 3!! \times 48.$	$46668 = 4!/6 + 6^6 + 8.$	$67547 = 4 \times 5^6 + 7 + 7!.$
$33842 = 2 - 3!! + 3!! \times 48.$	$46669 = 4!/6 + 6^6 + 9.$	$67548 = 4 \times 5^6 + 7! + 8.$
$33843 = 3 - 3!! + 3!! \times 48.$	$57460 = 0 + 4 \times 5^6 - 7!.$	$67549 = 4 \times 5^6 + 7! + 9.$
$33848 = -3!! + 3!! \times 48 + 8.$	$57461 = 1 + 4 \times 5^6 - 7!.$	$90720 = 0 + 0 + 2 \times 7! \times 9.$
$33849 = -3!! + 3!! \times 48 + 9.$	$57462 = 2 + 4 \times 5^6 - 7!.$	$90721 = 0 + 1 + 2 \times 7! \times 9.$
	$57463 = 3 + 4 \times 5^6 - 7!.$	$90722 = 0 + 2 + 2 \times 7! \times 9.$
	$57464 = 4 + 4 \times 5^6 - 7!.$	
	$57466 = 4 \times 5^6 + 6 - 7!.$	

#### 4.6 Sequential Representations in Decreasing Order of Digits

$2520 = (5 + 2)!/2 + 0.$	$20167 = 7 + (6 + 2)!/(1 + 0!).$	$30243 = (4 + 3)! \times 3! + 3 + 0!.$
$2521 = (5 + 2)!/2 + 1.$	$20168 = 8 + (6 + 2)!/(1 + 0!).$	$31255 = (5 + 5^{3!} \times 2) \times 1.$
$2522 = (5 + 2)!/2 + 2.$	$20169 = 9 + (6 + 2)!/(1 + 0!).$	$31256 = (6 + 5^{3!} \times 2) \times 1.$
$2525 = 5 + (5 + 2)!/2.$	$23344 = 4 + (4! + 3!^{3!})/2.$	$31257 = (7 + 5^{3!} \times 2) \times 1.$
$2526 = 6 + (5 + 2)!/2.$	$23345 = 5 + (4! + 3!^{3!})/2.$	$31258 = (8 + 5^{3!} \times 2) \times 1.$
$2527 = 7 + (5 + 2)!/2.$	$23346 = 6 + (4! + 3!^{3!})/2.$	$31259 = (9 + 5^{3!} \times 2) \times 1.$
$2528 = 8 + (5 + 2)!/2.$	$23347 = 7 + (4! + 3!^{3!})/2.$	$34624 = 64 + 4! \times 3!! \times 2.$
$2529 = 9 + (5 + 2)!/2.$	$23348 = 8 + (4! + 3!^{3!})/2.$	$34625 = 65 + 4! \times 3!! \times 2.$
$5170 = 7! + 5! + 10.$	$23349 = 9 + (4! + 3!^{3!})/2.$	$34626 = 66 + 4! \times 3!! \times 2.$
$5171 = 7! + 5! + 11.$	$25940 = 9 \times 5! \times 4! + 20.$	$35280 = 8! - (-5 + 3! \times 2)! + 0.$
$13444 = 4 + (4 + 4)!/3 \times 1.$	$25941 = 9 \times 5! \times 4! + 21.$	$35281 = 8! - (-5 + 3! \times 2)! + 1.$
$13445 = 5 + (4 + 4)!/3 \times 1.$	$25942 = 9 \times 5! \times 4! + 22.$	$35282 = 8! - (-5 + 3! \times 2)! + 2.$
$13446 = 6 + (4 + 4)!/3 \times 1.$	$27360 = 76 \times 3!!/2 + 0.$	$37807 = 8! + 7 - 7!/(3 - 0!).$
$13447 = 7 + (4 + 4)!/3 \times 1.$	$27361 = 76 \times 3!!/2 + 1.$	$37808 = 8! + 8 - 7!/(3 - 0!).$
$13448 = 8 + (4 + 4)!/3 \times 1.$	$27362 = 76 \times 3!!/2 + 2.$	$37809 = 9 + 8! - 7!/(3 - 0!).$
$13449 = 9 + (4 + 4)!/3 \times 1.$	$27367 = 7 + 76 \times 3!!/2.$	$38521 = 8! - 5 \times 3!!/2 + 1.$
$15633 = 6 + 5^{3!} + 3 - 1.$	$27368 = 8 + 76 \times 3!!/2.$	$38522 = 8! - 5 \times 3!!/2 + 2.$
$15635 = 6 + 5 + 5^{3!} - 1.$	$27369 = 9 + 76 \times 3!!/2.$	$38525 = 8! + 5 - 5 \times 3!!/2.$
$17288 = 8 + 8!/7 \times (2 + 1).$	$30240 = (4 + 3)! \times 3! + 0 + 0!.$	$38526 = 8! + 6 - 5 \times 3!!/2.$
$17289 = 9 + 8!/7 \times (2 + 1).$	$30241 = (4 + 3)! \times 3! + 1 + 0!.$	$38527 = 8! + 7 - 5 \times 3!!/2.$
$20166 = 6 + (6 + 2)!/(1 + 0!).$	$30242 = (4 + 3)! \times 3! + 2 + 0!.$	$38528 = 8! + 8 - 5 \times 3!!/2.$

$38529 = 9 + 8! - 5 \times 3!!/2.$	$40447 = 7 + (4 + 4)! + (4 + 0!)!.$	$60482 = 8! \times 6/4 + 2 \times 0!.$
$38760 = 8! - 7!/6 - 3!! + 0.$	$40448 = 8 + (4 + 4)! + (4 + 0!)!.$	$60483 = 8! \times 6/4 + 3 \times 0!.$
$38761 = 8! - 7!/6 - 3!! + 1.$	$40449 = 9 + (4 + 4)! + (4 + 0!)!.$	$60484 = 8! \times 6/4 + 4 \times 0!.$
$38762 = 8! - 7!/6 - 3!! + 2.$	$40489 = 9 + 8! + 4 \times 40.$	$69130 = 96 \times 3!! + 10.$
$38763 = 8! - 7!/6 - 3!! + 3.$	$43280 = 8! + 4 \times (3!! + 20).$	$69131 = 96 \times 3!! + 11.$
$38764 = 8! - 7!/6 + 4 - 3!!.$	$43328 = 8! + 4 \times (3!! + 32).$	$73590 = (9! + 7!)/5 + 3! + 0.$
$38765 = 8! - 7!/6 + 5 - 3!!.$	$46080 = -8! + 6! \times (4 + 1)! + 0.$	$73591 = (9! + 7!)/5 + 3! + 1.$
$38766 = 8! - 7!/6 + 6 - 3!!.$	$46081 = -8! + 6! \times (4 + 1)! + 0!.$	$73592 = (9! + 7!)/5 + 3! + 2.$
$38767 = 8! + 7 - 7!/6 - 3!!.$	$51970 = 9!/7 + 5! + 10.$	$73593 = (9! + 7!)/5 + 3! + 3.$
$38768 = 8! + 8 - 7!/6 - 3!!.$	$51971 = 9!/7 + 5! + 11.$	$73594 = (9! + 7!)/5 + 4 + 3!.$
$38769 = 9 + 8! - 7!/6 - 3!!.$	$59055 = 9^5 + 5 + (5 \times 0)!.$	$73595 = (9! + 7!)/5 + 5 + 3!.$
$40311 = (4!/3)! + 1 - 10.$	$59059 = 9 + 9^5 + (5 \times 0)!.$	$83523 = 8! + 5! \times 3!!/2 + 3.$
$40312 = (4!/3)! + 2 - 10.$	$59760 = (9! - 7!)/6 + 5! + 0.$	$83525 = 8! + 5 + 5! \times 3!!/2.$
$40313 = (4!/3)! + 3 - 10.$	$59761 = (9! - 7!)/6 + 5! + 1.$	$83526 = 8! + 6 + 5! \times 3!!/2.$
$40314 = 4 + (4!/3)! - 10.$	$59762 = (9! - 7!)/6 + 5! + 2.$	$83527 = 8! + 7 + 5! \times 3!!/2.$
$40315 = 5 + (4!/3)! - 10.$	$59763 = (9! - 7!)/6 + 5! + 3.$	$87360 = 8! \times (7 + 6)/3! + 0.$
$40316 = 6 + (4!/3)! - 10.$	$59764 = (9! - 7!)/6 + 5! + 4.$	$87361 = 8! \times (7 + 6)/3! + 1.$
$40317 = 7 + (4!/3)! - 10.$	$59765 = (9! - 7!)/6 + 5! + 5.$	$87362 = 8! \times (7 + 6)/3! + 2.$
$40318 = 8 + (4!/3)! - 10.$	$60480 = 8! \times 6/4 + 0 \times 0!.$	$87363 = 8! \times (7 + 6)/3! + 3.$
$40319 = 9 + (4!/3)! - 10.$	$60481 = 8! \times 6/4 + 1 \times 0!.$	
$40445 = 5 + (4 + 4)! + (4 + 0!)!.$		
$40446 = 6 + (4 + 4)! + (4 + 0!)!.$		

## 5 Non Sequential Selfie Numbers

This section deals with *selfie numbers* not appearing in previous section, i.e., we don't have symmetrical relations similar to above section.

### 5.1 Selfie Numbers in Order of Digits

$127 = -1 + 2^7.$	$2995 = -29 + 9!/5!.$	$4363 = 43 + 6 \times 3!!.$
$240 = 2 \times (4 + 0!)!.$	$3354 = 4 \times (5! + 3!!) - 3!.$	$4480 = (4 + 4)!/(8 + 0!)!$
$343 = (3 + 4)^3.$	$3376 = -3!! + (-3 + 7)^6.$	$4560 = -4 \times 5! + (6 + 0!)!.$
$360 = 3! \times 60.$	$3453 = 3!! \times 4!/5 - 3.$	$5016 = -(5 - 0!)! + (1 + 6)!.$
$660 = 6! - 60.$	$3465 = (-3 - 4! + 6!) \times 5.$	$5040 = (5 + 0! + (4 \times 0!)!)!.$
$688 = 8 \times 86.$	$3528 = (3! + 5!) \times 28.$	$5064 = ((5 \times 0)! + 6)! + 4!.$
$693 = 6! - 9 \times 3.$	$3550 = 3!! \times 5 - 50.$	$5177 = 5! + 17 + 7!.$
$715 = (7 - 1)! - 5.$	$3565 = -35 + 6! \times 5.$	$5184 = 5! + (-1 + 8)! + 4!.$
$736 = 7 + 3^6.$	$3584 = 3!! \times 5 + 8 - 4!.$	$5275 = 5! \times 2 + 7! - 5.$
$1285 = (1 + 2^8) \times 5.$	$3585 = (3!! + 5 - 8) \times 5.$	$5280 = 5! \times 2 + (8 - 0!)!.$
$1426 = -14 + 2 \times 6!.$	$3615 = (3 + 6!) \times 1 \times 5.$	$5395 = -(5! - 3!!) \times 9 - 5.$
$1435 = (-1 + 4)!! + 3!! - 5.$	$3654 = (3! + 6!) \times 5 + 4!.$	$5875 = 5! + 8!/7 - 5.$
$1442 = (1 + (4!/4)!) \times 2.$	$3655 = (3!! + 6 + 5) \times 5.$	$5880 = 5! + 8!/(8 - 0!)!$
$1573 = (1 + 5!) \times (7 + 3!!).$	$3685 = (3^6 + 8) \times 5.$	$6455 = (6^4 - 5) \times 5.$
$1673 = -1 - 6 + 7!/3.$	$3744 = -3!! + 7! - 7!/4.$	$6552 = (6 + 5!) \times 52.$
$1704 = (1 + 70) \times 4!.$	$3755 = (3!! + 7) \times 5 + 5!.$	$6768 = (6 + 7!/6) \times 8.$
$2048 = 2^{-0!+4+8}.$	$3774 = -3! + 7! - 7!/4.$	$6835 = (6! + 8!)/3! - 5.$
$2187 = (2 + 1^8)^7.$	$3864 = 3 \times (-8 + 6^4).$	$6840 = (6! + 8!)/(4 - 0!)!.$
$2472 = -2 \times 4! + 7!/2.$	$3957 = -3 - 9 \times 5! + 7!.$	$6864 = (6! + 8!)/6 + 4!.$
$2496 = (2 + 4!) \times 96.$	$3972 = 3 + (9 \times 7)^2.$	$7056 = (7 - 0!)^5 - 6!.$
$2502 = 2 + 50^2.$	$4096 = 4^{0 \times 9+6}.$	$7193 = -7 + (1 + 9) \times 3!!.$
$2592 = 2^5 \times 9^2.$	$4176 = (-4! + (-1 + 7)!) \times 6.$	$7235 = (7 + 2 \times 3!!) \times 5.$
$2737 = (2 \times 7)^3 - 7.$	$4296 = -4! + (-2 + 9)! - 6!.$	$7595 = 7 \times (5 + 9 \times 5!).$
$2864 = -2 \times 8 + 6! \times 4.$	$4324 = 4 + 3! \times (2 + 4)!.$	$7985 = -79 + 8!/5.$
	$4330 = 4 + 3! \times (3!! + 0!)!.$	$8057 = 8!/(0 + 5) - 7.$

$$\begin{aligned}
8062 &= 8!/(-0! + 6) - 2. \\
8064 &= 8!/((0/6)! + 4). \\
8065 &= (8! - 0! + 6)/5. \\
8405 &= (8!/4! + 0!) \times 5. \\
8648 &= 8 + 6! \times (4 + 8). \\
10000 &= 100^{0!+0!}. \\
10024 &= 100^2 + 4!. \\
10072 &= -10 + (0! + 7!) \times 2. \\
10075 &= (1 + 0!) \times (0 + 7!) - 5. \\
10076 &= (1 + 0!) \times (0! + 7!) - 6. \\
10944 &= (10 + 9) \times 4! \times 4!. \\
11264 &= 11 \times 2^{6+4}. \\
11349 &= (1 + (1 + 3!)!/4) \times 9. \\
11495 &= (1 + (1 + 4)!) \times 95. \\
11520 &= (1 + 15) \times (2 + 0!)!!. \\
11528 &= (1 + (1 + 5)! \times 2) \times 8. \\
11544 &= 1 \times (1 + 5! \times 4) \times 4!. \\
11664 &= 1 \times 1 \times 6^6/4. \\
11957 &= 11 \times (9 \times 5! + 7). \\
12096 &= (1 + 2 + 0!)! \times 9!/6!. \\
12240 &= (1 + 2)!! \times (2^4 + 0!). \\
12294 &= (1 + 2)! + 2^9 \times 4!. \\
12850 &= (1 + 2^8) \times 50. \\
12955 &= 12 \times 9 \times 5! - 5. \\
13392 &= ((1 + 3)! + 3!!) \times 9 \times 2. \\
13433 &= -1 - 3! + (4!/3)!/3. \\
13435 &= (1 + 3 + 4)!/3 - 5. \\
13439 &= -1 + 3 \times (4!/3)!/9. \\
13440 &= (1 + 3 + 4)!/(4 - 0!). \\
13443 &= 1 \times 3 + (4 + 4)!/3. \\
13452 &= -1 - 3 + (-4 + 5!)^2. \\
13537 &= 1 + 3!^5 + 3!! + 7!. \\
13583 &= -1 + 3!!/5 + 8!/3. \\
13661 &= (13 + 6) \times (6! - 1). \\
13683 &= 1 \times (3^6 + 8!)/3. \\
13823 &= -1 + (3! \times 8/2)^3. \\
13825 &= 1 + (3 \times 8)^{-2+5}. \\
14320 &= -1 \times (4 - 3!!) \times 20. \\
14352 &= 1 \times 4! \times (3!! - 5! - 2). \\
14365 &= (-1 + 4 \times 3!! - 6) \times 5. \\
14376 &= -1 \times 4! + 3 \times 7! - 6!. \\
14394 &= -(-1 + 4)! - 3!! + 9!/4!. \\
14395 &= (-1 + 4 \times (-3 + 9)!) \times 5. \\
14420 &= (1 + ((4!/4)!!)) \times 20. \\
14424 &= (1 + 4)!^{4-2} + 4!. \\
14425 &= (1 + 4! \times 4!) \times 25. \\
14637 &= (1 - 4! + 6!) \times 3 \times 7. \\
14640 &= (1 + 4 + 6)^4 - 0!. \\
14641 &= (1 + 4 + 6)^4 \times 1. \\
14689 &= 1 + 4! \times 68 \times 9. \\
14755 &= (-1 + 4) \times (7! - 5!) - 5. \\
14760 &= (-1 + 4) \times (7! - (6 - 0)!!). \\
14784 &= (-14 + 7!/8) \times 4!. \\
14973 &= -1 \times (49 - 7!) \times 3. \\
14994 &= -14 \times 9 + 9!/4!. \\
15093 &= ((1 + 5 + 0)!! - 9) \times 3. \\
15117 &= (1 - (5 - 1)) \times (1 - 7!). \\
15121 &= 1 + (5 + 1)! \times 21.
\end{aligned}$$

$$\begin{aligned}
15123 &= (1 + (-5 + 12)!!) \times 3. \\
15125 &= (1 + 5!) \times 125. \\
15232 &= (-1 + 5!) \times 2^{3!} \times 2. \\
15237 &= -1 + 5! - 2 + 3 \times 7!. \\
15273 &= (-1 + 52 + 7!) \times 3. \\
15367 &= (1 + 5!) \times (3!!/6 + 7). \\
15488 &= (1 + 5!) \times (4! - 8) \times 8. \\
15504 &= -1 - 5! + 5^{(-0!+4)!}. \\
15505 &= 1 \times 5^{5+0!} - 5!. \\
15506 &= 1 - 5! + 5^{06}. \\
15552 &= (15/5)!^5 \times 2. \\
15609 &= (1 + 5!) \times ((6 - 0)!! + 9). \\
15612 &= -1 + 5^6 - 12. \\
15613 &= 1 + 5^6 - 13. \\
15617 &= 1 \times 5^6 - 1 - 7. \\
15618 &= 1 \times 5^6 + 1 - 8. \\
15620 &= 1 + 5^6 - (2 + 0!)!. \\
15621 &= -1 + 5^6 - 2 - 1. \\
15622 &= 1 + 5^6 - 2 - 2. \\
15623 &= -1 + 5^6 + 2 - 3. \\
15624 &= 1 + 5^6 + 2 - 4. \\
15626 &= 1 + 5^{2/6}. \\
15642 &= 1 + 5^6 + 4^2. \\
15643 &= 1 \times 5^6 + 4! - 3!. \\
15644 &= -1 + 5^6 + 4! - 4. \\
15645 &= 1 \times 5^6 + 4 \times 5. \\
15648 &= -1 + 5^6 + (-4 + 8)!. \\
15650 &= 1 + 5^6 + (5 - 0)!. \\
15654 &= 1 \times 5^6 + 5 + 4!. \\
15656 &= 1 + 5^6 + 5 \times 6. \\
15662 &= 1 + 5^6 + 6^2. \\
15667 &= 1 \times 5^6 + 6 \times 7. \\
15688 &= -1 + 5^6 + 8 \times 8. \\
15697 &= 1 \times 5^6 + 9!/7!. \\
15698 &= 1 + 5^6 + 9 \times 8. \\
15745 &= 1 \times 5^{(7-4)!} + 5!. \\
15753 &= 1 + 5! + 7 + 5^{3!}. \\
15864 &= (-1 - 58 + 6!) \times 4!. \\
16245 &= (1 + 6!/2) \times 45. \\
16347 &= -1 - 6 \times 3! + 4^7. \\
16377 &= (1 + 6 - 3)^7 - 7. \\
16383 &= -1 + (6/3)^{8+3!}. \\
16447 &= -1 + 64 + 4^7. \\
16564 &= -1 - 6! + 5 + 6! \times 4!. \\
16795 &= (-1 + 6 \times 7!/9) \times 5. \\
16875 &= 1 \times 68 + 7^5. \\
17064 &= (-1 - 7 - 0! + 6!) \times 4!. \\
17159 &= -1 + (7 + 1 + 5)!/9!. \\
17246 &= -17 \times 2 + 4! \times 6!. \\
17263 &= -17 + (-2 + 6)! \times 3!. \\
17264 &= -(1 + 7) \times 2 + 6! \times 4!. \\
17283 &= (1 + 7! + (-2 + 8)!) \times 3. \\
17284 &= (1 + 7! - (-2 + 8)!) \times 4. \\
17304 &= 4 \times (0! + 3!!) \times (7 - 1). \\
17424 &= (-1 + 7 + (4 + 2)!) \times 4!. \\
17472 &= 1 \times 7 \times (-4! + 7!/2). \\
17496 &= (1 + 7 - 4)! \times (9 + 6!). \\
17526 &= 1 + 7^5 - 2 + 6!. \\
17528 &= 1 + 7^5 + (-2 + 8)!. \\
17533 &= 1 \times 7^5 + 3! + 3!!.
\end{aligned}$$

$$\begin{aligned}
25137 &= 2 + 5 \times (-13 + 7!). \\
25165 &= ((2 + 5)! - 1 - 6) \times 5. \\
25183 &= -2 + 5 \times ((-1 + 8)! - 3). \\
25185 &= (2 - 5 + (-1 + 8)!) \times 5. \\
25189 &= -2 + 5 \times (-1 + 8)! - 9. \\
25195 &= ((2 + 5)! - 1^9) \times 5. \\
25197 &= 2 - 5 \times (1^9 - 7!). \\
25198 &= -2 + 5 \times (-1^9 + 8)! . \\
25207 &= 2 + 5 \times ((2 \times 0)! + 7!). \\
25208 &= -2 + 5 \times (2 + (-0! + 8)!) . \\
25217 &= 2 + 5 \times (2 + 1 + 7!). \\
25335 &= ((2 + 5)! + 3^3) \times 5. \\
25337 &= 2 + 5 \times (3^3 + 7!). \\
25344 &= ((2 + 5)! + 3!^4) \times 4. \\
25375 &= (2^5 + 3 + 7!) \times 5. \\
25395 &= ((2 + 5)! + 39) \times 5. \\
25397 &= 2 + 5 \times (39 + 7!). \\
25775 &= (2 + 5! - 7 + 7!) \times 5. \\
25893 &= -3 \times 9 + 8! - 5!^2. \\
25914 &= -(-2 + 5)! + 9!/14. \\
25922 &= 2 + 5! \times 9 \times (2^2)! . \\
25927 &= 2 + 5 + 9!/2 \times 7). \\
25944 &= (2 + 5! \times 9) \times 4! - 4!. \\
25945 &= 25 + 9 \times 4! \times 5!. \\
26364 &= 26^3 \times 6/4. \\
26496 &= (2 + 6)! - 4!^{9-6}. \\
26638 &= -(2 + 6!) + 6! \times 38. \\
26832 &= (-(2 + 6)! + 8!/3) \times 2. \\
26864 &= (2 - 6 + 8!/6) \times 4. \\
26868 &= 2 \times (-6 - 8!/6) + 8!. \\
26879 &= -((2 - ((6 \times 8!) - 7))/9). \\
26884 &= 2 \times (6 + 8!) \times 8/4!. \\
27639 &= 2^7 \times 6^3 - 9. \\
27648 &= 2^7 \times 6^{4!8}. \\
28224 &= (2 + 82)^2 \times 4. \\
28320 &= 2 \times (8!/3 + (2 + 0!)!!). \\
28438 &= -2 + 8! - (4 \times 3)!/8!. \\
28559 &= -2 + (8 + 5)^{-5+9}. \\
28576 &= (2^8 + 5!) \times 76. \\
28704 &= (-2^8 + 7!) \times (-0! + 4)!. \\
28775 &= (2 + 8!/7 - 7) \times 5. \\
28805 &= ((-2 + 8)! \times 8 + 0!) \times 5. \\
29282 &= 2 \times (9 + 2)^{8/2}. \\
29520 &= ((-2 + 9)! - 5!) \times (2 + 0!)!. \\
29524 &= (2 \times 9^5 - 2)/4. \\
29576 &= 2 + (9 - 5! + 7!) \times 6. \\
29676 &= (2 - 96 + 7!) \times 6. \\
29728 &= -2^9 + 7! \times (-2 + 8). \\
30186 &= ((3! + 0!)! - 1 - 8) \times 6. \\
30228 &= ((3! + 0!)! - 2) \times (-2 + 8). \\
30252 &= 3! \times (0 + 2 + (5 + 2)!). \\
30270 &= 3! \times ((0! + 2)! + 7! - 0!). \\
30288 &= 3! \times ((0! - 2 + 8)! + 8). \\
30312 &= 3! \times ((0! + 3!)! + 12). \\
30354 &= 3! \times ((0! + 3!)! - 5 + 4!). \\
30360 &= (3! - 0!)! + 3! \times (6 + 0!)!. \\
30372 &= 3! \times ((0! + 3!)! + 7! - 2). \\
30377 &= 3! \times ((0! + 3!)! + 7!) - 7. \\
30384 &= 3! \times ((0! + 3!)! + (8 - 4)!) .
\end{aligned}$$

$$\begin{aligned}
30532 &= -3!! + (0! + 5^{3!}) \times 2. \\
30672 &= 3! \times ((0! + 6)! + 72). \\
30792 &= 3! \times ((0 + 7)! + 92). \\
30955 &= 3!! + (0! + 9)!/5! - 5. \\
30960 &= 3!! + (0! + 9)!/(6 - 0!)!. \\
31253 &= 3 + 1 \times 2 \times 5^{3!}. \\
31256 &= 3! + 1 \times 2 \times 5^6. \\
31995 &= (3!! - 1 \times 9) \times 9 \times 5. \\
32048 &= -3!! + 2^{-0!+4!-8}. \\
32085 &= -3!! + (2 + 0!)^8 \times 5. \\
32256 &= (3! - 2!)^2 \times 56. \\
32355 &= 3^2 \times (3!! \times 5 - 5). \\
32394 &= -3 \times (2 + 3!! \times (9 - 4!)). \\
32400 &= ((3 \times 2!)!/4)^{0!+0!}. \\
32424 &= ((3 \times 2!)!/4)^2 + 4!. \\
32538 &= -(3 \times 2)^5 - 3! + 8!. \\
32544 &= -(3 \times 2)^5 + (4 + 4)!. \\
32548 &= -(3 \times 2)^5 + 4 + 8!. \\
32744 &= 3^{7-4} - 4!. \\
32759 &= (3 - 2 + 7)^5 - 9. \\
32760 &= (-3!!/2 + 7!) \times (6 + 0!). \\
32762 &= -3! + 2^{7+6+2}. \\
32765 &= -3 + (2 \times 7 - 6)^5. \\
32771 &= 3 + 2^{7+7+1}. \\
32772 &= 3! \times (2 + 7!) + 7!/2. \\
32785 &= (3 + 2 \times 7) + 8^5. \\
32804 &= 3^{12} + 8^{0!+4}. \\
32805 &= (3!/2)^8 \times 05. \\
32835 &= ((3!/2)^8 + 3!) \times 5. \\
32848 &= 3!! - 2 \times 8^4 + 8!. \\
32977 &= (-329 + 7!) \times 7. \\
32992 &= (32 + 9!) / (9 + 2). \\
32994 &= (3!!/2 - 9) \times 94. \\
33144 &= (3!! + 3!) \times (-1 + 4!) + 4!. \\
33482 &= 3!! - 3! + 4^8/2. \\
33495 &= (3 + (3!! + 4!) \times 9) \times 5. \\
33585 &= (-3 + (3!! + 5!) \times 8) \times 5. \\
33741 &= (-3!! + 3^7) \times (4! - 1). \\
33839 &= -3/3 + 8! - 3!! \times 9. \\
33840 &= 3!! \times 3! \times 8 - (4 \times 0!). \\
33852 &= 3! \times (3!! \times 8 - 5! + 2). \\
33876 &= 3! \times (3! + 8!/7) - 6!. \\
33885 &= 3! - 3^8 + 8! + 5!. \\
33984 &= 3! \times ((3!! - 9) \times 8 - 4!). \\
34224 &= (3!! + 4!) \times (22 + 4!). \\
34344 &= (3 + 4!) \times (3!^4 - 4!). \\
34377 &= (-3 \times 43 + 7!) \times 7. \\
34425 &= 3^4 \times 425. \\
34432 &= (3!! \times 4! - 4^3) \times 2. \\
34440 &= 3!! \times (4! + 4!) - (4 + 0!)!. \\
34480 &= 3!! \times (4! + 4!) - 80. \\
34488 &= -3^{4!4} \times 8 + 8!. \\
34512 &= (3!! \times 4! - (5 - 1)!) \times 2. \\
34528 &= (-3!! - 4 + (5 + 2)!) \times 8. \\
34536 &= 3! \times (-4 + (5 + 3) \times 6!). \\
34544 &= (3 \times 4! \times 5! - 4) \times 4. \\
34550 &= (3!! - 4! - 5) \times 50. \\
34602 &= (-3 + 4! \times (6! + 0!)) \times 2. \\
34648 &= (3!! + 4 + 6!) \times 4! - 8. \\
34650 &= (-3 - 4! + 6!) \times 50. \\
34686 &= -((3 - (4! + (6! \times 8))) \times 6. \\
34704 &= (3!! + 4! + 7!) \times (-0! + 4!). \\
34713 &= (-3^4 + 7!) \times (1 + 3!). \\
34727 &= (-3^4 + 7! + 2) \times 7. \\
34752 &= 3 \times 4^7 - 5!^2. \\
34776 &= (-3 \times 4! + 7!) \times 7!/6!. \\
34848 &= (3!! + (4!/8)!) \times 48. \\
34968 &= 3! \times (-4 + (9 + 6!) \times 8). \\
34992 &= 3!^4 \times (9 + 9 \times 2). \\
35037 &= -3^5 + (0! + 3!) \times 7!. \\
35231 &= (-3 + 52) \times (3!! - 1). \\
35270 &= -3 + (5 + 2) \times (7! - 0!). \\
35272 &= 3! + (5 + 2) \times (7! - 2). \\
35273 &= (-3!! + (5 \times 2)!) \times 7/3!!. \\
35274 &= (3 + 5)! - 2 - 7! - 4. \\
35304 &= (3 + 5)! - (3! + 0!)! + 4!. \\
35328 &= (3!!/5 - 3!) \times 2^8. \\
35424 &= (3 + 5!) \times 4!/2 \times 4!. \\
35672 &= (3 + 5 + 6!) \times 7^2. \\
35721 &= 3^5 \times 7 \times 21. \\
35793 &= 3 \times 97 \times (5! + 3). \\
35850 &= (3!! + 5 - 8) \times 50. \\
35880 &= 3!! - 5! + 8! - (8 - 0!)!. \\
35910 &= (3!! \times 5 - 9) \times 10. \\
35928 &= -3 \times 5! + 9!/(2 + 8). \\
35995 &= 3! \times (59 - 9) - 5. \\
36000 &= 3! \times 6000. \\
36007 &= 3!! + (6 + 0!) \times (0! + 7!). \\
36025 &= (3!! + 6! + 0!) \times 25. \\
36049 &= 3!! + (6! + 0!) \times 49. \\
36050 &= (3!! + (6 \times 0!)!) \times 50. \\
36051 &= -3!! + (6! + 0!) \times 51. \\
36150 &= (3 + 6!) \times 1 \times 50. \\
36250 &= (3 + 6! + 2) \times 50. \\
36284 &= (3 + 6)/(2 + 8) - 4. \\
36432 &= (3^6 \times 4! + 3!!) \times 2. \\
36438 &= (3! - 6^4 \times 3) + 8!. \\
36550 &= (3!! + 6 + 5) \times 50. \\
36585 &= -(3 + 6!) \times 5 + 8! - 5!. \\
36720 &= 3!! + 6! \times (7^2 + 0!). \\
36744 &= 3 \times 6! \times (-7 + 4!) + 4!. \\
36850 &= (3^6 + 8) \times 50. \\
36984 &= 3!!/6 + 9 \times 8^4. \\
37044 &= (3 \times 7)^{-0!+4} \times 4. \\
37179 &= 3^7 \times (1 + 7 + 9). \\
37296 &= 37 \times 2 \times 9!/6!. \\
37344 &= (3!! \times (7 + 3!) - 4!) \times 4. \\
37428 &= -(3!! + 7! + 4!)/2 + 8!. \\
37435 &= (3! + 7) \times 4 \times 3!! - 5. \\
37468 &= (-3!! + 7) \times 4!/6 + 8!. \\
37587 &= 3^7 + 5! + 8! - 7!. \\
37748 &= (-3!! + 77) \times 4 + 8!. \\
37752 &= (3! + 7!/7) \times 52. \\
37814 &= 3! + 7! + 8^{1+4}. \\
38127 &= -3! + 8! - (1 + 2)^7. \\
38137 &= 3 + 8! + 1 - 3^7. \\
38160 &= 3!! \times (-8 + 1 + 60). \\
38162 &= -3!! + 8! + (1 - 6!) \times 2.
\end{aligned}$$

$$\begin{aligned}
38163 &= 3 + 8! - 1 \times 6! \times 3. \\
38164 &= 3!! + 8! + (1 - 6!) \times 4. \\
38304 &= -3!! + 8! - 3!^{04}. \\
38368 &= -3!! - 8^3 - 6! + 8!. \\
38394 &= -3! + 8! - 3!/9 \times 4!. \\
38397 &= -3 - 8!/3 + 9!/7. \\
38408 &= (3! + 8)^4 - 0 - 8. \\
38413 &= (3! + 8)^4 - 1 \times 3. \\
38415 &= (3! + 8)^4 - 1^5. \\
38416 &= (3! + 8)^4 \times 1^6. \\
38417 &= (3! + 8)^4 + 1^7. \\
38424 &= (3! + 8)^4 + 2 \times 4. \\
38434 &= (3! + 8)^4 - 3! + 4!. \\
38437 &= (3! + 8)^4 + 3 \times 7. \\
38479 &= (3! + 8)^4 + 7 \times 9. \\
38525 &= 3!! - 8! + 5^{2+5}. \\
38637 &= -3 + 8! - 6!/3 \times 7. \\
38638 &= 3^8 \times 6 - 3!! - 8. \\
38688 &= -3 \times 8 \times 68 + 8!. \\
38694 &= -3! + 8! - 6! \times 9/4. \\
38728 &= -3!! - 872 + 8!. \\
38793 &= -3^8 + 7! \times 9 - 3!. \\
38800 &= -3!! + 8! - 800. \\
38808 &= -3 \times 8!/80 + 8!. \\
38838 &= 3! \times (-88 + 3^8). \\
38856 &= (3^8 - 85) \times 6. \\
38874 &= -3! + 8! - 8!/(7 \times 4). \\
38880 &= (-3!! + 8!/8) \times (8 + 0!). \\
38928 &= 3! \times (8 + 9 \times (-2 + 8)!). \\
38955 &= -3!! + 8! - (9 + 5!) \times 5. \\
38970 &= -3!! + 8! - 9 \times 70. \\
39024 &= 3! \times (9 \times (0! + 2)!! + 4!). \\
39048 &= (-3! \times 9 + 0!) \times 4! + 8!. \\
39096 &= -3!! + (9 - 0!)! - 9!/6!. \\
39249 &= (3!! + 9^2) \times 49. \\
39283 &= 3^9 \times 2 - 83. \\
39318 &= 3! \times (9^{3+1} - 8). \\
39342 &= (3^9 - 3 \times 4) \times 2. \\
39343 &= 39 + 34^3. \\
39348 &= -(3 + 9) \times 3^4 + 8!. \\
39358 &= 3^9 \times (-3 + 5) - 8. \\
39360 &= 3! \times (9 \times 3^6 - 0!). \\
39372 &= (3 + 9 \times 3^7) \times 2. \\
39382 &= ((3 \times 9)^3 + 8) \times 2. \\
39384 &= 3! \times (9 \times 3!! + 84). \\
39388 &= (3! - 938) + 8!. \\
39402 &= (3! + 9^4) \times (0! + 2!). \\
39408 &= 3! \times (9^4 - 0! + 8). \\
39412 &= (3^9 + 4! - 1) \times 2. \\
39438 &= -3!! - 9 \times (4! - 3!) + 8!. \\
39495 &= 3! \times 9^4 + 9 + 5!. \\
39528 &= -3!! + (-9 + (5+2)!) \times 8. \\
39538 &= -3!! - 9 - 53 + 8!. \\
39568 &= -3 \times 9 - 5 - 6! + 8!. \\
39583 &= -3 - 9 - 5 + 8! - 3!!. \\
39768 &= ((3!! - 9) \times 7 - 6) \times 8. \\
39784 &= -3!!/9 \times 7 + 8! + 4!. \\
39799 &= 39 + (-7! + 9!) / 9. \\
39816 &= (3!! - 9) \times 8 \times (1 + 6).
\end{aligned}$$

$$\begin{aligned}
39828 &= (3 - 9) \times 82 + 8!. \\
39837 &= ((3!! - 9) \times 8 + 3) \times 7. \\
39843 &= 3^9 + 8! / (-4 + 3!). \\
39858 &= -3! \times (9 \times 8 + 5) + 8!. \\
39884 &= -3! \times 9 \times 8 + 8! - 4. \\
39888 &= -3 \times 9 \times (8 + 8) + 8!. \\
39896 &= 3!!/9 + 8! - 9!/6!. \\
39924 &= 3!! + 99^2 \times 4. \\
39948 &= (3! - 99) \times 4 + 8!. \\
40088 &= 4! - (0! + 0!)^8 + 8!. \\
40175 &= -4! - 0! + (1 + 7)! - 5!. \\
40195 &= -(4+0!)! + (-1+9)! - 5. \\
40260 &= (4 \times (0 + 2))! - 60. \\
40268 &= -40 - 2 \times 6 + 8!. \\
40270 &= -(4! + 0!) \times 2 + (7 + 0!)!. \\
40272 &= 4 \times (-(0! + 2)! + 7)! \times 2. \\
40276 &= 4 \times (0! + 2 \times (7! - 6)). \\
40281 &= -40 + 2 + 8! - 1. \\
40282 &= -(4 - 0!)^2 + 8! - 2. \\
40290 &= -4! - (0! + 2)! + (9 - 0!)!. \\
40293 &= (4 \times (0 + 2))! - 9 \times 3. \\
40296 &= -4! - 0 + (2^{9-6})!. \\
40298 &= -40 + 2 \times 9 + 8!. \\
40309 &= -4 - 0! - 3! + (-0! + 9)!. \\
40310 &= (4!/03)! - 10. \\
40312 &= 4 \times ((0! + 3)! - 1) \times 2. \\
40313 &= (4!/03)! - 1 - 3!. \\
40316 &= -4 + 0 + (3 - 1 + 6)!. \\
40319 &= (4!/03)! - 1^9. \\
40335 &= (4 + 0!) \times 3 + (3 + 5)!. \\
40355 &= 40 + (3 + 5)! - 5. \\
40360 &= 40 + (3 + 6 - 0!)!. \\
40372 &= 4 \times (0! + (3! + 7!) \times 2). \\
40382 &= 4^{03} + 8! - 2. \\
40384 &= (4 + 0!) / 3 + 8! + 4!. \\
40388 &= 4 + ((0! + 3)! + 8) \times 8. \\
40392 &= 4 \times ((0! + 3)! + 9) \times 2. \\
40398 &= (4! - 0!) \times 3 + 9 + 8!. \\
40399 &= -(4 \times 0!) + (3!! + 9!) / 9. \\
40428 &= (4 \times (0! + (4! + 2))) + 8!. \\
40435 &= -4 - 0! + (4!/3)! + 5!. \\
40438 &= (4 + 0!)! + 4 - 3! + 8!. \\
40528 &= 4 \times (0 + 52) + 8!. \\
40558 &= (4 - 0!)^5 - 5 + 8!. \\
40656 &= ((4 - 0!)! + 6!) \times 56. \\
40688 &= (40 + 6) \times 8 + 8!. \\
40788 &= (4 - 0!)! \times 78 + 8!. \\
40829 &= -4 + 0! + 8! + 2^9. \\
40838 &= (4 - 0!)! + 8^3 + 8!. \\
40879 &= -(4 \times 0!) + 8! + 7!/9. \\
40984 &= 4! + (0! + 9) \times 8^4. \\
40986 &= -(4 - 0!)! \times 9 + 8! + 6!. \\
41035 &= (4 \times (1 + 0!))! + 3!! - 5. \\
41040 &= (4 \times (1 + 0!))! + (4 - 0!)!!. \\
41338 &= 4^{-1+3!} - 3! + 8!. \\
41344 &= 4^{-1+3!} + (4 + 4)!. \\
41348 &= 4^{-1+3!} + 4 + 8!. \\
41736 &= (4 + 1)! - 7! + 3!^6. \\
41760 &= (-4! + (-1 + 7)!) \times 60.
\end{aligned}$$

$$\begin{aligned}
46564 &= 4! + 65 \times (6! - 4). \\
46564 &= 4! + 65 \times (6! - 4). \\
46584 &= (4 + 6!) \times 5! - 8! + 4!. \\
46616 &= -4! + 6^6 - 16. \\
46626 &= -4 + 6^6 - 26. \\
46630 &= 4 + 6^6 - 30. \\
46640 &= 4! + 6^6 - 40. \\
46652 &= -4 + (6 \times 6)^{5-2}. \\
46658 &= -4 + 6^6 + (-5 + 8)! . \\
46673 &= 4 + 6^6 + 7 + 3!. \\
46674 &= 4! + 6^6 - (7 - 4)! . \\
46680 &= 4! + 6^6 + 8 \times 0. \\
46688 &= (4 + 6^6/8) \times 8. \\
46704 &= 4! + 6^{7-0!} + 4!. \\
46848 &= 4! \times 68 \times 4 + 8!. \\
47368 &= (-4 + 7)!! + 3!^6 - 8. \\
47376 &= (-4 + 7)!! + 3!^7/6. \\
47476 &= (4 + 7) \times (-4 + 7! - 6!). \\
47520 &= (4 + 7)!/(5! + (2 + 0!)!!). \\
47524 &= (4 + 7 - 5!)^2 \times 4. \\
47526 &= (4! + 7 - 5!)^2 \times 6. \\
47664 &= (4! + 7!) \times 6 + 6! \times 4!. \\
47872 &= (-4^7 + 8 \times 7!) \times 2. \\
47876 &= -4 + 7!/8 \times 76. \\
48236 &= -4 + (8^2 + 3) \times 6!. \\
48355 &= -4! + 8! \times 3!/5 - 5. \\
48360 &= -4! + 8! \times 3!/(6 - 0!). \\
48384 &= 4! \times 8 \times 3 \times 84. \\
48385 &= 4 + 8! - 3 + 8!/5. \\
48388 &= 4 + 8!/(-3 + 8) + 8!. \\
48408 &= 4! + 8!/(4 + 0!) + 8!. \\
48488 &= -4! + 8! + 4^8/8. \\
48528 &= (4! + 8!/5) \times (-2 + 8). \\
48564 &= (4! \times 8!/5 + 6!)/4. \\
48664 &= (-4 + 6!) \times 68 - 4!. \\
48936 &= 4 \times ((8 + 9) \times 3! - 6). \\
48955 &= 4! \times (8 + 9) \times 5! - 5. \\
49335 &= (-4! + 93) \times (3!! - 5). \\
49374 &= (4! + 7!) \times 39/4. \\
49456 &= 49 \times (4^5) - 6!. \\
49693 &= 4 + 9 + 69 \times 3!!. \\
49723 &= (4! \times 9 + 7)^2 - 3!. \\
49923 &= ((-4 + 9)! + 9)^2 \times 3. \\
50275 &= -5! + (-0! + 2 \times 7!) \times 5. \\
50375 &= (-5 + (-0! + 3) \times 7!) \times 5. \\
50395 &= 5 \times (-0! + 3!) \times (9 + 5!). \\
50653 &= (-5 + (0! + 6)!/5!)^3. \\
50745 &= (5!/(0! + 7))^4 + 5!. \\
51373 &= (5 + 1)! + 37^3. \\
51425 &= (5! + 1) \times 425. \\
51686 &= (-5! + 1 + 6!) \times 86. \\
51960 &= 5! + 1 \times 9!/(6 + 0!). \\
51961 &= 5! + 1 + 9!/(6 + 1). \\
51968 &= 5! + (1 + 9 \times 6!) \times 8. \\
52488 &= (5 - 2 \times 4)^8 \times 8. \\
53376 &= ((5 + 3)! + 3!^7)/6. \\
53424 &= 53 \times 42 \times 4!. \\
53448 &= (5! + 3^{4+4}) \times 8. \\
53557 &= (-5 + 3!^5 - 5!) \times 7.
\end{aligned}$$

$$\begin{aligned}
53592 &= (-5! + 3!^5) \times (9 - 2). \\
53742 &= (-5! + 3^7) \times (4! + 2). \\
53883 &= 5! + 3 + 8! + 8!/3. \\
53886 &= 5! + 3! + 8 \times 8!/6. \\
54336 &= 5! \times 4^3 + 3!^6. \\
54375 &= (5!/4! + 3!!) \times 75. \\
54476 &= (5! + 4!^4 - 7!)/6. \\
54549 &= (-5 + 4!) \times (5! \times 4! - 9). \\
54644 &= (-5 + 4!) \times (6! \times 4 - 4). \\
54675 &= (5 + 4 + 6!) \times 75. \\
54678 &= (5 - 4! + 6!) \times 78. \\
54744 &= (-5 \times 4! + 7^4) \times 4!. \\
54756 &= 54 \times (7!/5 + 6). \\
54869 &= (-9! + 6^8)/4! + 5. \\
55320 &= -5! + (5 + 3)!/(2 + 0!)!!. \\
55375 &= -5! + (5 + 3!) \times (7! + 5). \\
55680 &= (-5!/5 + 6!) \times 80. \\
56280 &= 5! + 6! \times (-2 + 80). \\
56568 &= 5! + (6^5 - 6!) \times 8. \\
56755 &= (5 + 6) \times (7! + (6 - 0!)!). \\
56760 &= (5 + 6) \times (7! + (6 - 0!)!). \\
56950 &= -5^6 + 9!/5 - 0!. \\
56951 &= -5^6 + 9!/5 \times 1. \\
57480 &= -5! + (7 - 4)!! \times 80. \\
57504 &= (-5 + 7^{5-0!}) \times 4!. \\
57602 &= (5 \times (7! + 6!) + 0!) \times 2. \\
57624 &= 5 \times (7! + 6!) \times 2 + 4!. \\
57625 &= (5 + (7! + 6!)) \times 2 \times 5. \\
57960 &= 5! \times 7 \times (9 + 60). \\
57969 &= (5! - 7) \times (9!/6! + 9). \\
57974 &= 5^7 + 9 - 7! \times 4. \\
58325 &= 5 + 8! + 3!! \times 25. \\
58344 &= (-5 + 8)!! \times 3^4 + 4!. \\
58962 &= (5! \times 8 - 9) \times 62. \\
58969 &= (-(-5 + 8)!! + 9^6)/9. \\
58995 &= -(-5 + 8)! \times 9 + 9^5. \\
59037 &= -5 + 9^{-0!+3!} - 7. \\
59042 &= -5 + 9^{0!+4} - 2. \\
59044 &= -5 + 9^{(0 \times 4)!+4}. \\
59047 &= 5 + 9^{0!+4} - 7. \\
59052 &= 2 + (5 \times 0)! + 9^5. \\
59052 &= 5 + 9^{05} - 2. \\
59054 &= 5 + 9^{(0 \times 5)!+4}. \\
59095 &= 5 \times 9 + 0! + 9^5. \\
59095 &= 5 \times 9 + 0! + 9^5. \\
59163 &= 5! + 9^{-1+6} - 3!. \\
59169 &= 5! + 9^6 \times 1/9. \\
59319 &= (5! + 9 \times (3!! - 1)) \times 9. \\
59352 &= (-5! + 9!/3!!) \times (5! - 2). \\
59395 &= (5! + 9 \times 3!!) \times 9 - 5. \\
59395 &= (5! + 9 \times 3!!) \times 9 - 5. \\
59554 &= -5! + 9^5 + (5^4). \\
59635 &= -5! + 9!/6 - 3! - 5. \\
59640 &= -5! + 9!/6 - (4 - 0!)!!. \\
59664 &= -5! + 9!/6 - 6! + 4!. \\
59956 &= (-5! + 9! - 9!/5!)/6. \\
59968 &= (5! \times 9! - 9!)/6! - 8. \\
60359 &= (9! - 5 - 3! - 0!)/6. \\
60432 &= ((6 + 0!)! - 4) \times 3! \times 2.
\end{aligned}$$

$$\begin{aligned}
69864 &= 6! \times 98 - 6! + 4!. \\
69984 &= (6 - 9 + 9)^8 / 4!. \\
70497 &= ((7 + 0!)! / 4 - 9) \times 7. \\
70546 &= (7! - 0!) \times (5 \times 4 - 6). \\
70560 &= 70/5 \times (6 + 0!)!. \\
70584 &= 7! \times (0! + 5 + 8) + 4!. \\
71273 &= 7 \times (-1 + 2 \times 7!) + 3!. \\
71568 &= 71 \times (5! + 6) \times 8. \\
71993 &= -7 + (1 + 99) \times 3!. \\
72035 &= (7 + 20 \times 3!) \times 5. \\
72350 &= (7 + 2 \times 3!) \times 50. \\
72538 &= (7 + 2)! / 5 - 38. \\
72546 &= (7 + 2)! / 5 - 4! - 6. \\
72551 &= ((7 + 2)! - 5!) / 5 - 1. \\
72556 &= (7 + 2)! / 5 - 5! / 6. \\
72565 &= (7 + 2)! / 5 - 6 - 5. \\
72570 &= (7 + 2)! / 5 - 7 + 0!. \\
72576 &= (7 + 2)! / 5 \times (7 - 6). \\
72577 &= (7 + 2)! / 5 + 7/7. \\
72582 &= (7 + 2)! / 5 + 8 - 2. \\
72585 &= (7 + 2) \times (5 + 8!) / 5. \\
72595 &= 7 \times 2 + 5 + 9! / 5. \\
73085 &= -7! + (3! - 0!)^8 / 5. \\
73364 &= (7 \times 3!)^3 - 6! - 4. \\
73433 &= -7 + 34 \times 3 \times 3!. \\
73435 &= (-7! + 3! \times 4!) \times 3! - 5. \\
73440 &= (7! - 3!) \times (4 \times 4 + 0!). \\
73745 &= 7^3 \times (7!/4! + 5). \\
74064 &= 7! + 4 \times (-0! + 6!) \times 4!. \\
74164 &= 7! + 4 \times (1 + 6! \times 4!). \\
74304 &= 7! \times 4! - 3!^{(-0!+4)!}. \\
75344 &= 7! \times 5 \times 3 - 4^4. \\
75375 &= (7!/5 - 3) \times 75. \\
75473 &= -7 + 5 \times (-4! + 7! \times 3). \\
75578 &= -7 - (5! - 5! \times 7!) / 8. \\
75585 &= (7! \times 5 - 5) \times (8 - 5). \\
75595 &= 7! \times (5!/5 - 9) - 5. \\
75600 &= 7! \times 5 \times 6 / (0! + 0!). \\
75603 &= (7! \times 5 + (6 \times 0!)) \times 3. \\
75615 &= (7! - 5 + 6) \times 15. \\
75624 &= 7! \times 5 \times 6/2 + 4!. \\
75635 &= 7 \times (5 + 6! \times 3 \times 5). \\
75637 &= 7 + 5 \times (6 + 3 \times 7!). \\
75685 &= (7! \times 5! + 6!) / 8 - 5. \\
75690 &= (7! \times 5! + 6!) / (9 - 0!). \\
76335 &= (7 + 6!) \times 3 \times 35. \\
76608 &= 7^6 - 6! - 0! - 8!. \\
76609 &= 7^6 - 6! - (-0! + 9)! . \\
78047 &= -78 + (0! + 4)^7. \\
78352 &= (-7 \times 8 + 3!) \times (5! - 2). \\
78652 &= 7 \times (8 + 6 - 5!)^2. \\
79184 &= (7! - 91) \times (-8 + 4!).
\end{aligned}$$

$$\begin{aligned}
79335 &= ((7! + 9) \times 3 + 3!!) \times 5. \\
80352 &= (8! - (((0+3)!!)! / 5)) \times 2. \\
80402 &= (8! + (0! - ((4+0!)!!)) \times 2. \\
80424 &= ((8! - ((0!+4)!!) \times 2) + 4!. \\
80448 &= ((8! / (0+4)) - 4!) \times 8. \\
80479 &= (-8! + 0! - 4!) \times 7 + 9!. \\
80519 &= 8! - 0! - 5! + (-1+9)!. \\
80522 &= (8! + 0! - 5!/2) \times 2. \\
80528 &= 8! \times 2 - 5! + 0 + 8. \\
80532 &= (8! - 0! - 53) \times 2. \\
80572 &= (8! + 0! - 5 \times 7) \times 2. \\
80592 &= (8! - (0 - 5 + 9)!) \times 2. \\
80624 &= (8! + 0 - 6) \times 2 - 4. \\
80625 &= (8! + 0! - 6) \times 2 - 5. \\
80629 &= (8! - (0/6)!) \times 2 - 9. \\
80630 &= (8! + 0! - 6) \times (3 - 0!). \\
80632 &= (8! - 0! - 6 + 3) \times 2. \\
80636 &= (8! + 0!) \times 6/3 - 6. \\
80662 &= (8! - 0! + 6 + 6) \times 2. \\
80664 &= 8! \times (0! + 6/6) + 4!. \\
80682 &= (8 - 0!) \times 6 + (8! \times 2). \\
80755 &= 8! + (0! + 7)! + 5! - 5. \\
80760 &= 8! + (0! + 7)! + (6 - 0!)!. \\
80784 &= (4! - 8) \times (7! + 0! + 8). \\
80784 &= (8 + 0! + 7!) \times (-8 + 4!). \\
80792 &= 8 \times (0! + (7! + 9) \times 2). \\
80800 &= (80 + 8!) \times (0! + 0!). \\
80802 &= (8! + 0! + 80) \times 2. \\
80824 &= (80 + 8!) \times 2 + 4!. \\
81355 &= -(8 - 1)! + 3!! \times 5! - 5. \\
82082 &= ((8 - 2)! + 0! + 8!) \times 2. \\
82086 &= 8 + 2 \times (-0! + 8! + 6!). \\
82560 &= 8 \times (2 \times (5! + (6 + 0!)!)). \\
82656 &= (-8^2 + 6!) \times (5! + 6). \\
83232 &= (8! + 3!^{(-2+3)!}) \times 2. \\
83304 &= (8 - 3!!) \times (3 - (0! + 4)!). \\
83456 &= -8^{3!} + 4 \times 5! \times 6!. \\
83488 &= (-8 + 3!!) \times 4 + 8! + 8!. \\
83640 &= (8 - 3)! \times (6! - 4! + 0!). \\
83755 &= (-8!/3!! + 7^5) \times 5. \\
83957 &= 8 \times (3!! + 9) + 5^7. \\
84050 &= (8!/4! + 0!) \times 50. \\
85448 &= 8 + 5! \times ((4!/4)! - 8). \\
85560 &= -8 \times 5! + 5! \times (6! + 0!). \\
85573 &= 8 + 5 + 5! \times (-7 + 3!!). \\
85675 &= (-8 + 5!) \times 6! + 7! - 5. \\
85680 &= (-8 + 5!) \times 6! + (8 - 0!)!. \\
85705 &= -8! + 5 \times (7! + 0!) \times 5. \\
85739 &= 8! + 5 + (7! + 3!) \times 9. \\
86314 &= -86 + 3!! \times (1 + 4!). \\
86352 &= -8 \times 6 + 3! \times 5!^2. \\
86384 &= 8 + 6! \times (-3 + 8)! - 4!.
\end{aligned}$$

$$\begin{aligned}
86386 &= -8 + 6! \times (-3 + 8)! - 6. \\
86402 &= (8! + 6! \times 4 + 0!) \times 2. \\
86404 &= 8 + 6! \times (4 + 0!)! - 4. \\
86408 &= 8 + 6! \times (40/8)!. \\
86424 &= (8! + 6! \times 4) \times 2 + 4!. \\
86456 &= -8 + 64 + 5! \times 6!. \\
86475 &= (8 + 6! \times 4! + 7) \times 5. \\
86506 &= -8 - 6 + 5! \times (0! + 6!). \\
86528 &= (-8 + 6! + 5!)^2 / 8. \\
86968 &= 8! + 6^{9-6}! - 8. \\
86968 &= 8! + 6^{9-6}! - 8. \\
87352 &= -8 + 7!/3 \times 52. \\
87355 &= (8!/7! + 3!!) \times 5! - 5. \\
87384 &= 8! \times 7/3! + 8! + 4!. \\
87536 &= 8 \times 7 + 5! \times 3^6. \\
88704 &= (88 \times 7!) / (0! + 4). \\
88832 &= (8! + 8 \times 8^3) \times 2. \\
89474 &= 8 + (9! + 4! - 7!) / 4. \\
90494 &= (-904 + 9!) / 4. \\
90534 &= (9! - (-0! + 5!) - 3!!) / 4. \\
90594 &= (-9! / (0! + 5!) + 9!) / 4. \\
90675 &= 9 \times ((0! + 6!) + 7! - 5!). \\
90719 &= 90 \times 7! - 1 - 9!. \\
90734 &= (9! + (0! + 7!) / 3!!) / 4. \\
90744 &= 9! / (0 \times 7 + 4) + 4!. \\
91435 &= 9! \times 1/4 + 3!! - 5. \\
91440 &= 9! \times 1/4 + (4 - 0!)!. \\
91446 &= (9! \times 1 + 4!) / 4 + 6!. \\
91449 &= 9! / 4 + (4 - 1)!! + 9. \\
91464 &= 9! \times 1/4 + 6! + 4!. \\
91744 &= (9! + (1 + 7)^4) / 4. \\
92364 &= (9 + (2 + 3)!) \times (6! - 4). \\
93325 &= (9 + 3!^{3!}) \times 2 - 5. \\
93591 &= -9 + 3!! \times (5! + 9 + 1). \\
93744 &= 9! / 3!! \times (7!/4! - 4!). \\
94315 &= 9! / 4 + (3!! - 1) \times 5. \\
94335 &= 9! / 4 + (3 + 3!!) \times 5. \\
94365 &= 9! / 4 + 3^6 \times 5. \\
94494 &= (9! / 4 - 4! + 9!) / 4. \\
94751 &= 94 \times 7! / 5 - 1. \\
94848 &= (9 + 4!) \times 8^4 - 8!. \\
94976 &= 9! - 4^9 - 7! - 6!. \\
95237 &= (9 + 5! + 2) \times (3!! + 7). \\
95755 &= 95 \times 7! / 5 - 5. \\
95760 &= 95 \times 7! / (6 - 0!). \\
96759 &= 96 \times 7! / 5 - 9. \\
97792 &= 9 + 7^7 - 9! \times 2. \\
98304 &= 9 \times 8^{3!} / 04!. \\
98313 &= 9 + 8^{3!-1} \times 3. \\
98334 &= (9 \times 8^{3!} + 3!!) / 4!. \\
98415 &= 9^{8-4} \times 15. \\
99369 &= (9! + 9^{(-3+6)!}) / 9.
\end{aligned}$$

## 5.2 Selfie Numbers in Reverse Order of Digits

$$\begin{aligned}
25 &= 5^2. \\
125 &= 5^{2+1}. \\
126 &= 6 \times 21.
\end{aligned}$$

$$\begin{aligned}
153 &= 3 \times 51. \\
216 &= 6^{1+2}. \\
289 &= (9 + 8)^2. \\
337 &= 7^3 - 3!.
\end{aligned}$$

$$\begin{aligned}
715 &= -5 + (-1 + 7)! \\
1024 &= 4^{(2+0!)!-1} \\
1345 &= 5^4 + 3!! \times 1 \\
1359 &= 9 \times (5! + 31) \\
1395 &= 5 \times 9 \times 31 \\
1426 &= 62 \times (4! - 1) \\
1435 &= -5 + 3!! + (4 - 1)!! \\
1442 &= 2 \times ((4!/4)! + 1) \\
1477 &= 7 \times (7!/4! + 1) \\
1573 &= (3! + 7) \times (5! + 1) \\
1704 &= 4! \times (0 + 71) \\
2048 &= 8^4/(0 + 2) \\
2304 &= 4 \times (0! + 3!)^2 \\
2403 &= (3! + 0!)^4 + 2 \\
2517 &= (7! - 1 - 5)/2 \\
2575 &= -5 + (7! + 5!)/2 \\
2736 &= 6^3 + 7!/2 \\
2864 &= 4 \times 6! - 8 \times 2 \\
2876 &= (6! + 7! - 8)/2 \\
2916 &= (6 \times 1 \times 9)^2 \\
3072 &= 2^7 \times (0! + 3!) \\
3237 &= (7! - 3!)/2 + 3!! \\
3354 &= -3! + (3!! + 5!) \times 4 \\
3369 &= (9 + 6)^3 - 3! \\
3372 &= 2 \times (7!/3 + 3!) \\
3375 &= (5 + 7 + 3)^3 \\
3376 &= -6! + (7 - 3)^{3!} \\
3378 &= (8 + 7)^3 + 3 \\
3384 &= 4! + 8!/(3! + 3!) \\
3453 &= 3!!/5 \times 4! - 3 \\
3465 &= 5 \times (6! - 4! - 3) \\
3495 &= 5! + (-9 + 4!)^3 \\
3584 &= -4! + 8 + 5 \times 3!! \\
3585 &= 5 \times ((8 - 5)!! - 3) \\
3615 &= 5 \times 1 \times 6! + 3 \\
3654 &= 4! + 5 \times (6 + 3!!) \\
3655 &= 5 \times (5 + 6 + 3!!) \\
3744 &= -4! \times 4! + 7! - 3!! \\
3755 &= 5! + 5 \times (7 + 3!!) \\
3780 &= 3! \times 7!/8 + 0 \\
3782 &= 3! \times 7!/8 + 2 \\
3957 &= 7! - 5! \times 9 - 3 \\
4088 &= -8 + 8^{04} \\
4093 &= -3 + (9 - 0!)^4 \\
4096 &= (6!/90)^4 \\
4176 &= 6 \times ((7 - 1)! - 4!) \\
4296 &= -6! + (9 - 2)! - 4! \\
4324 &= (4 + 2) \times 3!! + 4 \\
4802 &= 2 \times (0! - 8)^4 \\
4816 &= 6! + 1 \times 8^4 \\
4957 &= 7! - 59 - 4! \\
4967 &= 7! - 69 - 4 \\
5016 &= (6 + 1)! - (-0! + 5)! \\
5064 &= 4! + (6 + (0/5)!)! \\
5175 &= 5! + 7! + 15 \\
5184 &= 4! + (8 - 1)! + 5! \\
5275 &= -5 + 7! + 2 \times 5! \\
5395 &= -5 + 9 \times (3!! - 5!)
\end{aligned}
\begin{aligned}
5836 &= -6! + 3^8 - 5 \\
6048 &= 8!/40 \times 6 \\
6144 &= 4^{4+1} \times 6 \\
6715 &= -5 + (1 + 7)!/6 \\
6748 &= (8! + 4! \times 7)/6 \\
6768 &= 8 \times (6 + 7!/6) \\
6835 &= -5 + (3!! + 8!)/6 \\
6864 &= 4! \times 6 + 8!/6 \\
6992 &= 2^9 + 9 \times 6! \\
7056 &= 6^5 - (-0! + 7)! \\
7193 &= 3!! \times (9 + 1) - 7 \\
7235 &= 5 \times (3!! \times 2 + 7) \\
7335 &= 5 \times (-3!! + 3^7) \\
7595 &= (5 + 9 \times 5!) \times 7 \\
7992 &= ((2 + 9)! + 9!)/7! \\
8192 &= 2^{9+1} \times 8 \\
8576 &= 67 \times (5! + 8) \\
8648 &= (8 + 4) \times 6! + 8
\end{aligned}
\begin{aligned}
14352 &= (-2 - 5! + 3!!) \times 4! \times 1 \\
14365 &= 5 \times (-6 + 3!! \times 4 - 1) \\
14373 &= -3^7 + 3!! \times (4! - 1) \\
14375 &= 5^{7-3} \times (4! - 1) \\
14376 &= -6! + 7! \times 3 - 4! \times 1 \\
14395 &= 5 \times ((9 - 3)! \times 4 - 1) \\
14425 &= 5^{1-2+4} + 4! + 1 \\
14525 &= 5^{1^2} + 5^{4-1} \\
14564 &= 4 \times (6! \times 5 + 41) \\
14637 &= 7 \times 3 \times (6! - 4! + 1) \\
14755 &= -5 + (-5! + 7!) \times (4 - 1) \\
14973 &= 3 \times (7! - 9) - (4 + 1)! \\
15093 &= -3 \times (9 - (0! + 5 + 1)!) \\
15117 &= (7! - 1) \times (-1 + 5 - 1) \\
15119 &= 9! / (-1 \times 1 + 5)! - 1 \\
15232 &= 2^{3!} \times 2 \times (5! - 1) \\
15237 &= 7! \times 3 - 2 + 5! - 1 \\
15239 &= 9! / (3! - 2)! + 5! - 1 \\
15367 &= (7 + 6!/3!) \times (5! + 1) \\
15425 &= 5^{1^2} + 4^5 + 1 \\
15488 &= 8 \times (-8 + 4!) \times (5! + 1) \\
15505 &= 5^{0+5} - 5! \times 1 \\
15562 &= 2 \times (6^5 + 5) \times 1 \\
15609 &= (9 + (-0! + 6)!) \times (5! + 1) \\
15649 &= (9 - 4)^6 + (5 - 1)! \\
15654 &= 4! + 5^6 + 5 \times 1 \\
15745 &= 5^{(-4+7)!} + 5! \times 1 \\
15864 &= 4! \times (6! - 8 - 51) \\
16128 &= 8! \times 2 / (1 \times 6 - 1) \\
16225 &= 52^2 \times 6 + 1 \\
16345 &= (5!/4!)^{3!} + 6! \times 1 \\
16374 &= 4^7 - 3 - 6 - 1 \\
16377 &= -7 + (7 - 3)^{6+1} \\
16495 &= 5! - 9 + 4^{6+1} \\
16564 &= 4! \times 6! + 5 - 6! - 1 \\
16585 &= 5! \times 8 + 5^6 \times 1 \\
16742 &= (-2 + 4!) \times 761 \\
16783 &= -3 \times 8 + 7^{6-1} \\
16794 &= -4 - 9 + 7^{6-1} \\
16807 &= 7^{0 \times 8+6-1} \\
16813 &= 3! + (-1 + 8)^{6-1} \\
17064 &= 4! \times (6! - 0! - 7 - 1) \\
17253 &= (3 + 5!) \times 2 \times 71 \\
17264 &= 4! \times 6! - 2 \times (7 + 1) \\
17279 &= 9! / (7 \times 2 + 7) - 1 \\
17304 &= (1^7 + 3!! + 0) \times 4! \\
17351 &= (-1 + 5)! \times 3!! + 71 \\
17424 &= 4! \times (2 + 4 + (7 - 1)!) \\
17496 &= (6! + 9) \times 4 \times (7 - 1) \\
17925 &= 5 \times (((2^9) \times 7) + 1) \\
18729 &= 9^{-2+7} - 8! \times 1 \\
18742 &= -2 + 4! \times 781 \\
19443 &= 3 \times ((4!/4)! \times 9 + 1) \\
19464 &= 4! \times 6! + 4! \times 91 \\
19474 &= (4 + 7!/4!) \times 91 \\
19683 &= 3^8 \times (-6 + 9) \times 1 \\
19684 &= (-4!/8 + 6)^9 + 1 \\
19736 &= (6 + 3^7) \times 9 - 1 \\
19747 &= 7 \times (4! + 7) \times 91
\end{aligned}$$

$$\begin{aligned}
20148 &= (8! - 4!) \times 1/02. \\
20157 &= 7! \times (5 - 1) - 0! - 2. \\
20158 &= 8! \times 5/10 - 2. \\
20184 &= 4! + 8!/(1 \times 0 + 2). \\
20268 &= (8! + 6^{+0!})/2. \\
20448 &= (8! + 4! \times 4!)/02. \\
20449 &= (9 \times 4 \times 4 - 0!)^2. \\
20455 &= 5 \times (-5 + 4^{0!+2!}). \\
20485 &= 5 \times (8^4 + (0/2)!). \\
20665 &= 5^6 + (6 + (0/2)!). \\
20736 &= (6 \times 3 \times (7 + 0!))^2. \\
20873 &= (3!! - 7) + 8!/(0 + 2). \\
20876 &= 6! + (-7 + 8! - 0!)/2. \\
21575 &= 5 \times (7! - 5 - (1 + 2)!!). \\
21603 &= 30 \times 6! + 1 + 2. \\
21605 &= 5 \times (0! + 6 \times (1 + 2)!!). \\
21844 &= (-4 + 4^8)/(1 + 2). \\
21848 &= (8 + 4^8)/(1 + 2). \\
21952 &= (2 \times (5 + 9))^{1+2}. \\
22264 &= 46 \times 22^2. \\
22398 &= 8!/9 \times (3 + 2) - 2. \\
22472 &= (2 + 7!/4!)^2/2. \\
22528 &= (8/2)^5 \times 22. \\
22599 &= 9 \times (-9 + (5 + 2)!!). \\
22675 &= -5 + (7! + (6 + 2)!!)/2. \\
22678 &= (8! + 7 \times 6!)/2 - 2. \\
22679 &= (9 \times 7 \times 6! - 2)/2. \\
22757 &= 7 \times (57^2 + 2). \\
23035 &= -5 + 3!! \times (0 + 32). \\
23038 &= 8 \times (3 + 0!) \times 3!! - 2. \\
23064 &= 4! + 6! \times (0 + 32). \\
23066 &= -6 + (6! + 0!) \times 32. \\
23136 &= (6! + 3) \times 1 \times 32. \\
23304 &= -4! - 0 + 3!^{3!}/2. \\
23319 &= -9 + 1 \times 3!^{3!}/2. \\
23323 &= -3 - 2 + 3!^{3!}/2. \\
23325 &= -5 + 2 + 3!^{3!}/2. \\
23326 &= 6^{2+3} \times 3 - 2. \\
23331 &= 1 \times 3 + 3!^{3!}/2. \\
23332 &= (2^3 + 3!^{3!})/2. \\
23364 &= 4 \times (-6! + 3^{3!+2}). \\
23377 &= 7 \times 7 + 3!^{3!}/2. \\
23392 &= (2 + 9^3) \times 32. \\
23409 &= (9 + 04!) \times 3!^2. \\
23436 &= 63 \times (4! + 3!!)/2. \\
23513 &= -(3! + 1)^5 + (3! + 2)!. \\
23664 &= (-4! + 6!) \times (6 \times 3! - 2). \\
23758 &= (8 \times 5 - 7) \times 3!! - 2. \\
23762 &= (26 + 7) \times 3!! + 2. \\
23856 &= 6 \times (-5! + 8^{3!-2}). \\
24191 &= -1 + 9!/(-1 + 4^2). \\
24276 &= 6 \times 7 \times (2 + 4!)^2. \\
24336 &= ((6 + 33) \times 4)^2. \\
24346 &= (6! - 4) \times 34 + 2. \\
24367 &= 7 \times (63 - 4)^2. \\
24384 &= 4! \times (8^3 - 4) \times 2. \\
24576 &= 6 \times (7 - 5)^{4!2}. \\
24579 &= (-9 + 7!) \times 5 - 4!^2. \\
24624 &= 4! \times (2^{6+4} + 2).
\end{aligned}$$

$$\begin{aligned}
24649 &= (9 + 4! \times 6 + 4)^2. \\
24695 &= -5^{9-6!} + (4 \times 2)!. \\
24964 &= ((4! - 6) \times 9 - 4!)^2. \\
24975 &= 5 \times 7! - (-9 + 4!)^2. \\
25075 &= 5 \times (7! + 0 - 5^2). \\
25088 &= 8 \times (8!/(0! + 5!))^2. \\
25165 &= 5 \times (6! - 1) \times (5 + 2). \\
25183 &= (-3 + (8 - 1)!!) \times 5 - 2. \\
25185 &= 5 \times ((8 - 1)! - 5 + 2). \\
25189 &= -9 + (8 - 1)! \times 5 - 2. \\
25198 &= 8!/(9 - 1) \times 5 - 2. \\
25207 &= (7! + (0 \times 2)!) \times 5 + 2. \\
25208 &= ((8 - 0!)! + 2) \times 5 - 2. \\
25217 &= (7! + 1 + 2) \times 5 + 2. \\
25335 &= 5 \times (3^3 + (5 + 2)!). \\
25337 &= (7! + 3^3) \times 5 + 2. \\
25575 &= 5 \times (75 + (5 + 2)!). \\
25577 &= (7! + 75) \times 5 + 2. \\
25775 &= 5 \times (7! - 7 + 5! + 2). \\
25915 &= -5 + (-1 + 9)! - 5!^2. \\
25918 &= (8 + 1)!/(9 + 5) - 2. \\
25922 &= (2 + 2)! \times 9 \times 5! + 2. \\
25944 &= 4! + 4 \times 9 \times (5 - 2)!!. \\
25945 &= 5! \times 4! \times 9 + 5^2. \\
26064 &= (4 + 6!) \times (0 + 6^2). \\
26136 &= (6 + 3!!) \times 1 \times 6^2. \\
26208 &= (8 + (0! + 2)!!) \times 6^2. \\
26244 &= (4 \times 42 - 6)^2. \\
26279 &= (9!/7 - 2 + 6!)!/2. \\
26352 &= (2 + 5!) \times 3! \times 6^2. \\
26488 &= 8! - 8 - 4!^{6/2}. \\
26496 &= 69 \times (4! + 6!/2). \\
26635 &= -5 + 3!! + 6! \times 6^2. \\
26664 &= 4! + 6! + 6! \times 6^2. \\
26848 &= 8 \times (-4 + 8!/(6 \times 2)). \\
26864 &= 4 \times (-6 + 8!/6 + 2). \\
26868 &= 8! - (6 + 8!/6) \times 2. \\
26898 &= 8! + (9 - 8!/6) \times 2. \\
26937 &= 73 \times (9 + 6!/2). \\
26973 &= 37 \times 9^{6/2}. \\
27456 &= (6 + 5) \times (-4! + 7!/2). \\
27534 &= (4!^3 - 57) \times 2. \\
27634 &= (4!^{-3+6} - 7) \times 2. \\
27648 &= 8 \times 4! \times 6!/(7 - 2). \\
27715 &= 5 \times (-1 + 7!) + 7!/2. \\
27735 &= 5 \times (3 + 7!) + 7!/2. \\
27744 &= 4! + (4 + 7) \times 7!/2. \\
28224 &= 42^2 \times 8 \times 2. \\
28438 &= 8! - (3 \times 4)!/8! - 2. \\
28575 &= (5! + 7) \times (5!/8)^2. \\
28656 &= 6^5 + 6! + 8!/2. \\
28735 &= 5^{3!} \times 7 - 8! \times 2. \\
28795 &= -5 - 9!/7 + 8! \times 2. \\
28798 &= 8! - 9!/7 + 8! - 2. \\
28805 &= 5 \times (0! + 8 \times (8 - 2)!). \\
28944 &= (4!^4 + 9!)/(8/2)!. \\
28974 &= -4^7 + 9!/8 - 2. \\
29376 &= 6 \times (7! - (3 + 9)^2). \\
29576 &= 6 \times (7! - 5! + 9) + 2. \\
29736 &= 6 \times (-3 + 7! - 9^2). \\
29929 &= (92 + (9 \times 9))^2. \\
29946 &= 6 \times (-49 + (9 - 2)!!). \\
30137 &= 7! \times 3! - 103. \\
30175 &= -5 + (7! - 10) \times 3!. \\
30176 &= 6 \times 7! - (1 + 0!)^{3!}. \\
30186 &= -6 \times (8 + 1 - (0! + 3)!!). \\
30228 &= (8 - 2) \times (-2 + (0! + 3)!!). \\
30239 &= (9!/3!) / (0 \times 3)!. \\
30252 &= (2 + (5 + 2)!) \times (0 + 3)!. \\
30288 &= (8 + (8 - (2 \times 0)!!)) \times 3!. \\
30324 &= 42 \times (3 - 0! + 3!!). \\
30354 &= (4! - 5 + (3! + 0!)!!) \times 3!. \\
30372 &= (-2 + 7! + (3 + 0!)!!) \times 3!. \\
30377 &= -7 + (7! + (3 + 0!)!!) \times 3!. \\
30384 &= (4! + (8 - (3 \times 0)!!)) \times 3!. \\
30475 &= -5 + (7! + 40) \times 3!. \\
30576 &= (6 + 7! + 50) \times 3!. \\
30738 &= (83 + 7!) \times (0 + 3)!. \\
30786 &= (6!/8 + 7! + 0!) \times 3!. \\
31782 &= (2^8 + 7! + 1) \times 3!. \\
31995 &= -5 \times 9 \times (9 - 1 \times 3!!). \\
32048 &= 8^{4+0!} - (2 \times 3)!. \\
32128 &= 8! - 2^{1+2 \times 3!}. \\
32256 &= (6 + 5!) \times 2^{2^3}. \\
32258 &= -8!/5 + 2 + (2^3)!. \\
32394 &= ((4! - 9) \times 3!! - 2) \times 3. \\
32403 &= (3!!/04)^2 + 3. \\
32406 &= (6!/04)^2 + 3!. \\
32448 &= (8 + 4 \times 4!)^2 \times 3. \\
32537 &= -7 - 3!^5 + (2^3)!. \\
32538 &= 8! - 3!^5 - 2 \times 3. \\
32544 &= 4! \times 452 \times 3. \\
32568 &= 8! - 6^5 + (-2 + 3)!. \\
32648 &= 8 \times 4^6 - (2 + 3)!. \\
32744 &= 4 \times (4^7/2 - 3!). \\
32762 &= (2 + 6)^{7-2} - 3!. \\
32771 &= (1 + 7)^{7-2} + 3. \\
32784 &= 4! + 8! - 7!/2 \times 3. \\
32805 &= 5 \times (0! + 8)^{-2+3!}. \\
32832 &= 2^{3!} + 8^{2+3}. \\
32835 &= 5 \times (3^8 + 2 \times 3). \\
33144 &= 4! + (4! - 1) \times (3!! + 3!!). \\
33458 &= 8! + (5 - 4!)^3 - 3. \\
33484 &= -4 + (8 \times 4)^3 + 3!. \\
33488 &= 8 \times 8^4 + (3 + 3)!. \\
33489 &= (-9 + 8 \times 4!)^{3!3!}. \\
33495 &= 5 \times (9 \times (4! + 3!!) + 3). \\
33579 &= 9 \times 7 \times 533. \\
33585 &= 5 \times (8 \times (5! + 3!!) - 3). \\
33587 &= -7 + 8! \times 5/3! - 3!. \\
33599 &= (9!/9 \times 5 - 3!)/3!. \\
33768 &= -8! + (6 \times 7)^{-3+3!}. \\
33769 &= (9! \times 67 + 3!!)/3!!.. \\
33839 &= -9 \times 3!! + 8! - 3/3. \\
33852 &= (2 - 5! + 8 \times 3!!) \times 3!. \\
33984 &= -48 \times (9 + 3 - 3!!). \\
34047 &= (7!/4 + 0!) \times (4! + 3). \\
34224 &= (4! + 22) \times (4! + 3!!).
\end{aligned}$$

$$\begin{aligned}
34248 &= 8! - (4!!/2)/(4! - 3)! \\
34377 &= 7 \times (7! - 3 \times 43) \\
34416 &= 61 \times 4! \times 4! - 3!! \\
34432 &= 2 \times (3!! \times 4! - 4^3) \\
34435 &= -5^3 + (4! + 4!) \times 3!! \\
34452 &= 2 \times (-54 + 4! \times 3!!) \\
34512 &= 2 \times (-(-1 + 5!) + 4! \times 3!!) \\
34524 &= 4!/2 \times (5! \times 4! - 3) \\
34528 &= 8 \times ((2 + 5)! - 4 - 3!!) \\
34536 &= (6! \times (3 + 5) - 4) \times 3!! \\
34544 &= 4 \times (-4 + 5! \times 4! \times 3) \\
34575 &= 5 \times (7! + 5^4 \times 3) \\
34584 &= (48 \times 5! + 4) \times 3!! \\
34602 &= 2 \times ((0! + 6!) \times 4! - 3) \\
34624 &= 4! \times 2 \times 6! + 4^3 \\
34648 &= -8 + 4! \times (6! + 4 + 3!!) \\
34686 &= 6 \times (8 \times 6! + 4! - 3) \\
34704 &= ((4 - 0!)!! + 7! + 4!) \times 3!! \\
34968 &= (8 \times (6! + 9) - 4) \times 3!! \\
34991 &= -1 + (9 + 9)^4/3 \\
34992 &= 2 \times (9 + 9)^4/3! \\
34993 &= (3 + (9 + 9)^4)/3 \\
35272 &= (-2 + 7!) \times (2 + 5) + 3! \\
35274 &= -4 - 7! - 2 + (5 + 3)! \\
35304 &= 4! - (0! + 3!!) + (5 + 3)! \\
35394 &= 49 \times 3!! + 5! - 3! \\
35424 &= 4!/2 \times 4! \times (5! + 3) \\
35557 &= 7^5 + 5^5 \times 3! \\
35648 &= 8 \times (4^6 + 5! \times 3) \\
35792 &= 2^9 - 7! + (5 + 3)! \\
35864 &= -4^6 + 8! - 5! \times 3 \\
35937 &= (-7 - 3!!/9 + 5!)^3 \\
35943 &= 3!!/5! + (9 + 4!)^3 \\
36007 &= 7 \times (0! + (0! + 6!)) + 3!! \\
36015 &= 5 \times (10 \times 6! + 3) \\
36025 &= 5^2 \times (0! + 6! + 3!!) \\
36153 &= -3!! + 51 \times (6! + 3) \\
36224 &= (4 \times 2)! - (-2 + 6)^3! \\
36248 &= 8! + 4! - (-2 + 6)^3! \\
36288 &= 8! - 8^2 \times 63 \\
36289 &= 9!/(8 + 2) + 6/3! \\
36481 &= (-1 + 8 \times 4!)^{6/3} \\
36585 &= -5! + 8! - 5 \times (6! + 3) \\
36715 &= -5 + 17 \times 6! \times 3 \\
36744 &= 4! + (4! - 7) \times 6! \times 3 \\
36757 &= -7 \times (5 - 7! - 6^3) \\
36792 &= (-2 + 9) \times (7! + 6^3) \\
36798 &= 8! - 9! \times 7/6! + 3! \\
37044 &= 4 \times ((4 - 0!) \times 7)^3 \\
37173 &= 3^7 \times 17 - 3! \\
37248 &= 8! - 4 \times 2^7 \times 3! \\
37344 &= 4 \times (-4! + 3!! \times (7 + 3!!)) \\
37435 &= -5 + 3!! \times 4 \times (7 + 3!) \\
37488 &= 8! + (8^4 - 7!) \times 3 \\
37584 &= (4! \times 8)^{-5+7} + 3!! \\
37668 &= 86 \times 6 \times 73 \\
37748 &= 8! + 4 \times (77 - 3!!) \\
37795 &= -5 + 9 \times (7! - 7!/3!) \\
\end{aligned}$$

$$\begin{aligned}
37938 &= 8! - 397 \times 3! \\
38248 &= 8! - 4! - 2^{8+3} \\
38278 &= 8 \times (7! - 2^8) + 3! \\
38328 &= 8! - (-2 + 3!) \times 83 \\
38368 &= 8! - 6! - 3!! - 8^3 \\
38427 &= (7 \times 2)^4 + 8 + 3 \\
38448 &= 8! - 4! \times 48 - 3!! \\
38472 &= (2 \times 7)^4 + 8!/3!! \\
38523 &= -3!!/2 \times 5 + 8! + 3 \\
38525 &= 5^{2+5} - 8! + 3!! \\
38526 &= -6!/2 \times 5 + 8! + 3!! \\
38528 &= 8! - 2^5 \times 8!/3!! \\
38584 &= (48 + 5) \times (8 + 3!!) \\
38592 &= -(-2 + 9)!/5 + 8! - 3!! \\
38637 &= -7!/3 - 6 + 8! + 3 \\
38688 &= 8! - 8 \times 68 \times 3 \\
38767 &= -7!/6 + 7 + 8! - 3!! \\
38863 &= -3^6 - 8 + 8! - 3!! \\
38928 &= 8! - 29 \times 8 \times 3! \\
38936 &= 6! \times 3! \times 9 + 8!/3!! \\
38955 &= -5 \times (5! + 9) + 8! - 3!! \\
38963 &= 3!! \times 6 \times 9 + 83 \\
39024 &= (4! + (2 + 0!)!! \times 9) \times 3! \\
39048 &= 8! + 4! \times (0! - 9 \times 3!) \\
39096 &= -6! + (9 - 0!)! - 9!/3!! \\
39304 &= (40 + 3 - 9)^3 \\
39348 &= 8! + (-4! + 3!) \times 9 \times 3! \\
39356 &= 6 \times (-5 + 3^9)/3 \\
39382 &= 2 \times (8 + (3 \times 9)^3) \\
39392 &= 2^9 + 3!! \times 9 \times 3! \\
39438 &= 8! - 3! \times 49 \times 3 \\
39528 &= 8 \times ((2 + 5)! - 9) - 3!! \\
39538 &= 8! - 3!! - 59 - 3 \\
39568 &= 8! - 6! - 5 - 9 \times 3 \\
39583 &= -3 + 8! - 5 - 9^3 \\
39728 &= 8! + 2^7 - (9 - 3)! \\
39758 &= 8! - 5 - 7!/9 + 3 \\
39768 &= 8 \times (-6 + 7 \times (-9 + 3!!)) \\
39808 &= 8! + 0 - 8^{9/3} \\
39813 &= -3 + 1 \times 8! - 9!/3!! \\
39816 &= (6 + 1) \times 8 \times (-9 + 3!!) \\
39824 &= 4 \times 2 + 8! - 9!/3!! \\
39834 &= 4! - 3! + 8! - 9!/3!! \\
39837 &= 7 \times (3 + 8 \times (-9 + 3!!)) \\
39858 &= 8! - (5 + 8 \times 9) \times 3! \\
39879 &= 9 \times 7 + 8! - 9!/3!! \\
39884 &= -4 + 8! - 8 \times 9 \times 3! \\
39888 &= 8! - (8 + 8) \times 9 \times 3 \\
39896 &= 6!/9 + 8! - 9!/3!! \\
39936 &= 6^{3!} - 9!/(9 \times 3!) \\
39948 &= 8! - 4 \times (99 - 3!) \\
40175 &= -5! + (7 + 1)! - 0! - 4! \\
40195 &= -5! + (9 - 1)! - 0! - 4 \\
40268 &= 8! - (6 \times 2 + 0!) \times 4 \\
40272 &= 2 \times (7! - (2 + 0!)!) \times 4 \\
40276 &= ((-6 + 7!) \times 2 + 0!) \times 4 \\
40293 &= -3 \times 9 + (2 \times (0 + 4))! \\
40296 &= ((-6 + 9)^2 - 0!)! - 4! \\
40297 &= ((7 + 9)/2)! + 0! - 4!
\end{aligned}$$

$$\begin{aligned}
45306 &= ((6+0!)! - 3!) \times (5+4). \\
45315 &= (-5+(1+3!)!) \times (5+4). \\
45319 &= 9 \times ((1+3!)! - 5) + 4. \\
45336 &= 63 \times 3! \times 5! - 4!. \\
45355 &= -5 + (5! + 3!!) \times 54. \\
45356 &= (6+5!) \times 3 \times 5! - 4. \\
45359 &= 9!/(5+3) - 5 + 4. \\
45377 &= 7! - 7 + (3+5)! + 4!. \\
45378 &= (8+7! - 3!) \times (5+4). \\
45592 &= (-2+95 \times 5!) \times 4. \\
45595 &= -5 + 95 \times 5! \times 4. \\
45732 &= (4! + (5! + 7) \times 3!!)/2. \\
45783 &= 3^8 \times 7 - 5! - 4!. \\
46016 &= (6! - 1) \times 064. \\
46056 &= (65 - 0!) \times 6! - 4!. \\
46072 &= 2 \times (7! - 0! + 6!) \times 4. \\
46075 &= -5 + (7 - 0!)! \times 64. \\
46076 &= 6! \times (70 - 6) - 4. \\
46082 &= 2 \times (8! + 0! - 6! \times 4!). \\
46137 &= -7 + (3!! + 1) \times 64. \\
46144 &= 4 \times 4 \times (1+6!) \times 4. \\
46232 &= (2+3!!) \times 2^6 + 4!. \\
46328 &= -8 + 2^{3!} \times (6! + 4). \\
46336 &= (6/3)^{3!} \times (6! + 4). \\
46337 &= -7^3 + 3!^6 + 4!. \\
46368 &= 8 \times (6! + 3^6) \times 4. \\
46476 &= 6^{(7-4)!} - 6!/4. \\
46584 &= 4! - 8! + 5! \times (6! + 4). \\
46623 &= -3^2 + 6^6 - 4!. \\
46626 &= (6/2)!^6 - 6 - 4!. \\
46628 &= -(8/2)! + 6^6 - 4. \\
46652 &= (2 - 5 + 6)!^6 - 4. \\
46658 &= (8 - 5)! + 6^6 - 4. \\
46661 &= 1^6 + 6^6 + 4. \\
46663 &= -3 + 6^6 + 6 + 4. \\
46674 &= (-4 + 7)!^6 - 6 + 4!. \\
46681 &= 1^8 + 6^6 + 4!. \\
46689 &= 9!/8! + 6^6 + 4!. \\
46704 &= 4! + (-0! + 7)^6 + 4!. \\
46736 &= 6^{3!} + 76 + 4. \\
46871 &= -1 + 7 \times (8!/6 - 4!). \\
46883 &= 3^8 + 8! + 6 - 4. \\
46936 &= 6^{3!} + 9!/6^4. \\
47368 &= -8 + 6! + 3!^{(7-4)!}. \\
47376 &= 6^7/3! + (7 - 4)!!. \\
47476 &= (-6! + 7! - 4) \times (7 + 4). \\
47488 &= 8! + 8^4 \times 7/4. \\
47538 &= 8! + 3 \times (5 + 7^4). \\
47664 &= 4! \times (6! + 6 + 7!/4). \\
47868 &= 8! - 6 \times (8 - 7!)/4. \\
48333 &= 3!^{3!} - 3 + 8!/4!. \\
48336 &= 6^{3+3} + 8!/4!. \\
48344 &= (4! - 4)^3 + 8! + 4!. \\
48366 &= 6^6 + (3!! + 8!)/4!. \\
48384 &= 4! \times 8 \times 3 \times 84. \\
48388 &= 8!/(8 - 3) + 8! + 4. \\
48408 &= 8!/(0! + 4) + 8! + 4!. \\
48596 &= 69 \times 5! + 8! - 4. \\
48936 &= 6! \times (3 + 9) + 8! - 4!.
\end{aligned}$$

$$\begin{aligned}
48955 &= -5 + 5! \times (9 + 8) \times 4!. \\
48956 &= 6! \times 5 + 9!/8 - 4. \\
49556 &= (6! + 5!) \times 59 - 4. \\
49656 &= 6 \times 5! \times 69 - 4. \\
49668 &= -8 + 6! \times 69 - 4. \\
49824 &= -4!^2 - 8! + 9!/4. \\
50275 &= 5 \times (7! \times 2 - 0!) - 5!. \\
50375 &= 5 \times (7! \times (3 - 0!) - 5). \\
50395 &= ((5 + 9) \times 3!! - 0!) \times 5. \\
50625 &= (5!/(2+6))^{-0!+5}. \\
50967 &= 7 \times (6! + 9^{-0!+5}). \\
51373 &= 37^3 + (1 + 5)!. \\
51719 &= 9! \times 1/7 - 1 - 5!. \\
51737 &= (7 + 3!!) \times 71 + 5!. \\
51839 &= 9 \times 3!! \times 8 - 1^5. \\
51845 &= (5 + 4)!/(8 - 1) + 5. \\
51879 &= 9!/7 - 81 + 5!. \\
51968 &= 8 \times (6! \times 9 + 1) + 5!. \\
52079 &= 9!/7 - 0! + 2 \times 5!. \\
52483 &= 3^8 \times 4 \times 2 - 5. \\
52498 &= 8 \times 9^4 + 2 \times 5. \\
53337 &= 73 \times 3^{3!} + 5!. \\
53424 &= 424 \times (3! + 5!). \\
53557 &= -7 \times (5! + 5 - 3!)^5. \\
53592 &= (-2 + 9) \times (-5! + 3!)^5. \\
53688 &= 8 \times (8!/6 + 3!) - 5!. \\
53712 &= -(2 + 1)!! + 7 \times 3!^5. \\
53713 &= -3!! + 1 + 7 \times 3!^5. \\
53808 &= 8 \times (0! + 8!/3! + 5). \\
53824 &= (4! - 2^8)^{-3+5}. \\
53848 &= 8 \times (-4 + 8!/3!) + 5!. \\
53856 &= 6! \times 5! - 8! + 3!^5. \\
53946 &= (6 + 4! \times 9) \times 3^5. \\
54396 &= (-6! + 9! \times 3)/(4 \times 5). \\
54549 &= (-9 + 4! \times 5!) \times (4! - 5). \\
54576 &= (6! + 7! \times 54)/5. \\
54644 &= (-4 + 4 \times 6!) \times (4! - 5). \\
54688 &= 8 \times (8!/6 - 4 + 5!). \\
54742 &= -2 + 4! \times (7^4 - 5!). \\
55375 &= (5 + 7!) \times (3! + 5) - 5!. \\
55939 &= 9!/3!! \times (-9 + 5!) - 5. \\
56087 &= 78 \times (-0! + 6!) + 5. \\
56485 &= (-5 + 84) \times (6! - 5). \\
56568 &= 8 \times (6^5 - 6!) + 5!. \\
56755 &= -5 + (5! + 7!) \times (6 + 5). \\
56957 &= (-7 + 5!) \times 9!/6! + 5. \\
57126 &= (6 + 2)! - 1 + 7^5. \\
57127 &= (7 + 2 - 1)! + 7^5. \\
57128 &= 8! + 2 - 1 + 7^5. \\
57465 &= 5^6 \times 4 - 7! + 5. \\
57602 &= 2 \times (0! + (6! + 7!) \times 5). \\
57624 &= 4! + 2 \times (6! + 7!) \times 5. \\
57625 &= (5 + 2 \times (6! + 7!)) \times 5. \\
57843 &= 3!! - 4 + 8! + 7^5. \\
57847 &= (7 - 4)!! + 8! + 7^5. \\
58325 &= 5^2 \times 3!! + 8! + 5. \\
58329 &= 9^{2+3} - (8 - 5)!!. \\
58368 &= 8 \times (6! + 3^8) + 5!. \\
58459 &= 9!/(5 \times 4) + 8! - 5.
\end{aligned}$$

$$\begin{aligned}
63624 &= (4! + 2^6) \times (3 + 6!). \\
63884 &= -4 + 88 \times (3! + 6!). \\
63994 &= (49 - 9)^3 - 6. \\
64518 &= 8!/15 \times 4! + 6. \\
64792 &= 2^{9+7} - 4! - 6!. \\
64806 &= (6! + 0! + 8!/4) \times 6. \\
64836 &= (6! + 3! + 8!/4) \times 6. \\
64888 &= 8! - 8 + 8^4 \times 6. \\
65284 &= 4^8 - 2 \times (5! + 6). \\
65422 &= 2^{2^4} - 5! + 6. \\
65484 &= 4^8 + 4 - 56. \\
65488 &= 8 \times (8 \times 4^5 - 6). \\
65528 &= -8 + 2^{5+5+6}. \\
65536 &= (6/3)^{5+5+6}. \\
65735 &= -5^{3!} + (-7 + 5!) \times 6!. \\
66144 &= 4 \times (4! \times (-1 + 6!) - 6!). \\
66248 &= -8 + 4^{2+6} + 6!. \\
66339 &= (9 \times 3)^3 + 6^6. \\
66396 &= -6 + 93 \times (6! - 6). \\
66738 &= 8! + 37 \times (6! - 6). \\
67195 &= -5 + (9! + (1 + 7)!)/6. \\
67536 &= (6 + 3)!/5 - 7 \times 6!. \\
68544 &= 4 \times 4! \times ((-5 + 8)!! - 6). \\
68579 &= 97 \times (-5 - 8 + 6!). \\
69024 &= ((4 + 2)! - 0!) \times 96. \\
69144 &= 4! + (4 - 1)!! \times 96. \\
69216 &= (6! + 1^2) \times 96. \\
69312 &= (2 + 1 \times 3!!) \times 96. \\
69336 &= 6^3 + 3!! \times 96. \\
69504 &= (4 + (0! + 5)!) \times 96. \\
69786 &= -6! + 8! + (7! - 9) \times 6. \\
69847 &= 7! + 4^8 - 9 - 6!. \\
69864 &= -4! + (6! + 8) \times 96. \\
69984 &= (4! + 8 \times 9) \times (9 + 6!). \\
70546 &= (-6 + 4 \times 5) \times (-0! + 7!). \\
70584 &= 4! + (8 + 5 + 0!) \times 7!. \\
71199 &= 9 \times (-9 + (11!/7!)). \\
71273 &= 3!! + (7! \times 2 - 1) \times 7. \\
71993 &= 3!! \times (9 + 91) - 7. \\
72035 &= 5 \times ((3! - 0!)!^2 + 7). \\
72549 &= ((9! \times 4!)/5!) - (27). \\
72559 &= (9!/5) - ((5 \times 2) + 7). \\
72581 &= (1 + 8)!/5 - 2 + 7. \\
72585 &= (5 + 8)!/5 \times (2 + 7). \\
73085 &= 5^{8-(0 \times 3)!} - 7!. \\
73088 &= 8 \times (8^{0!+3} + 7!). \\
73236 &= (6 - 3!!) \times (2 - 3!!)/7. \\
73296 &= 6! + 9! \times 2/(3 + 7). \\
73433 &= 3!! \times 34 \times 3 - 7. \\
73435 &= -5 + 3! \times (4! \times 3!! - 7!). \\
73597 &= (7! + 9!)/5 + 3! + 7. \\
73645 &= (-5 + (-4 + 6!) \times 3!!)/7. \\
73805 &= 5^{-0!+8} + 3!! - 7!. \\
74064 &= 4 \times (6! - 0!) \times 4! + 7!.
\end{aligned}$$

$$\begin{aligned}
74164 &= (4! \times 6! + 1) \times 4 + 7!. \\
74304 &= -(4 - 0!)!^{3!} + 4! \times 7!. \\
74348 &= 8! + (4 + 3!!) \times 47. \\
74385 &= -5!/8 \times (3^4 - 7!). \\
74879 &= ((9! - 7) + 8! \times 4)/7. \\
75243 &= -3!! \times 4 - 2 + 5^7. \\
75245 &= -5 \times 4!^2 + 5^7. \\
75344 &= -4^4 + 3 \times 5 \times 7!. \\
75473 &= (3 \times 7! - 4!) \times 5 - 7. \\
75585 &= (5 - 8) \times (5 - 5 \times 7!). \\
75595 &= -5 + (-9 + 5!/5) \times 7!. \\
75603 &= 3 \times (0! + 6! \times 5 \times 7). \\
75635 &= (5 \times 3 \times 6! + 5) \times 7. \\
75637 &= (7! \times 3 + 6) \times 5 + 7. \\
77378 &= -8! + 7^{3!} + 7 \times 7. \\
77559 &= 9!/5 - 57 + 7!. \\
77609 &= 9!/(-0! + 6) + 7! - 7. \\
78125 &= 5^{(2-1)^8 \times 7}. \\
78132 &= (2 + 3)^{-1+8} + 7. \\
78352 &= (-2 + 5!) \times (3!! - 8 \times 7). \\
78489 &= (9 + 8)^4 + 8 - 7!. \\
79335 &= 5 \times (3!! + 3 \times (9 + 7!!)). \\
79823 &= -3!! + 2 \times 8! - 97. \\
79947 &= (7!/4 + 9) \times 9 \times 7. \\
80352 &= 2 \times (-5! - (3 + 0!)! + 8!). \\
80402 &= 2 \times (0! - (4 + 0!)! + 8!). \\
80424 &= 4! + 2 \times (-4 + 0!)! + 8!. \\
80448 &= (8!/4 - 4!) \times (0 + 8). \\
80479 &= 9! - 7 \times (4! - 0! + 8!). \\
80519 &= (9 - 1)! - 5! - 0! + 8!. \\
80528 &= 8 + 0 - 5! + 2 \times 8!. \\
80572 &= 2 \times (-7 \times 5 + 0! + 8!). \\
80582 &= 2 \times 8! - 50 - 8. \\
80585 &= -5 + 8! - 50 + 8!. \\
80592 &= 2 \times (-(9 - 5)! + (0 + 8)!). \\
80624 &= -4 + 2 \times (-6 + 0 + 8!). \\
80625 &= -5 + 2 \times (-6 + 0! + 8!). \\
80629 &= -9 + 2 \times (-(6 \times 0!) + 8!). \\
80632 &= 2 \times (3 + 6 - 0!)! - 8. \\
80662 &= 2 \times (6 + 6 - 0! + 8!). \\
80664 &= 4! + (6/6 + 0!) \times 8!. \\
80682 &= 2 \times 8! + 6 \times (-0! + 8). \\
80752 &= 2 \times (57 - 0! + 8!). \\
80755 &= 5! - 5 + (7 + 0!)! + 8!. \\
80792 &= (2 \times (9 + 7!) + 0!) \times 8. \\
80802 &= 2 \times (0! + 80 + 8!). \\
80824 &= 4! + 2 \times (80 + 8!). \\
81355 &= -5 + 5! \times 3!! - (-1 + 8)!. \\
81542 &= 2 \times (451 + 8!). \\
82082 &= 2 \times (8! + 0! + (-2 + 8)!). \\
82086 &= (6! + (8! - 0!)) \times 2 + 8. \\
82368 &= 8 \times 6^3 + 2 \times 8!. \\
82952 &= (2^5 \times 9)^2 + 8. \\
83232 &= 2 \times (3!^{-2+3!} + 8!).
\end{aligned}$$

### 5.3 Selfie Numbers in Increasing Order Digits

$120 = (-0! + (1 + 2)!)!.$	$12924 = ((1 + 2)!! \times 2 - 4) \times 9.$	$15667 = 1 \times 5^6 + 6 \times 7.$
$121 = 11^2.$	$12951 = (-1 + 12 \times 5!) \times 9.$	$15688 = -1 + 5^6 + 8 \times 8.$
$127 = -1 + 2^7.$	$12959 = -1 + (-2 + 5)!! \times (9 + 9).$	$15698 = 1 + 5^6 + 8 \times 9.$
$184 = (-1 + 4!) \times 8.$	$12996 = (1 \times 2 + 6!) \times (9 + 9).$	$15765 = 15 \times (-5 + 6!) + 7!.$
$736 = 3^6 + 7.$	$13452 = (-12 + 3!!) \times (4! - 5).$	$15839 = -1 + 3!! \times (5 + 8 + 9).$
$1331 = 11^{3!-3}.$	$13536 = (1 + 3!)! + 3!^5 + 6!.$	$15840 = (-0! - 1 + 4!) \times (-5 + 8)!!.$
$1785 = (-1 + 5!) \times (7 + 8).$	$13537 = 1 + 3!! + 3!^5 + 7!.$	$16345 = (-1 + 3 + 4)! + 5^6.$
$2047 = -0! + 2^{4+7}.$	$13673 = (13 + 3!) \times 6! - 7.$	$16353 = -1 + 3^{3!} + 5^6.$
$2159 = -1 + 2 \times 5! \times 9.$	$13823 = -1 + (2 \times 3!)^3 \times 8.$	$16377 = (1 - 3 + 6)^7 - 7.$
$2401 = (0! + (1 + 2)!)^4.$	$13825 = 1 + (-2 + 3!)!^{-5+8}.$	$16383 = -1 + (3!/3)^{6+8}.$
$2753 = 23 \times 5! - 7.$	$13831 = -1 + (1 + 3!)^3 + 8.$	$16385 = 1 + (-3 + 5)^{6+8}.$
$2846 = -2 + 4 \times (6! - 8).$	$13832 = (1 + 23)^3 + 8.$	$16445 = (-1^4 + 4!) \times (-5 + 6!).$
$3453 = -3 + 3!! \times 4!/5.$	$13935 = (1 + 3!)^3 + 5! - 9.$	$16445 = (-1^4 + 4!) \times (-5 + 6!).$
$3565 = -35 + 5 \times 6!.$	$13953 = (1 + 3!)^3 + 5! + 9.$	$16465 = (1 + 4)! + 5^6 + 6!.$
$3582 = (-2 + 3!!) \times 5 - 8.$	$13959 = (13 \times 5! - 9) \times 9.$	$16497 = (-1 + 4!) \times 6! - 7 \times 9.$
$3585 = 3!! \times 5 - 5!/8.$	$14256 = (1 + 2!)^4 \times (5 + 6).$	$16554 = (-1 + 4! \times (-5 + 5!)) \times 6.$
$3742 = -2 - 3!^4 + 7!.$	$14355 = ((-1 + 3!!) \times 4 - 5) \times 5.$	$16559 = -1 + (5! + 5!) \times 69.$
$3744 = -3!! - 4! \times 4! + 7!.$	$14365 = -(1 + 3!)!/4 + 5^6.$	$16560 = (-0! + 5!) \times 6! - 6!.$
$3840 = (-0! + 3!!) \times 4 \times 8.$	$14373 = (-1 + 3!!) \times (3 + 4!) - 7!.$	$16561 = 1 + (-1 + 5!) \times 6! - 6!.$
$4096 = 04^{(-6+9)}!$ .	$14400 = (0! + 0! + 1)!! \times (-4 + 4!).$	$17104 = (0! + 1 + 1)!! + 4^7.$
$4330 = (0! + 3!!) \times 3! + 4.$	$14405 = (0! + (1 + 4)! \times 4!) \times 5.$	$17159 = -1 + (1 + 5 + 7)!/9!.$
$4336 = 3!!/3 + 4^6.$	$14406 = (0! + (-1 + 4)!)^4 \times 6.$	$17233 = 1 + (-2 + 3!!) \times (-3 + 7)!!.$
$4338 = 3! \times (3 + (4!/8)!!).$	$14420 = (0! + (1 + 2)!!) \times (-4 + 4!).$	$17245 = (1 + 2)!! \times 4! - 5 \times 7.$
$4536 = 3^4 \times 56.$	$14424 = (1 + 2)!! \times (-4 + 4!) + 4!.$	$17265 = (1 + 2) \times (-5 + 6! + 7!!).$
$4752 = -2 \times (4! + 5!) + 7!.$	$14520 = (0! + (-1 + 2 + 4)!) \times 5!.$	$17273 = (1 + 2)!! \times (-3 + 7)!! - 7.$
$5039 = -0! + (3 - 5 + 9)!!.$	$14521 = (-1 + 12)^4 - 5!.$	$17274 = -(1 + 2)! + 4! \times 7!/7.$
$5040 = (-0! - 0! + 4 + 5)!!.$	$14641 = (1 + (1 + 4)!)^{-4+6}.$	$17447 = -1 + 4! \times ((-4 + 7)!! + 7).$
$5072 = 02^5 + 7!!.$	$14689 = 1 + 4! \times 68 \times 9.$	$17488 = (-1 + 4)^7 \times 8 - 8.$
$5075 = ((0! + 5)! + 5) \times 7.$	$15125 = 11^2 \times (5 + 5!!).$	$17497 = 1 + 4! \times (7!/7 + 9).$
$5076 = 0! + (5 + 6!) \times 7.$	$15137 = 1 + 1 + 3 \times (5 + 7!!).$	$17856 = (-1 + 5^6)/7 \times 8.$
$5275 = 2 \times 5! - 5 + 7!!.$	$15265 = -(1 + 2) \times 5! + 5^6.$	$17948 = 1 \times 4 \times (7 + 8!/9).$
$5376 = 3! \times 56 + 7!!.$	$15358 = 1 - 3 + 5! \times (5! + 8).$	$19332 = (-12 + 3 \times 3!!) \times 9.$
$5391 = (-1 + 3!! - 5!) \times 9.$	$15432 = 12 \times 3!^4 - 5!!.$	$19376 = -1 + (3 \times 6! - 7) \times 9.$
$5735 = 3!! - 5 \times 5 + 7!!.$	$15496 = -(1 + 4)! + 5^6 - 9.$	$19439 = -1 + 3!! \times (4 \times 9 - 9).$
$6145 = 1 + 4^5 \times 6.$	$15612 = -11 - 2 + 5^6.$	$19659 = -(-1 + 5)! + (-6 + 9)^9.$
$6459 = 4! + (-5 + 6!) \times 9.$	$15613 = 1 - 13 + 5^6.$	$19682 = -1 + ((-2 + 6)!!/8)^9.$
$6472 = 2 \times (-4 + 6!) + 7!!.$	$15615 = -(1 + 1)! \times 5 + 5^6.$	$19683 = ((1 - 3 + 6)!!/8)^9.$
$6480 = (-0! + 4)!! + 6! \times 8.$	$15617 = -(-1 + 1)! + 5^6 - 7.$	$19684 = 1 + (4 \times 6/8)^9.$
$6549 = 4! + (5 + 6!) \times 9.$	$15618 = (-1 + 1)! + 5^6 - 8.$	$19692 = (-1 - 2 + 6)^9 + 9.$
$6595 = 5! - 5 + 6! \times 9.$	$15620 = 0! - (1 + 2)! + 5^6.$	$19693 = 1 + (-3 + 6)^9 + 9.$
$7911 = 11!/7! - 9.$	$15621 = -1 - 1 - 2 + 5^6.$	$19737 = (-1 + 3^7 + 7) \times 9.$
$8448 = 4! \times 4 \times 88.$	$15622 = 1 - 2 - 2 + 5^6.$	$20147 = -0! - 12 + 4 \times 7!!.$
$8595 = (-5 + 5! \times 8) \times 9.$	$15623 = -(12/3)!! + 5^6.$	$20743 = (02 \times 3!)^4 + 7.$
$8984 = 4! + (8! + 8!)!!/9.$	$15624 = -1^{24} + 5^6.$	$21744 = ((1 + 2)!! - 4!) \times 4! + 7!!.$
$10098 = (0! + 0!) \times ((-1 + 8)!! + 9).$	$15630 = -01 + 3! + 5^6.$	$22264 = 22^2 \times 46.$
$10362 = (-0! + 12^3) \times 6.$	$15632 = 1 + 2 \times 3 + 5^6.$	$22398 = -2 + (2 + 3) \times 8!/9.$
$10384 = (0! + 1 + 3!)^4 \times 8.$	$15633 = -1 + 3 \times 3 + 5^6.$	$22864 = (-22 + 4 \times 6!) \times 8.$
$10786 = 0! + (-1 + 6!) \times (7 + 8).$	$15634 = 13 - 4 + 5^6.$	$22976 = 2 \times (-2 + 6!) \times (7 + 9).$
$11264 = 11 \times 2^{4+6}.$	$15640 = 0! + 14 + 5^6.$	$23040 = ((0! + (0! + 2)!!)!! + 3!!) \times 4.$
$11349 = (1 + (1 + 3)!!/4) \times 9.$	$15641 = (1 + 1)^4 + 5^6.$	$23044 = (0! + 2 \times 3!! \times 4) \times 4.$
$11528 = (1 + 12 \times 5!) \times 8.$	$15642 = 1 + 2^4 + 5^6.$	$23048 = (0! + (2 \times 3)!! \times 4) \times 8.$
$11648 = (1 + 1)^4 \times (6! + 8).$	$15643 = -1 \times 3! + 4! + 5^6.$	$23184 = ((1 + 2)! - 3!!) \times 4! + 8!!.$
$11881 = ((1 + 11)! + 8!)/8!!.$	$15644 = -1 - 4 + 4! + 5^6.$	$23335 = -2 + 3 \times (3 + 3!)^5.$
$11882 = 1 + (12! + 8!)/8!!.$	$15645 = 1 \times 4 \times 5 + 5^6.$	$23352 = (2 \times 2)! + 3 \times 3!^5.$
$11943 = (11^3 - 4) \times 9.$	$15649 = 1 \times 4! + 5^{(-6+9)!}.$	$23472 = 22 \times 3!^4 - 7!!.$
	$15650 = 0! + (-1 + 5)! + 5^6.$	$23546 = 23 \times 4^5 - 6.$
	$15654 = 1 \times 4! + 5 + 5^6.$	

$$\begin{aligned}
24192 &= ((1+2)^2)!/(4!-9). \\
24346 &= 2 + 34 \times (-4+6!). \\
24546 &= ((2 \times 4)^4 - 5) \times 6. \\
24564 &= (-2+4 \times 4^5) \times 6. \\
24584 &= 24 \times 4^5 + 8. \\
24695 &= (2 \times 4)! - 5^{(-6+9)}. \\
25137 &= 1 - 2^{3!} + 5 \times 7!. \\
25176 &= (1+2)! + 5 \times (-6+7!). \\
25177 &= 12 + 5 \times (-7+7!). \\
25179 &= -12 + 5 \times 7! - 9. \\
25188 &= -12 + 5 \times 8!/8. \\
25191 &= (1+(1+2)!)! \times 5 - 9. \\
25197 &= -12 + 5 \times 7! + 9. \\
25210 &= ((0!+(1+2)!)!+2) \times 5. \\
25270 &= ((0!+2)!!+2) \times 5 \times 7. \\
25375 &= ((2 \times 3)!+5) \times 5 \times 7. \\
25914 &= -(1+2)! + 4! \times 5! \times 9. \\
25920 &= (02^2)! \times 5! \times 9. \\
25924 &= 2 \times 2 + 4! \times 5! \times 9. \\
25929 &= (2 \times 2)! \times 5! \times 9 + 9. \\
25938 &= (2+3 \times 5! \times 8) \times 9. \\
26064 &= ((0!+2)!!+4) \times 6 \times 6. \\
26136 &= 12 \times 3 \times (6!+6). \\
26172 &= (1+2)^{12} \times (6!+7). \\
26208 &= (0!+2)^2 \times (6!+8). \\
26398 &= -2 + 3! \times (-6!+8!)/9. \\
26640 &= (0!+(2+4) \times 6) \times 6!. \\
27436 &= (2+3!!) \times (-4+6 \times 7). \\
27720 &= (0!+2)!!/2 \times 77. \\
27724 &= 2 \times (-2+4^7) - 7!. \\
27734 &= 2 \times (3+4^7) - 7!. \\
27735 &= 2^{3 \times 5} + 7 - 7!. \\
28438 &= -2 - (3 \times 4)!/8! + 8!. \\
28552 &= (-2+2 \times 5!) \times 5! - 8. \\
28832 &= 2 \times (2-3!!) \times 8 + 8!. \\
28864 &= 2 \times (4-6!) \times 8 + 8!. \\
29438 &= (-2+3!!) \times (4 \times 8+9). \\
29520 &= (0!+2)!! \times (2^5+9). \\
29574 &= (2+4) \times (-5!+7!+9). \\
30240 &= ((0 \times 0)!+2)! \times (3+4)!. \\
30241 &= 0! + (1+2)! \times (3+4)!. \\
30275 &= ((0!+2)! \times 3!!+5) \times 7. \\
30287 &= -0! + 2 \times 3 \times (7!+8). \\
30294 &= (0!+2)! \times (3+4)! + 9. \\
30347 &= -0!+3! \times (-3!+4!+7!). \\
30367 &= 0! + (3+3!!) \times 6 \times 7. \\
30373 &= (0!+3! \times (3+3!!)) \times 7. \\
30576 &= 03! \times (56+7!). \\
31256 &= 1 \times 2 \times (3+5^6). \\
31614 &= 11 \times (-3!+4 \times 6!). \\
31680 &= (0!-13) \times 6! + 8!. \\
31686 &= (1-3!!-6!) \times 6 + 8!. \\
31756 &= 1 + 3 \times (5^6 - 7!). \\
32254 &= -2 + (2^3)! \times 4/5. \\
32256 &= 2^{2^3} \times (5!+6). \\
32258 &= 2 - (2^3)!/5 + 8!. \\
32391 &= (-1+(2+3) \times 3!!) \times 9. \\
32398 &= -2 + 3!! \times (-3+8) \times 9. \\
32537 &= (2^3)! - 3!^5 - 7.
\end{aligned}$$

$$\begin{aligned}
32538 &= -2 \times 3 - 3!^5 + 8!. \\
32544 &= (2^3)! - (4!/4)^5. \\
32648 &= -(2+3)! + 4^6 \times 8. \\
32744 &= 2 \times (-3 \times 4 + 4^7). \\
32759 &= 2^{3+5+7} - 9. \\
32772 &= 2 \times (2 + (-3+7)^7). \\
32775 &= 2^{3+5+7} + 7. \\
32864 &= 2 \times 3! + 4^6 \times 8. \\
33120 &= (0!+1) \times 23 \times 3!!. \\
33235 &= 23 \times (3!!+3!!+5). \\
33264 &= 2 \times ((3+3!!) \times 4! - 6!). \\
33384 &= (-3+3! \times (3!!-4!!)) \times 8. \\
33495 &= 33 \times (4^5 - 9). \\
33696 &= 3!^{3!} - (6!+6!) \times 9. \\
33738 &= (3!+3!! \times 3!!)/7 - 8!. \\
33768 &= -3!! + (-3^6 + 7!) \times 8. \\
33831 &= -(1+3!!) \times 3 \times 3 + 8!. \\
33834 &= -3!! - 3! + 3!! \times 48. \\
34207 &= -0! + 2 \times (3!!+4^7). \\
34476 &= 3 \times 4 \times (4 \times 6! - 7). \\
34488 &= (3!-4!)^{4!/8} + 8!. \\
34531 &= (-1+3!!+3!!) \times 4! - 5. \\
34535 &= (3!!+3!!) \times 4! - 5 \times 5. \\
34572 &= 2 \times 3!! \times 4! + 5 + 7. \\
34584 &= 3 \times (4! \times 4 \times 5! + 8). \\
34608 &= (0!+3!!) \times 4! \times (-6+8). \\
34614 &= (1+3!!) \times (4!+4!) + 6. \\
34624 &= 2^{3!} + (4!+4!) \times 6!. \\
34698 &= 3! \times ((4+6!) \times 8 - 9). \\
34703 &= -0!+3! \times (3!!+4!+7!). \\
34713 &= (1+3!) \times (-3^4 + 7!). \\
34727 &= (2-3^4+7!) \times 7. \\
34728 &= -23 \times 4! - 7! + 8!. \\
34776 &= (-3 \times 4 \times 6 + 7!) \times 7. \\
34784 &= (-3!!+4!+4+7!) \times 8. \\
34832 &= 2 \times ((3!+3!!) \times 4! - 8). \\
34839 &= (3!+3!!) \times 48 - 9. \\
34875 &= -3^4 \times 5 - 7! + 8!. \\
34944 &= (-3!! \times 4! + 4!^4)/9. \\
34983 &= 3^{3!} \times 48 - 9. \\
35147 &= (1+3!) \times (-4!+5+7!). \\
35184 &= -(1+3!!) + 4! - 5! + 8!. \\
35247 &= 2 + (3+4) \times (-5+7!). \\
35280 &= -(0!-2+3+5!) + 8!. \\
35281 &= 1 - (2 \times 3! - 5!) + 8!. \\
35282 &= 2 - (2 \times 3! - 5!) + 8!. \\
35476 &= (3!!+4) \times (56-7). \\
35496 &= (3!!-4!) \times (5!-69). \\
35856 &= -3! \times (5!/5+6!) + 8!. \\
35873 &= -3!! \times 3! - 5! - 7 + 8!. \\
35933 &= 33^3 + 5 - 9. \\
35937 &= 33^{5+7-9}. \\
35950 &= (-0!+3!!) \times (5+5 \times 9). \\
36224 &= (2+2 \times 3)! - 4^6. \\
36248 &= (-2+3!!) - 4^6 + 8!. \\
36432 &= 2 \times (3^{3!} \times 4! + 6!). \\
36438 &= -3 \times 3!^4 + 6 + 8!. \\
36486 &= (3^4 - 6!) \times 6 + 8!. \\
36719 &= -1 + 3!! \times (6 \times 7 + 9).
\end{aligned}$$

$$\begin{aligned}
39755 &= (3 + 5)! - 5 - 7!/9. \\
39759 &= (3 + 5)! - (7! + 9)/9. \\
39769 &= 3 + 6 + (-7! + 9!)/9. \\
39825 &= -2 \times 3^5 + 8! - 9. \\
39843 &= -3! \times 3^4 + 8! + 9. \\
39872 &= 2^{3!} \times 7 \times 89. \\
39924 &= (2^3)! - 4 \times 99. \\
39955 &= -3 \times 5! - 5 + 9!/9. \\
39959 &= -3 \times 5! + (-9 + 9!)/9. \\
39987 &= (-37 + 8!/9) \times 9. \\
39996 &= -36 \times 9 + 9!/9. \\
40080 &= -(0! + 0!) \times (0! + 4)! + 8!. \\
40138 &= -(0! + 1)! - 3!!/4 + 8!. \\
40185 &= -0! - 14 - 5! + 8!. \\
40224 &= ((0! + 2)! + 2)! - 4 \times 4!. \\
40238 &= 0! - 2 - 3^4 + 8!. \\
40265 &= 0! + (2 \times 4)! - 56. \\
40268 &= -(0! + 2)! - 46 + 8!. \\
40273 &= (02^3)! - 47. \\
40274 &= 0! + (2 \times 4)! - 47. \\
40283 &= -0! - 2 - 34 + 8!. \\
40304 &= (0! + 0! + 3!)! - 4 \times 4. \\
40313 &= (0! + 1 + 3!)! - 3 - 4. \\
40316 &= (0! + 1 + 3!)! - 4!/6. \\
40319 &= -0! + (13 + 4 - 9)!!. \\
40330 &= (0! + 0! + 3!)! + 3! + 4. \\
40340 &= (0! + 0! + 3!)! - 4 + 4!. \\
40380 &= (0! + 0!)^{3!} - 4 + 8!. \\
40384 &= (0! + 3) \times 4 \times 4 + 8!. \\
40385 &= (0! + 3 \times 4) \times 5 + 8!. \\
40387 &= 0! + 3! \times (4 + 7) + 8!. \\
40418 &= 0! + 1 + 4 \times 4! + 8!. \\
40428 &= (0! + 2 + 4!) \times 4 + 8!. \\
40435 &= (-0! + 3!)! + (4 + 4)! - 5. \\
40558 &= (-0! + 4)^5 - 5 + 8!. \\
40583 &= -0! + 3! \times 4! + 5! + 8!. \\
40608 &= (0! + 0!) \times 4! \times 6 + 8!. \\
40687 &= -0! + (46 + 7!) \times 8. \\
40688 &= 046 \times 8 + 8!. \\
40755 &= ((-0! + 4)!! - 5) \times 57. \\
40786 &= -0! + 467 + 8!. \\
40788 &= (-0! + 4)! \times 78 + 8!. \\
40804 &= (0! + (0! + 4)!) \times 4 + 8!. \\
40824 &= (-0! - 2 + 4!) \times 4! + 8!. \\
40872 &= (0! + 2)!! - 4! \times 7 + 8!. \\
40873 &= 0! + 3!! - 4! \times 7 + 8!. \\
40983 &= (-0! + 3!!) \times (48 + 9). \\
41040 &= (0! + 0! + 1)!! + (4 + 4)!. \\
41352 &= 12^3 \times 4! - 5!. \\
41458 &= 1 + (4!^4 - 5!)/8. \\
41473 &= 1 + 3 \times 4!^{-4+7}. \\
41528 &= ((1 + 2)!! - 4) \times 58. \\
41585 &= (-1 + 4!) \times 55 + 8!. \\
41832 &= (-1 + 2^{3!}) \times 4! + 8!. \\
42338 &= 2 + 3!! + 3!^4 + 8!. \\
42480 &= (0! + 2) \times (4!/4)! + 8!. \\
43184 &= (1 \times 3!! - 4) \times 4 + 8!. \\
43185 &= (-1 + 3!! \times 4) \times 5!/8. \\
43230 &= (0! + 2 \times 3!!) \times (3! + 4!).
\end{aligned}$$

$$\begin{aligned}
43238 &= 2 + 3^{3!} \times 4 + 8!. \\
43264 &= 2^{3!} \times (-44 + 6!). \\
43535 &= 3!^{13!} + 4 - 5^5. \\
43656 &= -3!! \times 4 - 5! + 6^6. \\
43676 &= (3!! - 4) \times (-6 + 67). \\
43680 &= (0! + 3!)! \times 4/6 + 8!. \\
43749 &= ((-3!! + 4)/4 + 7!) \times 9. \\
43794 &= ((-3!! + 4)/4 + 7!) \times 9. \\
43805 &= (0! + 3!! - 4!) \times 5 + 8!. \\
43824 &= (2 + 3! \times 4!) \times 4! + 8!. \\
43872 &= -2 \times (3!! + 4!) + 7! + 8!. \\
43896 &= (3!! + 4!) \times (68 - 9). \\
44176 &= 14^4 + 6! + 7!. \\
44386 &= -3! - 4! + 4^6 + 8!. \\
44416 &= 1 \times (4 + 4)! + 4^6. \\
44937 &= ((3 + 4)! - 47) \times 9. \\
45179 &= -1 + (-4 \times 5 + 7!) \times 9. \\
45238 &= -2 + (3 + 4)! - 5! + 8!. \\
45268 &= -2 + ((4 + 5)! - 6!)/8. \\
45348 &= -3 \times 4 + (4 + 5)!/8. \\
45357 &= -3 + 45/5 \times 7!. \\
45360 &= (0! + 3!) \times (4 + 5) \times 6!. \\
45369 &= ((3 + 4)! - 5 + 6) \times 9. \\
45372 &= 2 \times 3! + (4 + 5) \times 7!. \\
45380 &= (0! + 3!)! + 4 \times 5 + 8!. \\
45385 &= (3 + 4)! - 5 \times 5 + 8!. \\
45475 &= (4 + 4)! + 5! - 5 + 7!. \\
45479 &= -4/4 + 5! + 7! \times 9. \\
45480 &= (-0! + 44) \times 5! + 8!. \\
45675 &= (4 + 5) \times (5 + 6!) \times 7. \\
45795 &= 4 \times 5! + (-5 + 7!) \times 9. \\
45864 &= 44 \times (5! + 6) + 8!. \\
45872 &= 2^{4+5} + 7! + 8!. \\
46056 &= -(-0! + 4)!! + 5! + 6^6. \\
46079 &= -0!^4 + 6! + 7! \times 9. \\
46080 &= (00! + 4)! \times 6! - 8!. \\
46081 &= 0! + (1 + 4)! \times 6! - 8!. \\
46085 &= 0! + 4 + 5! \times 6! - 8!. \\
46328 &= 2^{3!} \times (4 + 6!) - 8. \\
46335 &= 3 \times (-3!!/4 + 5^6). \\
46356 &= -3!!/4 - 5! + 6^6. \\
46464 &= 4 \times 4 \times 4 \times (6! + 6). \\
46515 &= (-1 + 4) \times (-5! + 5^6). \\
46526 &= -(2 + 4!) \times 5 + 6^6. \\
46556 &= -4 \times 5 \times 5 + 6^6. \\
46608 &= (-0! + 4)!^6 - 6 \times 8. \\
46626 &= -24 - 6 + 6^6. \\
46630 &= 0! - 3 - 4! + 6^6. \\
46637 &= -3 \times 4 + 6^6 - 7. \\
46650 &= -(0 \times 4)! - 5 + 6^6. \\
46688 &= (4 + 6^6/8) \times 8. \\
46719 &= (-1 + 4)!^6 + 7 \times 9. \\
46765 &= -4 + 5! + 6^6 - 7. \\
46792 &= 2 \times (-4 + 6!) + 7! \times 9. \\
46800 &= (0! + (0! + 4)!) \times 6! - 8!. \\
46848 &= 4! \times 4 \times 68 + 8!. \\
46851 &= (-1 + 4) \times (5^6 - 8). \\
46881 &= (1 - 4 + 6)^8 + 8!. \\
47286 &= (2 + 4)^6 + 7!/8.
\end{aligned}$$

$$\begin{aligned}
62524 &= (2 \times 2)! + 4 \times 5^6. \\
62640 &= ((0! + 2)^4 + 6) \times 6!. \\
62744 &= 2 \times 44 \times (6! - 7). \\
63357 &= -3 + (3! + 5) \times (6! + 7!). \\
63991 &= (-1 + 3!!) \times (6!/9 + 9). \\
64638 &= (-3!^4 + 6! \times 6!) / 8. \\
64680 &= -(0! + 4)! + 6! \times 6! / 8. \\
64686 &= -4! - (6! - 6! \times 6!) / 8. \\
64800 &= (-00! + 4)!! \times 6! / 8. \\
64801 &= 0! + (-1 + 4)!! \times 6! / 8. \\
64806 &= (-0! + 4)! + 6! \times 6! / 8. \\
64808 &= (-0! + 4)!! \times 6! / 8 + 8. \\
64809 &= (-0! + 4)!! \times 6! / 8 + 9. \\
64824 &= 2^{4 \times 4} - 6! + 8. \\
64826 &= 2 + 4! + 6! \times 6! / 8. \\
64866 &= -4! + (6! + 6! \times 6!) / 8. \\
65422 &= 2^{2^4} - 5! + 6. \\
65528 &= 2^{5+5+6} - 8. \\
65735 &= 3!! \times 5! - 5^6 - 7!. \\
66234 &= 23 \times 4 \times 6! - 6. \\
66238 &= -2 + 36 \times 6! + 8!. \\
66384 &= (3!! + 4) \times 6 \times 6 + 8!. \\
67199 &= ((-1 + 6)! \times 7! - 9) / 9. \\
67534 &= -3! + 4 \times 5^6 + 7!. \\
67564 &= 4 \times (5^6 + 6) + 7!. \\
68305 &= (-0! + 3!!) \times (5 + 6! / 8). \\
68352 &= (-(-2+3)!! + 5!) \times (6! - 8). \\
68644 &= (4^4 + 6)^{-6+8}. \\
68875 &= (5 + 6!) \times (7 + 88). \\
69264 &= 2^4 \times (6 \times 6! + 9). \\
69552 &= (2 + 5)! / 5 \times 69. \\
70570 &= (0! + 0!) \times (5 + 7 \times 7!). \\
71199 &= (11!/7! - 9) \times 9. \\
72448 &= 2 \times (-4^{(-4+7)!} + 8!). \\
73088 &= (-0! + 3)^{7+8} + 8!. \\
73236 &= (-2+3)!! \times (-3! + 6!) / 7. \\
73433 &= 3!! \times 3 \times 34 - 7. \\
73437 &= -3 + (-3! + 4!) / (7+7!). \\
74144 &= 14 \times (4^4 + 7!). \\
74160 &= (0! + (-1 + 4)!!) \times 6! / 7. \\
74303 &= -0! - 3!^{3!} + 4! \times 7!. \\
74348 &= (3!! + 4) \times 47 + 8!. \\
74352 &= (2+3)!! \times (-4! + 5!) + 7!. \\
74525 &= -(2 + 4)! \times 5 + 5^7. \\
74856 &= -4! + 5! \times (-6 + 7! / 8). \\
74876 &= -4 - 6! + 7! \times (7 + 8). \\
74880 &= (0! + 4)! \times 78 \times 8.
\end{aligned}$$

$$\begin{aligned}
75243 &= -2 - 3!! \times 4 + 5^7. \\
75245 &= -24 \times 5! + 5^7. \\
75438 &= (-3!^4 + 5! \times 7!) / 8. \\
75453 &= 3 \times (-4! - 5 \times (5 - 7!)). \\
75480 &= (-0! + 4) \times 5 \times (7! - 8). \\
75486 &= -4! + 5! \times (-6 + 7!) / 8. \\
75523 &= -2 + 3 \times 5 \times (-5 + 7!). \\
75585 &= 5! \times (-5/5 + 7!) / 8. \\
75601 &= 0! + 15 \times 6! \times 7. \\
75615 &= 15 \times (-5 + 6 + 7!). \\
75678 &= 5! + (-6 + 7!) \times 7 + 8!. \\
75685 &= -5 + 5! \times (6 + 7!) / 8. \\
76335 &= 3 \times 35 \times (6! + 7). \\
76517 &= (-1 + 5!) \times (6! - 77). \\
77896 &= -6^7 - 7! - 8 + 9!. \\
77903 &= -0! - 3!^7 - 7! + 9!. \\
77904 &= -(-0! + 4)!^7 - 7! + 9!. \\
78047 &= (0! + 4)^7 - 78. \\
78115 &= -(1 + 1)! + 5^7 - 8. \\
78116 &= -1 + (-1 + 6)^7 + 8. \\
78117 &= (-1 - 1 + 7)^7 - 8. \\
78132 &= -1 + (2 + 3)^7 + 8. \\
78133 &= (-1 + 3 + 3)^7 + 8. \\
78135 &= -1 + 3 + 5^7 + 8. \\
78253 &= (2 + 3)! + 5^7 + 8. \\
78255 &= 2 + 5! + 5^7 + 8. \\
78624 &= 2 \times (-4! \times 6 \times 7 + 8!). \\
79983 &= -3!! - (7 \times (8! - 9) - 9!). \\
80128 &= (0! + 1)! \times (-2^8 + 8!). \\
80352 &= 02 \times (-3!! / 5 + 8!). \\
80527 &= 0! + 2 \times (-57 + 8!). \\
80570 &= (0! + 0!) \times (-5 \times 7 + 8!). \\
80585 &= 055 + 8! + 8!. \\
80604 &= (0! + 0!)! \times (-4! + 6 + 8!). \\
80616 &= (0! + 1)! \times (-6 - 6 + 8!). \\
80619 &= (0! + 1)! \times (-6 + 8!) - 9. \\
80627 &= -0! - 2 \times (6 - 7! \times 8). \\
80653 &= 0! + (-3 + 5) \times (6 + 8!). \\
80658 &= (-0! + 5)! - 6 + 8! + 8!. \\
80687 &= -0! + (6 + 7!) \times 8 + 8!. \\
80704 &= (0! + 0!) \times (4 + 7!) \times 8. \\
80723 &= -0! + 2 \times (3! \times 7 + 8!). \\
80734 &= (-0! + 3) \times (47 + 8!). \\
80736 &= (-0! + 3) \times (6 + 7!) \times 8. \\
80759 &= -0! + 5! - 7 \times 8! + 9!. \\
81368 &= -1 + 3^6 + 8! + 8!. \\
82067 &= 0! + 2 \times (6! - 7 + 8!). \\
82080 &= (0! + 0!) \times ((-2+8)!! + 8!).
\end{aligned}$$

$$\begin{aligned}
82528 &= 2 \times ((-2 + 5!) \times 8 + 8!). \\
83160 &= (-0! + 13)!! / (6! \times 8). \\
83248 &= 2 \times (3!^4 + 8 + 8!). \\
83532 &= 2 \times (3! + 3!! \times 58). \\
83584 &= 3! \times (-4 + 5!) + 8 \times 8. \\
83595 &= 3 \times (5! + 5^8 - 9!). \\
84576 &= -4! + 5! \times (6! - 7 - 8). \\
84680 &= (0! + 4)^6 \times 8 - 8!. \\
85416 &= -1 \times 4! + 5! \times (6! - 8). \\
85446 &= 4!/4 + 5! \times (6! - 8). \\
85462 &= -2 + 4! + 5! \times (6! - 8). \\
85464 &= 4! + 4! \times 5 \times (6! - 8). \\
85680 &= (-0! + 5!) \times (6 - 8 + 8)!. \\
85681 &= (-1 + 5!) \times 6! + (-8 + 8)!. \\
85697 &= (-5 + 6 + 7!) \times (8 + 9). \\
85736 &= 3!! \times 5! - 6! + 7 \times 8. \\
85746 &= -4! + 5! \times 6! - 7!/8. \\
85765 &= -5 + 5! \times 6! - 7!/8. \\
86332 &= (2 + 3)! \times 3!! - 68. \\
86335 &= (3 + 3!! \times 5!) - 68. \\
86352 &= (2 \times 3)! \times 5! - 6 \times 8. \\
86405 &= 0! - 4 + 5! \times 6! + 8. \\
86415 &= -1 + 4! + 5! \times 6! - 8. \\
86435 &= ((3+4)! + ((5! \times 6!) + 8)). \\
86519 &= -1 + 5! \times (6! - 8 + 9). \\
86967 &= 6^6 + 7! \times 8 - 9. \\
87357 &= -3 + 5! \times (7!/7 + 8). \\
87976 &= -6^7 + 7! - 8 + 9!. \\
90712 &= 0! + (-1 + 2 \times 7!) \times 9. \\
90719 &= 0 - 1 + 7! \times (9 + 9). \\
90773 &= -0! + (3! + 7! + 7!) \times 9. \\
90774 &= ((-0! + 4)! + 7! + 7!) \times 9. \\
90792 &= (-0! + 2 \times 7! + 9) \times 9. \\
93253 &= 2 \times 3!^{3!} - 59. \\
93302 &= -0! + 2 \times 3!^{3!} - 9. \\
93432 &= 2 \times 3!^{3!} + (-4 + 9)!. \\
93525 &= ((2 \times 3)! + 5) \times (5! + 9). \\
94656 &= -4! + 5! \times (6! + 69). \\
95265 &= (-2 + 5!) + 5^6 \times 9. \\
95267 &= 2 + (5^6 - 7!) \times 9. \\
95565 &= (5! - 5) \times (5! + 6! - 9). \\
95751 &= ((-1 + 5)! - 5) \times 7! - 9. \\
96336 &= 3!^{3!} + 6! \times 69. \\
96384 &= -3! \times (4^6 + 8!) + 9!. \\
97835 &= (3!! - 5 + 7!) \times (8 + 9). \\
98415 &= (1 + 4) \times (-5 + 8)^9.
\end{aligned}$$

## 5.4 Selfie Numbers in Decreasing Order Digits

$$\begin{aligned}
25 &= 5^2. \\
125 &= 5^{2+1}. \\
126 &= 6 \times 21. \\
184 &= 8 \times (4! - 1). \\
216 &= 6^{2+1}. \\
289 &= (9 + 8)^2. \\
324 &= (4! - 3!)^2.
\end{aligned}$$

$$\begin{aligned}
337 &= 7^3 - 3!. \\
343 &= (4 + 3)^3. \\
360 &= 6! / (3 - 0!). \\
464 &= 6! - 4^4. \\
660 &= 6! - 60. \\
688 &= 8 \times 86. \\
1022 &= -2 + 2^{10}.
\end{aligned}$$

$$\begin{aligned}
1024 &= (4 - 2)^{10}. \\
1260 &= 6 \times 210. \\
1345 &= 5^4 + 3!! \times 1. \\
1359 &= 9 \times (5! + 31). \\
1395 &= 9 \times 5 \times 31. \\
1438 &= 8/4 \times 3! + 1. \\
1477 &= 7 \times (7!/4! + 1). \\
1673 &= 7 \times (6!/3 - 1).
\end{aligned}$$

$$\begin{aligned}
1680 &= 8!/(-6 + 10)! \\
1785 &= (8 + 7) \times (5! - 1) \\
1827 &= 87 \times 21 \\
2048 &= 8^4/2 + 0 \\
2159 &= 9 \times 5! \times 2 - 1 \\
2304 &= 4!^3/(2 + 0!)! \\
2407 &= 7^4 + (2 + 0!)! \\
2437 &= 7^4 + 3!^2 \\
2496 &= 96 \times (4! + 2) \\
2515 &= -5 + 5! \times 21 \\
2547 &= (7! + 54)/2 \\
2736 &= -7! + 6^{3+2} \\
2846 &= (-8 + 6!) \times 4 - 2 \\
2864 &= 8 \times (6! - 4)/2 \\
2876 &= (-8 + 7! + 6!)/2 \\
2880 &= 8!/(8 + (2 + 0!)!) \\
2916 &= (9 \times 6)^2 \times 1 \\
3369 &= (9 + 6)^3 - 3! \\
3372 &= (7!/3 + 3!) \times 2 \\
3375 &= (7 + 5 + 3)^3 \\
3378 &= (8 + 7)^3 + 3 \\
3384 &= 8 + 4^{3!} - 3!! \\
3582 &= -8 + 5 \times (3!! - 2) \\
3774 &= 7! - 7!/4 - 3! \\
3840 &= 8 \times 4 \times (3! - 0!)! \\
3864 &= (-8 + 6^4) \times 3 \\
4088 &= -8 + 8^4 \times 0! \\
4330 &= 4 + 3! \times (3!! + 0!) \\
4375 &= 7! \times 5^4/3!! \\
4480 &= 8!/(4 + 4 + 0!) \\
4560 &= (-6 + 5!) \times 40 \\
4624 &= (64 + 4)^2 \\
4752 &= 7! - (5! + 4!) \times 2 \\
4760 &= 7 \times (6! - 40) \\
4967 &= -9 + 7! - 64 \\
5039 &= (9 - 5 + 3)! - 0! \\
5075 &= 7 \times (5 + (5 + 0!)!) \\
5076 &= 7! + 6 \times (5 + 0!) \\
5120 &= 5 \times 2^1 0 \\
5275 &= 7! - 5 + 5! \times 2 \\
5391 &= 9 \times (-5! + 3!! - 1) \\
5735 &= 7! - 5 \times 5 + 3!! \\
5875 &= 8!/7 - 5 + 5! \\
6048 &= 8! \times 6/40 \\
6144 &= 6 \times 4^{4+1} \\
6291 &= 9 \times (6! - 21) \\
6459 &= 9 \times (6! - 5) + 4! \\
6472 &= 7! + (6! - 4) \times 2 \\
6480 &= 8 \times 6! + (4 - 0!)!! \\
6492 &= 9 \times 6! + 4!/2 \\
6549 &= 9 \times (6! + 5) + 4! \\
6552 &= (6 + 5!) \times 52 \\
6595 &= 9 \times 6! - 5 + 5! \\
6768 &= 8 \times (7!/6 + 6) \\
6840 &= 8!/6 + (4 + 0!)! \\
6864 &= 8!/6 + 6 \times 4! \\
6880 &= 8 \times 860 \\
7057 &= 7 \times 7!/5 + 0! \\
7130 &= (-7 + 3!!) \times 10 \\
7560 &= 7! \times 6/(5 - 0!) \\
8064 &= 8!/(6 - 4^0) \\
8448 &= 88 \times 4 \times 4! \\
8595 &= 9 \times (8 \times 5! - 5) \\
9025 &= 95^2 \times 0! \\
9216 &= 96^2 \times 1 \\
10000 &= 100^{0!+0!} \\
10098 &= (9 + (8 - 1)!) \times (0! + 0!) \\
10344 &= 4! \times 431 \times 0! \\
10368 &= 8 \times 6^{3+1 \times 0!} \\
10369 &= 9!/(6 \times 3! - 1) + 0! \\
10786 &= (8 + 7) \times (6! - 1) + 0! \\
11025 &= (-5 \times 21)^{1+0!} \\
11329 &= 9!/32 - 11 \\
11339 &= 9!/(33 - 1) - 1 \\
11495 &= 95 \times (4 + 1)! + 1 \\
11648 &= (8 + 6!) \times 4^{1+1} \\
11663 &= 6^6/(3 + 1) - 1 \\
11664 &= 6^6/(4 - 1 + 1) \\
11665 &= 6^6/(5 - 1) + 1 \\
11767 &= -7! + 7^{-6+11} \\
11859 &= 98 \times (5! + 1) + 1 \\
12095 &= 9!/(5 \times (2 + 1)!) - 0! \\
12096 &= 9!/(6/2 \times 10) \\
12143 &= (4 \times 3!)!/(21)! - 1 \\
12144 &= 4!!/(42/(1 + 1))! \\
12543 &= (5! - 4!/3)^2 - 1 \\
12544 &= (5! - 4 - 4)^2 \times 1 \\
12600 &= 6 \times 2100 \\
12759 &= -9 + (-7 + 5!)^2 - 1 \\
12768 &= 8 \times 76 \times 21 \\
12775 &= 7 + (-7 + 5!)^2 - 1 \\
12924 &= -9 \times (4 - 2 \times (2 + 1)!!) \\
12939 &= (9 + 9) \times 3!! - 21 \\
12959 &= (9 + 9) \times (5 - 2)!! - 1 \\
12996 &= (9 + 9) \times (6! + 2) \times 1 \\
13104 &= 4!^3 - (1 + 1 + 0!)!! \\
13224 &= (-4! + 3!!) \times (-2 + 21) \\
13225 &= (-5 + (3 + 2)!)^2 \times 1 \\
13248 &= (8! - 4!^3)/2 \times 1 \\
13368 &= (8! - 6^3)/3 \times 1 \\
13380 &= 8!/3 - 3! \times 10 \\
13430 &= (4!/3)!/3 - 10 \\
13433 &= (4!/3)!/3 - 3! - 1 \\
13434 &= (4 + 4)!/3 - 3! \times 1 \\
13435 &= -5 + (4!/3)!/3 \times 1 \\
13438 &= (8! - 4!)/3 + 3! \times 1 \\
13439 &= (9 - 4 + 3)!/3 - 1 \\
13440 &= (4 + 4)!/(3 - 1 + 0!) \\
13441 &= (4 + 4)!/3 + (1 - 1)! \\
13442 &= ((4 + 4)! + 3!)/(2 + 1) \\
13443 &= (4 + 4)!/3 + 3 \times 1 \\
13450 &= (5^4 + 3!!) \times 10 \\
13458 &= (8! + 54)/3 \times 1 \\
13488 &= 8 \times (8!/4! + 3! \times 1) \\
13536 &= 6^5 + 3!! + (3! + 1)! \\
13644 &= -6!/4 + 4!^3 \times 1 \\
13673 &= -7 + 6! \times (3 \times 3! + 1) \\
13680 &= (8! + 6!)/3 \times 1 \times 0! \\
13681 &= (8! + 6!)/3 + (-1 + 1)! \\
13682 &= (8! + 6 + 3!!)/(2 + 1) \\
13683 &= (8! + 6!)/3 + 3 \times 1 \\
13688 &= 8 + (8! + 6!)/3 \times 1 \\
13689 &= 9 + (8! + 6!)/3 \times 1 \\
13747 &= -77 + 4!^3 \times 1 \\
13774 &= -7 \times 7 + 4!^3 - 1 \\
13813 &= (8 \times 3)^3 - 11 \\
13814 &= -8 + 4!^3 - 1 - 1 \\
13823 &= (8 \times 3)^3 - 2 + 1 \\
13834 &= 8 + 4!^3 + 3 - 1 \\
13944 &= (9 - 4)! + 4!^3 \times 1 \\
13950 &= 9 \times 5 \times 310 \\
13954 &= 9 + 5! + 4!^3 + 1 \\
14168 &= (-8 + 6^4) \times 11 \\
14257 &= 7! + (5! - 4!)^2 + 1 \\
14320 &= (-4 + 3!!) \times 2 \times 10 \\
14350 &= 5 \times (4 \times 3!! - 10) \\
14355 &= 5 \times (-5 + 4 \times (3!! - 1)) \\
14360 &= (6! - 4 + 3!!) \times 10 \\
14369 &= (9! - 6!)/4! - 3!! - 1 \\
14373 &= -7! + (4! + 3) \times (3!! - 1) \\
14390 &= 9!/4! - 3!! - 10 \\
14393 &= 9!/4! - 3!! - 3! - 1 \\
14395 &= (9! - 5!)/4! - 3!! \times 1 \\
14397 &= -9 + 7^4 \times 3! \times 1 \\
14400 &= (4! \times (4 + 1))^{0!+0!} \\
14405 &= 5 \times (4 \times (4 - 1)!! + 0!) \\
14407 &= 7^4 \times (4 - 1)! + 0! \\
14420 &= (-4 + 4!) \times ((2 + 1)!! + 0!) \\
14424 &= 4! + (-4 + 4!) \times (2 + 1)!! \\
14519 &= (9! + 5!)/(4! + 1) - 1 \\
14520 &= 5! \times ((4 + 2 - 1)! + 0!) \\
14635 &= (6 + 5)^4 - 3! \times 1 \\
14645 &= ((6 + 5)^4 + 4) \times 1 \\
14879 &= (9! - 8!/7)/4! - 1 \\
14995 &= (9! - 9!/5!)/4! + 1 \\
15119 &= 9!/(5 - 1)! - 1 + 1 \\
15126 &= 6 \times (5! \times 21 + 1) \\
15130 &= (5! + 3)^{1+1} + 0! \\
15137 &= (7! + 5) \times 3 + 1 + 1 \\
15225 &= (5 + (5 - 2)!!) \times 21 \\
15235 &= 5! - 5 + 3!! \times 21 \\
15267 &= (7 + 6 \times 5!) \times 21 \\
15288 &= (8 + (8 - 5)!!) \times 21 \\
15324 &= 5! + (4 + 3!!) \times 21 \\
15358 &= (8 + 5!) \times 5! - 3 + 1 \\
15372 &= (7 + 5 + 3!!) \times 21 \\
15384 &= 8 + (5! + 4)^{3-1} \\
15498 &= 9!/(8 \times 5!) \times 41 \\
15503 &= -5! + 5^{3!} - 1 - 0! \\
15504 &= -5! + 5^{4-1}! - 0! \\
15505 &= -5! + 5^{5+1 \times 0!} \\
15562 &= (6^5 + 5) \times 2 \times 1 \\
15620 &= -6 + 5^{2+1}! + 0! \\
15624 &= 6 \times (5! + 4) \times 21 \\
15626 &= (6 - 6)! + 5^{2+1}! \\
15630 &= 6 + 5^{3!} - 1 \times 0!
\end{aligned}$$

$$\begin{aligned}
15632 &= 6 + 5^{3 \times 2} + 1. \\
15752 &= 7 + 5! + 5^{2+1}. \\
15753 &= 7 + 5! + 5^{3!} + 1. \\
15839 &= (9 + 8 + 5) \times 3! - 1. \\
15840 &= (8 - 5)!! \times (4! - 1 - 0!). \\
16225 &= 6 \times 52^2 + 1. \\
16254 &= (6! + 54) \times 21. \\
16345 &= 6! + 5^{4+3-1}. \\
16354 &= -6 \times 5 + 4^{3!+1}. \\
16368 &= 8 \times 66 \times 31. \\
16445 &= (6! - 5!/4!) \times (4! - 1). \\
16497 &= -9 \times 7 + 6! \times (4! - 1). \\
16554 &= 6 \times ((-5 + 5!) \times 4! - 1). \\
16560 &= 6! \times (6 \times (5 - 1) - 0!). \\
16561 &= -6! + 6! \times (5 - 1)! + 1. \\
16798 &= -9!/8! + 7^{6-1}. \\
16879 &= 9 \times 8 + 7^{6-1}. \\
17160 &= (7 + 6)!/(-1 + 10)! . \\
17233 &= (7 - 3)! \times (3!! - 2) + 1. \\
17245 &= -7 \times 5 + 4! \times (2 + 1)!! . \\
17265 &= (7! + 6! - 5) \times (2 + 1). \\
17273 &= -7 + (7 - 3)! \times (2 + 1)!! . \\
17274 &= 7!/7 \times 4! - (2 + 1)!. \\
17279 &= 9!/(7 + 7 \times 2) - 1. \\
17280 &= 8!/7 \times (2 + 1 \times 0!). \\
17281 &= 8!/7 \times (2 + 1) + 1. \\
17283 &= 8!/7 \times 3 + 2 + 1. \\
17354 &= 75 + 4! \times 3!! - 1. \\
17447 &= (7 + (7 - 4)!!) \times 4! - 1. \\
17497 &= (9 + 7!/7) \times 4! + 1. \\
17533 &= 7^5 + 3! + 3!! \times 1. \\
17580 &= (8! - 7! - 5!)/(1 + 0!). \\
17637 &= (7 \times 7! - 6)/(3 - 1). \\
17647 &= 7 \times ((7!/(6 + (-4))) + 1). \\
17724 &= 7 \times (7! + 4!)/2 \times 1. \\
18270 &= 87 \times 210. \\
18424 &= 8 \times (4 \times 4!^2 - 1). \\
18432 &= 8 \times 4!^3/(2 + 1)!. \\
18433 &= 8 \times 4!^3/3! + 1. \\
19208 &= 98^2 \times (1 + 0!). \\
19376 &= 9 \times (-7 + 6! \times 3) - 1. \\
19439 &= (-9 + 9 \times 4) \times 3!! - 1. \\
19512 &= 9 \times (5! + 2^11). \\
20148 &= (8! - 4!)/2 \times 1 \times 0!. \\
20160 &= (6 + 2)!/(1 \times 0! + 0!). \\
20161 &= (6 + 2)!/(1 + 1) + 0!. \\
20162 &= (6 + 2)!/2 + 1 + 0!. \\
20163 &= (6 + (3! + 2)!!)/(1 + 0!). \\
20164 &= (6 \times 4! - 2)^{1+0!}. \\
20182 &= 8!/2 + 21 + 0!. \\
20184 &= (8! + 4! \times 2)/(1 + 0!). \\
20280 &= 8!/2 + ((2 + 0!)! - 0!)!. \\
20448 &= (8! + 4! \times 4!)/2 \times 0!. \\
20455 &= 5 \times (-5 + 4^{2+0!})!. \\
20480 &= 8^4 \times ((2 + 0!)! - 0!). \\
20735 &= (7 + 5)^{3!-2} - 0!. \\
20743 &= 7 + (4! \times 3!)^2 \times 0!. \\
21744 &= 7! - 4! \times (4! - (2 + 1)!!). \\
21952 &= ((9 + 5) \times 2)^{2+1}.
\end{aligned}$$

$$\begin{aligned}
22175 &= 7!/5 \times 22 - 1. \\
22472 &= (7!/4! + 2)^2/2. \\
22599 &= 9 \times (-9 + (5 + 2)!!)/2. \\
22678 &= (8! + 7! - 6 + 2)/2. \\
22679 &= (9 \times 7 \times 6! - 2)/2. \\
22687 &= (8! + 7 \times (6! + 2))/2. \\
22698 &= (9!/8 + 6^2)/2. \\
22864 &= 8 \times (6! \times 4 - 22). \\
22976 &= (9 + 7) \times (6! - 2) \times 2. \\
23033 &= -3! + 3!! \times 32 - 0!. \\
23035 &= -5 + 3!! \times 32 \times 0!. \\
23039 &= (9 - 3)! \times 32 - 0!. \\
23040 &= 4 \times (3!! + ((2 + 0!)! + 0!)!). \\
23043 &= 4 + 3!! \times 32 - 0!. \\
23044 &= 4 \times (4 \times 3!! \times 2 + 0!). \\
23048 &= 8 \times (4 \times (3 \times 2)! + 0!). \\
23064 &= (6! + 4!) \times (32 - 0!). \\
23136 &= (6! + 3) \times 32 \times 1. \\
23184 &= 8! + 4! \times (3! - (2 + 1)!!). \\
23304 &= -4! + 3!^{3!}/2 \times 0!. \\
23319 &= -9 + 3!^{3!}/2 \times 1. \\
23323 &= -3! + (3!^{3!} + 2)/2. \\
23325 &= -5 + 3!^{3!}/2 + 2. \\
23326 &= 6^{3+3}/2 - 2. \\
23329 &= ((9 - 3)^{3!} + 2)/2. \\
23330 &= 3 + 3!^{3!}/2 - 0!. \\
23331 &= 3 \times (3!^{3+2} + 1). \\
23332 &= (3!^{3!} + 3! + 2)/2. \\
23340 &= (4! + 3!^{3!})/2 \times 0!. \\
23341 &= (4! + 3!^{3!})/2 + 1. \\
23342 &= (4! + 3!^{3!})/2 + 2. \\
23343 &= (4! + 3! + 3!^{3!})/2. \\
23377 &= 7 \times 7 + 3!^{3!}/2. \\
23409 &= (9 + 4! \times 3!)^2 \times 0!. \\
23758 &= (-87 + 5!) \times 3!! - 2. \\
23760 &= 7! + 6! \times (3! + 20). \\
24191 &= 9!/(4^2 - 1) - 1. \\
24192 &= 9!/(-4 - 2 + 21). \\
24193 &= 9!/(4! - 3^2) + 1. \\
24276 &= 7 \times 6 \times (4!^2 + 2). \\
24334 &= (4! - 4 + 3)^3 \times 2. \\
24336 &= 6^4 + 3!! \times 32. \\
24353 &= (5 + 4!)^3 - 3!^2. \\
24360 &= (6! - 4!) \times (3!^2 - 0!). \\
24546 &= 6 \times (-5 + 4^{4+2}). \\
24579 &= (-9 + 7!) \times 5 - 4!^2. \\
24649 &= (9 + 6 \times 4! + 4)^2. \\
24964 &= (9 \times (6 - 4!) + 4)^2. \\
25075 &= 7! \times 5 - 5^{2+0!}. \\
25137 &= 7! \times 5 - 3 \times 21. \\
25150 &= 5 \times ((5 + 2)! - 10). \\
25176 &= (7! - 6) \times 5 + (2 + 1)!. \\
25187 &= 8 + 7! \times 5 - 21. \\
25191 &= -9 + 5 \times ((2 + 1)! + 1)!. \\
25197 &= -9 + 7! \times 5 + (2 + 1)!. \\
25207 &= 7 \times ((5!/2)^2 + 0!). \\
25210 &= 5 \times (2 + ((2 + 1)! + 0!)!). \\
25249 &= -9! + (5^4 - 2)^2. \\
25270 &= 7 \times 5 \times (2! + (2 + 0!)!!).
\end{aligned}$$

$$\begin{aligned}
29664 &= 9!/(6+6) - 4!^2. \\
29735 &= 9 \times 7! - 5^{3 \times 2}. \\
29929 &= (9 \times 9 + 92)^2. \\
30239 &= 9!/((3+3) \times 2) - 0!. \\
30275 &= 7 \times (5+3! \times (2+0!)!!). \\
30287 &= (8+7!) \times 3! - (2 \times 0!). \\
30294 &= (9+(4+3)!) \times (2+0!)!. \\
30347 &= (7!+4!-3!) \times 3! - 0!. \\
30367 &= 7 \times 6 \times (3!!+3) + 0!. \\
30373 &= 7 \times (3! \times (3+3!!) + 0!). \\
30564 &= 6 \times (54+(3!+0!)!). \\
31249 &= (9-4)^{3!} \times 2 - 1. \\
31250 &= 5^{3+2} \times 10. \\
31251 &= 5^{3!} \times 2 + (-1+1)!. \\
31252 &= (5^{3!} \times 2+2) \times 1. \\
31614 &= (6! \times 4 - 3!) \times 11. \\
31680 &= 8! - 6! \times 3! \times (1+0!). \\
31684 &= ((8-6!)/4)^{3-1}. \\
31686 &= 8! - 6 \times (6! + 3!!) - 1. \\
31744 &= (7+4!) \times 4^{3!-1}. \\
31950 &= 9 \times 5 \times (3!!-10). \\
32048 &= (8 \times 4)^3 - (2+0!)!!. \\
32175 &= (7^5 - 3!!) \times 2 + 1. \\
32258 &= -8!/5 + (3!+2)! + 2. \\
32355 &= (-5+5 \times 3!!) \times 3^2. \\
32391 &= 9 \times (3!! \times (3+2) - 1). \\
32398 &= 9 \times (8-3) \times 3!! - 2. \\
32528 &= 8^5 - (3+2)! \times 2. \\
32546 &= -6^5 + (4!/3)! + 2. \\
32568 &= 8! - 6^5 + (3!-2)!. \\
32758 &= (8+7)!/(5+3!)! - 2. \\
32774 &= 7 \times (7! + (4-3!!)/2). \\
32784 &= 8! / 7! \times (4^{3!} + 2). \\
32805 &= 8^5 + 3!^2 + 0!. \\
32848 &= 8 \times (8+4^{3!} + 2). \\
32854 &= 8^5 + 43 \times 2. \\
32880 &= (8! - 8!/3! - (2+0!)!!). \\
33120 &= 3!! \times (3!^2 + 10). \\
33180 &= 8! + (3!-3!!) \times 10. \\
33264 &= (-6!+4! \times (3+3!!)) \times 2. \\
33384 &= 8 \times ((-4!+3!!) \times 3! - 3). \\
33458 &= 8^5 - 4! - 3! + 3!! . \\
33485 &= 8^{5!/4!} - 3 + 3!! . \\
33488 &= (8 \times (8-4))^3 + 3!! . \\
33489 &= (-9+8 \times 4!)^{3!3/3} . \\
33579 &= 9 \times 7 \times 533. \\
33597 &= (-9+7! \times 5!/3!)/3. \\
33598 &= (-9+8! \times 5-3)/3!. \\
33599 &= (9!/9 \times 5-3!)/3!. \\
33696 &= -9 \times (6!+6!) + 3!^{3!} . \\
33720 &= (7!/3+3!) \times 20. \\
33768 &= -8! + (7 \times (6-3)!)^3. \\
33831 &= 8! - 3 \times 3 \times (3!!+1). \\
33876 &= (8!/7+6) \times 3! - 3!! . \\
33984 &= (9!-8!)/4 - 3!^{3!} . \\
34248 &= 8! - 4!/(4!-3!)/2. \\
34377 &= 7 \times (7! - 43 \times 3). \\
34452 &= (-54+4! \times 3!!) \times 2. \\
34476 &= (-7+6! \times 4) \times 4 \times 3.
\end{aligned}$$

$$\begin{aligned}
34531 &= -5 + 4! \times (3!!+3!!-1). \\
34535 &= -5 \times 5 + 4! \times (3!!+3!!). \\
34572 &= 7 + 5 + 4! \times 3!! \times 2. \\
34584 &= (8+5! \times 4 \times 4!) \times 3. \\
34608 &= (8-6) \times 4! \times (3!!+0!). \\
34614 &= 6 + (4!+4!) \times (3!!+1). \\
34698 &= (-9+8 \times (6!+4)) \times 3!. \\
34703 &= (7!+4!+3!!) \times 3! - 0!. \\
34776 &= 7 \times (7!-6 \times 4 \times 3). \\
34784 &= 8 \times (7!+4+4!-3!!). \\
34832 &= (-8+4! \times (3!+3!!)) \times 2!. \\
34858 &= 8! - (8^5+4)/3!. \\
34968 &= (-9+8!/6!) \times (4!+3!!). \\
34974 &= 9 \times (-7!/4!+4^{3!}). \\
34991 &= (9+9)^4/3 - 1. \\
34992 &= 9 \times 9 \times 432. \\
34993 &= ((9+9)^4+3)/3. \\
35147 &= 7 \times (5-4!+(3!+1)!!). \\
35184 &= 8! - 5! + 4! - (3!+1)!. \\
35247 &= (7!-5) \times (4+3) + 2. \\
35384 &= 8! - 5! - 4^{3!} - 3!! . \\
35557 &= 7^5 + 5^5 \times 3!. \\
35784 &= 8! - 7! + (5+4)!/3!! . \\
35785 &= 8!/(7-5) + 5^{3!} . \\
35793 &= 97 \times (5!+3) \times 3. \\
35856 &= 8! - (6!+5!/5) \times 3!. \\
35873 &= 8! - 7 - 5! - 3! \times 3!! . \\
35910 &= (-9+5 \times 3!!) \times 10. \\
35928 &= (9 \times 8!/5-3!!)/2. \\
35933 &= -9+5+33^3. \\
35937 &= ((9+7-5) \times 3)^3. \\
35950 &= (9 \times 5+5) \times (3!!-0!). \\
35964 &= 9 \times 6 \times (-54+3!!). \\
35985 &= 9!/8 - 5^5 \times 3. \\
35991 &= 9 \times (9+5!) \times 31. \\
36144 &= 6^4 \times 4! + (3!+1)!. \\
36186 &= 8! - 6 \times (6!-31). \\
36288 &= 8! - 8!/(6+3!-2). \\
36294 &= 9!/(6+4) + 3 \times 2. \\
36384 &= 8! - (6!-4^3) \times 3!. \\
36432 &= -6^4 \times 3 + (3!+2)!. \\
36438 &= 8! - 6^4 \times 3 + 3!. \\
36568 &= 8!/6! \times 653. \\
36594 &= 9 \times (-6 \times 5 + 4^{3!}). \\
36719 &= (9+7 \times 6) \times 3!! - 1. \\
36755 &= (7-6!) \times 5 + (5+3)!. \\
36768 &= 8 \times 766 \times 3!. \\
36792 &= (9!+7!)/(6+3!-2). \\
36840 &= 8! - (6!-4!) \times (3!-0!). \\
36936 &= 9 \times 6 \times (-6 \times 3!+3!!). \\
36975 &= (9+7 \times 6) \times (5+3!!). \\
37248 &= 8 \times (7!-4!-3!!/2). \\
37294 &= 9! \times 74/3!! - 2. \\
37424 &= (7!+4!^4)/3^2. \\
37428 &= 8! - (7!+4!+3!!)/2. \\
37468 &= 8! + (7-6!) \times 4!/3!. \\
37484 &= 8! + 7!/4 - 4^{3!} . \\
37536 &= -76 \times 5! + 3!^{3!} . \\
37584 &= 87 \times (5!+4!) \times 3.
\end{aligned}$$

$$\begin{aligned}
39485 &= 9 + 8! - 5! - 4 - 3!! \\
39528 &= 9 \times (8!/5 + 3!!)/2 \\
39537 &= -9 \times 7 + (5+3)! - 3!! \\
39538 &= -9 + 8! - 53 - 3!! \\
39555 &= -9 \times 5 + 55 \times 3!! \\
39583 &= -9 - 8 + (5+3)! - 3!! \\
39585 &= 9 + 8! - 5!/5 - 3!! \\
39595 &= 9!/9 - 5 - 5! \times 3! \\
39599 &= (9! - 9)/9 - 5! \times 3! \\
39658 &= -9 + 8! - 653 \\
39672 &= 9 \times (7! - 632) \\
39690 &= 9!/9 - 630 \\
39769 &= 9 + (9! - 7!)/(6+3) \\
39798 &= 9!/9 - 87 \times 3! \\
39809 &= 9!/9 - 8^3 + 0! \\
39816 &= (-9! + 8! \times 6!)/3!! \times 1 \\
39818 &= 9 + 8! - 8^3 + 1 \\
39873 &= -9 + 8! - 73 \times 3! \\
39889 &= 9 \times 9 + 8! - 8^3 \\
39924 &= -99 \times 4 + (3! + 2)! \\
39936 &= -9!/(9 \times 6) + 3!^{3!} \\
39955 &= 9!/9 - 5 - 5! \times 3 \\
39959 &= (9! - 9)/9 - 5! \times 3 \\
39960 &= 9!/9 - 6!/(3 - 0!) \\
39977 &= ((-9 + 9)! + 7)! - 7^3 \\
39978 &= (-9 + 9)! + 8! - 7^3 \\
39996 &= 9!/9 - 9 \times 6 \times 3! \\
40080 &= 8! - (4 + 0!)! \times (0! + 0!) \\
40081 &= 8! - 4! \times 10 + 0! \\
40086 &= 8! - 6 \times (40 - 0!) \\
40158 &= 8! - 5! - 41 - 0! \\
40184 &= 8! - 4 \times (4! + 10) \\
40186 &= 8! - 6 \times 4! + 10 \\
40188 &= 8! - (8 + 4)!/10! \\
40224 &= -4! \times 4 + (2^{2+0!})! \\
40247 &= -74 + (4 \times 2)! + 0! \\
40256 &= -65 + (4 \times 2)! + 0! \\
40258 &= 8! - (5! + 4)/2 \times 0! \\
40280 &= 8! - 42 + 0! + 0! \\
40283 &= 8! - 4 - 32 - 0! \\
40298 &= -9 + 8! - 4!/2 - 0! \\
40304 &= -4 \times 4 + (3! + 0! + 0!)! \\
40309 &= -9 + (4!/3)! - 0! - 0! \\
40310 &= (4!/3)! - 10 \times 0! \\
40330 &= 4 + 3! + (3! + 0! + 0!)! \\
40333 &= (4!/3)! + 3! + 3! + 0! \\
40340 &= 4! - 4 + (3! + 0! + 0!)! \\
40345 &= -5 + (4 + 4)! + 30 \\
40347 &= 7 \times 4 + (4!/3)! - 0! \\
40350 &= 5!/4 + (3! + 0! + 0!)! \\
40367 &= (7! + 6) \times (4!/3) - 0! \\
40377 &= (7 + 7!) \times 4!/3 + 0! \\
40378 &= 8! + 7 \times 4 + 30 \\
40380 &= 8! + 4! + 3!^{0!+0!} \\
40382 &= 8! + 4^3 - 2 \times 0! \\
40384 &= 8! + 4^{4-3^0} \\
40385 &= 8! + 5 \times (4 \times 3 + 0!) \\
40387 &= 8! + 74 - 3! - 0! \\
40418 &= 8! + 4 \times 4! + 1 + 0!
\end{aligned}$$

$$\begin{aligned}
40428 &= 8! + 4 \times (4! + 2 + 0!) \\
40435 &= -5 + (4 + 4)! + (3! - 0!)! \\
40439 &= (9 - 4)! + (4!/3)! - 0! \\
40463 &= 6 \times 4! + (4!/3)! - 0! \\
40465 &= 6!/5 + (4 + 4)! + 0! \\
40480 &= 8! + 4 \times 40 \times 0! \\
40583 &= 8! + 5! + 4! \times 3! - 0! \\
40608 &= 8! + 6 \times 4! \times (0! + 0!) \\
40680 &= 8! + 6!/(4^0 + 0!) \\
40682 &= 8! + (6! + 4)/2 \times 0! \\
40688 &= 8! + 8 \times (6 + 40) \\
40768 &= 8! + 7 \times 64 \times 0! \\
40804 &= 8! + 4 \times (4 + 0!)! + 0! \\
40824 &= 8! + 4! + 4! \times 20 \\
40832 &= 8! + (4!/3)^{2+0!} \\
40833 &= 8! + (4!/3)^3 + 0! \\
40855 &= 8! - 5 + 540 \\
40872 &= 8! - 7 \times 4! + (2 + 0!)!! \\
40873 &= 8! - 7 \times 4! + 3!! + 0! \\
41040 &= (4 + 4)! + (1 + 0! + 0!)!! \\
41344 &= (4 + 4)! + 4^{3!-1} \\
41348 &= 8! + 4 + 4^{3!-1} \\
41352 &= -5! + 4!^3 \times (2 + 1)! \\
41353 &= -5! + 4!^3 \times 3 + 1 \\
41473 &= (7 - 4) \times 4!^3 + 1 \\
41585 &= 8! + 55 \times (4! - 1) \\
41618 &= 8! + 6^4 + 1 + 1 \\
41768 &= 8 \times (7! + 6!/4 + 1) \\
41832 &= 8! + 4! \times 3 \times 21 \\
42368 &= 8! + 64 \times 32 \\
42384 &= 8! + 4! \times 43 \times 2 \\
42385 &= 8! + 5^4 + 3!! \times 2 \\
42480 &= 8! + (4!/4)! \times (2 + 0!) \\
42718 &= 8! + 7^4 - 2 - 1 \\
42721 &= 7^4 + (2^{2+1})! \\
42723 &= 7^4 + (3! + 2)! + 2 \\
42768 &= 8! + 7! - 6^4 \times 2 \\
42827 &= 8! + 7! - (4! + 2)/2 \\
42835 &= 8! - 5 + (4 + 3)!/2 \\
42849 &= (9 - 8 \times 4! - 4!)^2 \\
42864 &= 8! + (6^4 - 4!) \times 2 \\
42877 &= 8! + (7! + 74)/2 \\
43184 &= 8! + 4 \times (-4 + 3!! \times 1) \\
43205 &= 5 \times (4! \times 3!!/2 + 0!) \\
43230 &= (4! + 3!) \times (3!! \times 2 + 0!) \\
43238 &= 8! + 4 \times 3!^{3!} + 2 \\
43245 &= 5 \times (4 \times 4! - 3)^2 \\
43264 &= (6! - (4 + 4)^3)^2 \\
43398 &= 9 \times (8^4 + 3!) + 3!! \\
43535 &= -5^5 + 4 + 3!^{3!} \\
43562 &= (6! \times 5! + 4 + 3!!)/2 \\
43631 &= (6! + 4!^3) \times 3 - 1 \\
43632 &= (6! + 4!^3) \times 3!/2 \\
43648 &= (8^6 - 4^4)/3! \\
43656 &= 6^6 - 5! - 4 \times 3!! \\
43805 &= 8! - 5 \times (4! - 3!! + 0!) \\
43824 &= 8! + 4! \times (4! \times 3! + 2) \\
43856 &= 8! + (6! \times 5 - 4^3) \\
43872 &= 8! + 7! - (4! + 3!!) \times 2
\end{aligned}$$

$$\begin{aligned}
46630 &= 6^6 + 4 - 30. \\
46635 &= 6 \times (6^5 - 4) + 3. \\
46637 &= -7 + 6^6 - 4 \times 3. \\
46639 &= -9 + 6^6 - 4!/3. \\
46650 &= 6^6 - (5!/40)! . \\
46662 &= 6^6 + (6/(4 - 2))!. \\
46663 &= 6^6 + 6 + 4 - 3. \\
46664 &= 6^6 + (6 - 4) \times 4. \\
46689 &= 9!/8! + 6^6 + 4!. \\
46695 &= 9 + 6^6 + 5!/4. \\
46719 &= 9 \times 7 + 6^{4-1}!. \\
46765 &= -7 + 6^6 + 5! - 4. \\
46784 &= 8! \times 7/6 - 4^4. \\
46792 &= 9 \times 7! + (6! - 4) \times 2. \\
46800 &= -8! + 6! \times ((4+0!)! + 0!). \\
46848 &= 8! + 8 \times (6! + 4 \times 4!). \\
46926 &= (-9 + 6!) \times (64 + 2). \\
46971 &= 9 \times (7! + 6!/4 - 1). \\
47033 &= 7 \times ((4!3)!/3! - 0!). \\
47520 &= (7! + 5! \times 4!) \times (2 + 0!)!. \\
47592 &= 9 \times (7! + (5! + 4) \times 2). \\
47652 &= 76 \times (5^4 + 2). \\
47868 &= 8! + (-8 + 7!) \times 6/4. \\
47873 &= 8! - 7 + 7!/4 \times 3!. \\
47876 &= (8! \times 7 + 7!)/6 - 4. \\
47880 &= 8! + (8! + 7!)/(4 - 0!)!. \\
47892 &= 9!/8 + (7! + 4!)/2. \\
47952 &= (-9 + 7!/5) \times 4! \times 2. \\
48056 &= 8! + 6^5 - 40. \\
48333 &= 8!/4! - 3 + 3!^{3!}. \\
48336 &= 8!/6 \times 4 + 3!^{3!}. \\
48344 &= 8! + 4! + (-4 + 4!)^3. \\
48384 &= 8 \times 84 \times 4! \times 3. \\
48385 &= 8! + 8!/5 + 4 - 3. \\
48576 &= 8 \times (7! \times 6/5 + 4!). \\
48736 &= 8! + 7! - 6! + 4^{3!}. \\
48926 &= (9 + 8) \times (6! \times 4 - 2). \\
48956 &= 9!/8 + 6! \times 5 - 4. \\
48996 &= (9 + (9 + 8) \times 6!) \times 4. \\
49293 &= 9 + (9 \times 4! + 3!)^2. \\
49347 &= 9 \times (7! + 443). \\
49676 &= (9 \times 7 + 6) \times 6! - 4. \\
49680 &= 9!/8 + 6 \times (4 - 0!)!. \\
49775 &= 9 \times 7! + 7! - 5^4. \\
50386 &= (8 + 6) \times (5 \times 3!! - 0!). \\
50759 &= 9 \times (7! + 5 \times 5!) - 0!. \\
51686 &= 86 \times (6! - 5! + 1). \\
51697 &= 9!/7 - 6!/5 + 1. \\
51719 &= 9!/7 - 5! - (-1 + 1)!. \\
51789 &= (9 \times 8!)/7 - 51. \\
51790 &= 9!/7 - 5 \times 10. \\
51794 &= 9!/7 - 5 - 41. \\
51795 &= 9 \times (7! - 5 + (5 + 1)!). \\
51796 &= 9 \times (7! + 6! - 5) + 1. \\
51797 &= 9!/7 - 7!/5! - 1. \\
51839 &= 9!/(-8 + 5 \times 3) - 1. \\
51843 &= (8 - 5) \times (4! \times 3!! + 1). \\
51967 &= 9!/7 + 6 + 5! + 1. \\
52079 &= 9!/7 + 5! \times 2 - 0!.
\end{aligned}$$

$$\begin{aligned}
52168 &= 8 \times 6521. \\
52488 &= 8 \times (85 - 4)^2. \\
53248 &= (8 + 5) \times 4^{3 \times 2}. \\
53783 &= 8 + 75 \times (-3 + 3!!). \\
53824 &= ((8 - 5)!! - 4!)/3)^2. \\
53845 &= 85 \times 5^4 + 3!!.. \\
53856 &= -8! + 6^5 + 5! \times 3!!.. \\
53886 &= 8 \times 8!/6 + 5! + 3!. \\
54009 &= 9^5 - ((4 - 0!)! + 0!)!. \\
54138 &= 8! - 5 + 4!^3 - 1. \\
54369 &= (-9 + 6^5) \times (4 + 3). \\
54375 &= 75 \times (5!/4! + 3!!). \\
54376 &= 7 \times (6^5 - 4!/3). \\
54378 &= 87 \times (5^4 + 3). \\
54476 &= 7 \times 6^5 + 44. \\
54576 &= 7 \times 65 \times 5! - 4!. \\
54607 &= 7 \times (6^5 + 4! + 0!). \\
54688 &= 8 \times (8!/6 + 5! - 4). \\
54719 &= 9!/7 + 5! \times 4! - 1. \\
54726 &= 7 \times (6^5 + 42). \\
54936 &= (-9! + (6 + 5!/4!)!) / 3!!.. \\
55225 &= (5 \times (-5 + 52))^2. \\
55320 &= -5! + (5 + 3!)! / (2 + 0!)!!. \\
55436 &= ((6 + 5)! - 5! \times 4!) / 3!!.. \\
55449 &= 9^5 - 5 \times (4!/4).. \\
55728 &= 8! \times 7/5 - (5 - 2)!!.. \\
55808 &= 8! + (8 + 5!) \times (5! + 0!). \\
55823 &= 8! - 5! + (5^{3!} - 2). \\
55825 &= 8! - 5! + 5^{5-2}!. \\
55862 &= 8! + (6^5 - 5) \times 2. \\
55944 &= (-9 + 5!) \times (5! \times 4 + 4!). \\
56250 &= 6 \times 5^5 \times (2 + 0!). \\
56568 &= 8 \times (-6! + 6^5) + 5!. \\
56587 &= (8! \times 7 + 6!)/5 - 5. \\
56885 &= 8 \times 8!/6 + 5^5. \\
56952 &= 9!/6! \times (5! - 5 - 2). \\
57128 &= 8! + 7^5 + 2 - 1. \\
57295 &= -9! + 7^5 \times 5^2. \\
57339 &= 9 \times (7! + (5 + 3!)^3). \\
57525 &= -75 + (5! + 5!)^2. \\
57696 &= (9 + 7) \times (6 + 6! \times 5). \\
57843 &= 8! + 7^5 - 4 + 3!!.. \\
58315 &= 8! + 5 \times (5 \times 3!! - 1). \\
58329 &= (9!/8!)^5 - (3 \times 2)!.. \\
58335 &= 8! + 5 \times (5 \times 3!! + 3). \\
58935 &= (9!/8!)^5 - 5! + 3!. \\
59013 &= 9^5 - 3!^{1+0!}. \\
59023 &= 9^5 - 3! - 20. \\
59024 &= 9^5 - 4! - (2 \times 0)!.. \\
59025 &= 9^5 - (5 - 2 + 0!)!. \\
59032 &= 9^5 + 3 - 20. \\
59035 &= 9^5 - 5 \times 3 + 0!. \\
59039 &= -9 + 9^5 - (3 \times 0)!.. \\
59041 &= 9^5 - 4 \times (1 + 0!). \\
59042 &= 9^5 - 4 \times 2 + 0!. \\
59043 &= 9^5 + 4! - 30. \\
59044 &= 9^5 - 4 - 4^0. \\
59045 &= 9^5 - 5 + (4 \times 0)!.. \\
59048 &= (9!/8!)^5 - (4 \times 0)!..
\end{aligned}$$

$$\begin{aligned}
67986 &= 9 \times ((8! + 7!)/6 - 6). \\
67995 &= 9 \times (9 \times 7!/6 - 5). \\
68352 &= (8-6!) \times (-5!+(3!-2)!). \\
68400 &= 8! + 6! \times (40 - 0!). \\
68496 &= (9! + 8!)/6 + 6^4. \\
68800 &= 8 \times 8600. \\
68875 &= (8 + 87) \times (6! + 5). \\
69024 &= 96 \times ((4 + 2)! - 0!). \\
69120 &= 96 \times (2 + 1 \times 0!)!! \\
69121 &= 96 \times (2 + 1)!! + 1. \\
69123 &= 96 \times 3!! + 2 + 1. \\
69126 &= 96 \times 6! + (2 + 1)!. \\
69129 &= 9 + 96 \times (2 + 1)!! \\
69216 &= 96 \times (6! + 2 - 1). \\
69264 &= (9 + 6 \times 6!) \times 4^2. \\
69312 &= 96 \times (3!! + 2 \times 1). \\
69336 &= 96 \times 6! + 3!^3. \\
69384 &= 98 \times (6! - 4 \times 3). \\
69385 &= (9! - 8!)/6 + 5^{3!}. \\
69743 &= 97 \times (6! - 4 + 3). \\
69744 &= 97 \times 6! - 4 \times 4!. \\
69835 &= 98 \times 6! - 5 - 3!! \\
69840 &= 98 \times 6! - (4 - 0!)!! \\
69864 &= 98 \times 6! - 6! + 4!. \\
69872 &= 98 \times (-7 + 6!) - 2. \\
69903 &= 9 \times (-9 + 6^{3!} - 0!). \\
69984 &= 9 \times 9 \times 864. \\
70538 &= (8! - 7^5) \times 3 - 0!. \\
70570 &= (7 \times 7! + 5) \times (0! + 0!). \\
71300 &= (-7 + 3!!) \times 100. \\
71569 &= (9! - 7 \times 6!)/5 + 1. \\
72559 &= (9! - 75)/5 - 2. \\
72576 &= 7 \times (7! + 6!/5) \times 2. \\
72578 &= (8 + 7/7)!/5 + 2. \\
73088 &= 8! + 8^{7-3+0!}. \\
73359 &= -9 + (7!/5!)^3 - 3!! \\
73375 &= 7 \times (-7! + 5^{3!}) - 3!! \\
73599 &= 9 + (9! + 7!)/5 + 3!. \\
74183 &= (-8 + 7^4) \times 31. \\
74303 &= 7! \times 4! - 3!^3! - 0!. \\
74352 &= 7! + (5! - 4!) \times (3!! + 2). \\
74496 &= 97 \times (6! + 4! + 4!). \\
74549 &= ((9! - 7!) \times 5 - 4!)/4!. \\
74876 &= (8 + 7) \times 7! - 6! - 4. \\
74880 &= 8! + 8!/7 \times (4 - 0!)!. \\
75453 &= ((7! - 5) \times 5 - 4!) \times 3. \\
75480 &= (-8 + 7!) \times 5 \times (4 - 0!). \\
75523 &= (7! - 5) \times 5 \times 3 - 2. \\
75600 &= 7! \times 6 \times 5/(0! + 0!)!. \\
75678 &= 8! + 7 \times (7! - 6) + 5!. \\
76517 &= (77 - 6!) \times (-5! + 1). \\
76608 &= -8! + 7^6 - 6! - 0!. \\
77378 &= -8! + 7 \times 7 + 7^{3!}. \\
77739 &= (9!/(7 + 7) - 7) \times 3. \\
78624 &= 8! - 7 \times 6 \times 4! \times 2. \\
78975 &= 9 \times 8775. \\
79374 &= 9 \times 7 \times 7!/4 - 3!.
\end{aligned}$$

$$\begin{aligned}
79380 &= 9!/8 \times 7/(3 + 0!). \\
79893 &= 99 \times (87 + 3!!). \\
79983 &= 9! + (9 - 8!) \times 7 - 3!! \\
80384 &= 8! + 8! - 4^{3+0!}. \\
80448 &= 8 \times (8!/4 - 4! \times 0!). \\
80496 &= (9! + 8! - 6!)/(4 + 0!). \\
80520 &= (8! - 5!/2) \times (0! + 0!). \\
80570 &= (8! - 7 \times 5) \times (0! + 0!). \\
80580 &= 8! + 8! - 5!/(0! + 0!). \\
80585 &= 8! + 8! - 55 \times 0!. \\
80604 &= (8! + 6 - 4!) \times (0! + 0!). \\
80616 &= (8! - 6 - 6) \times (1 + 0!). \\
80619 &= -9 + (8! - 6) \times (1 + 0!). \\
80627 &= (8 \times 7! - 6) \times 2 - 0!. \\
80633 &= 8! \times 6/3 - 3! - 0!. \\
80653 &= (8! + 6) \times (5 - 3) + 0!. \\
80658 &= 8! + 8! - 6 + (5 - 0!)!. \\
80687 &= 8! + 8 \times (7! + 6) - 0!. \\
80704 &= 8 \times (7! + 4) \times (0! + 0!). \\
80723 &= (8! + 7 \times 3!) \times 2 - 0!. \\
80725 &= (8! + 7!/5!) \times 2 + 0!. \\
80736 &= 8 \times (7! + 6) \times (3 - 0!). \\
80759 &= 9! - 8! \times 7 + 5! - 0!. \\
80800 &= (8! + 80) \times (0! + 0!). \\
81327 &= (8! + 7^3) \times 2 + 1. \\
81359 &= (9! + 8!)/5 + 3!! - 1. \\
82067 &= (8! - 7 + 6!) \times 2 + 0!. \\
82080 &= (8! + (8-2)!) \times (0! + 0!). \\
82528 &= (8! + 8 \times (5! - 2)) \times 2. \\
82942 &= (9 \times 8 \times 4)^2 - 2. \\
83232 &= 8! + 3!^{3!-2} \times 2. \\
83349 &= 9 \times ((8-4)! - 3)^3. \\
83449 &= (9 + 8)^4 - 4! \times 3. \\
83494 &= (9 + 8)^4 - 4! - 3. \\
83584 &= 8 \times 8 + (5! - 4) \times 3!! \\
84075 &= (8 + 7^5) \times (4 + 0!). \\
84239 &= (9 + 8)^4 + 3!! - 2. \\
84480 &= 88 \times 4! \times 40. \\
84576 &= (-8 - 7 + 6!) \times 5! - 4!. \\
85264 &= ((8 + 65) \times 4)^2. \\
85416 &= (-8 + 6!) \times 5! - 4! \times 1. \\
85436 &= (-8 + 6!) \times 5! - 4!/3!. \\
85446 &= (-8 + 6!) \times 5! + 4!/4. \\
85462 &= (-8 + 6!) \times 5! + 4! - 2. \\
85464 &= (-8 + 6!) \times 5 \times 4! + 4!. \\
85680 &= (8 - 8 + 6!) \times (5! - 0!). \\
85681 &= (-8 + 8)! + 6! \times (5! - 1). \\
85697 &= (9 + 8) \times (7! + 6 - 5). \\
85736 &= 8 \times 7 - 6! + 5! \times 3!! \\
86315 &= -86 + 5! \times 3!! + 1. \\
86352 &= -8 \times 6 + 5! \times (3 \times 2)!. \\
86355 &= 8 + 6! \times 5! - 53. \\
86391 &= -9!/8! + 6! \times (3! - 1)!. \\
86405 &= 8 + 6! \times 5! - 4 + 0!. \\
86409 &= 9!/8! + 6! \times (4 + 0!)!. \\
86415 &= -8 + 6! \times 5! + 4! - 1. \\
86435 &= -8 + 6! \times 5! + 43.
\end{aligned}$$

## 6.1 Patterned Selfie Numbers In Order of Digits

$36 = 3! \times 6$	$5568 = (-5!/5 + 6!) \times 8$	$14425 = (1 + 4! \times 4!) \times 25$
$360 = 3! \times 60$	$55680 = (-5!/5 + 6!) \times 80$	$144250 = (1 + 4! \times 4!) \times 250$
$1285 = (1 + 2^8) \times 5$	$6399 = ((6 - 3)!! - 9) \times 9$	$14637 = (1 - 4! + 6!) \times 3 \times 7$
$12850 = (1 + 2^8) \times 50$	$63990 = ((6 - 3)!! - 9) \times 90$	$146370 = (1 - 4! + 6!) \times 3 \times 70$
$1432 = 1 \times (-4 + 3!!) \times 2$	$6455 = (6^4 - 5) \times 5$	$14641 = (1 + 4 + 6)^4 \times 1$
$14320 = 1 \times (-4 + 3!!) \times 20$	$64550 = (6^4 - 5) \times 50$	$146410 = (1 + 4 + 6)^4 \times 10$
$1442 = (1 + (4!/4)!) \times 2$	$6552 = (6 + 5!) \times 52$	$14973 = 1 \times (-49 + 7!) \times 3$
$14420 = (1 + (4!/4)!) \times 20$	$65520 = (6 + 5!) \times 520$	$149730 = 1 \times (-49 + 7!) \times 30$
$2163 = (2 - 1 + 6!) \times 3$	$6768 = (6 + 7!/6) \times 8$	$15093 = ((1 + 5 + 0!)! - 9) \times 3$
$21630 = (2 - 1 + 6!) \times 30$	$67680 = (6 + 7!/6) \times 80$	$150930 = ((1 + 5 + 0!)! - 9) \times 30$
$2496 = (2 + 4!) \times 96$	$7235 = (7 + 2 \times 3!!) \times 5$	$15123 = (1 + (-5 + 12)!) \times 3$
$24960 = (2 + 4!) \times 960$	$72350 = (7 + 2 \times 3!!) \times 50$	$151230 = (1 + (-5 + 12)!) \times 30$
$3455 = (3!! - 4! - 5) \times 5$	$8405 = (8!/4! + 0!) \times 5$	$15125 = (1 + 5!) \times 125$
$34550 = (3!! - 4! - 5) \times 50$	$84050 = (8!/4! + 0!) \times 50$	$151250 = (1 + 5!) \times 1250$
$3456 = 3!! \times 4/5 \times 6$	$10082 = (1 + (0 - 0! + 8)!) \times 2$	$15232 = (-1 + 5!) \times 2^{31} \times 2$
$34560 = 3!! \times 4/5 \times 60$	$100820 = (1 + (0 - 0! + 8)!) \times 20$	$152320 = (-1 + 5!) \times 2^{31} \times 20$
$3465 = (-3 - 4! + 6!) \times 5$	$11344 = (-11 + 3!!) \times 4 \times 4$	$15273 = (-1 + 52 + 7!) \times 3$
$34650 = (-3 - 4! + 6!) \times 50$	$113440 = (-11 + 3!!) \times 4 \times 40$	$152730 = (-1 + 52 + 7!) \times 30$
$3528 = (3! + 5!) \times 28$	$11349 = (1 + (1 + 3!)!/4) \times 9$	$15488 = (1 + 5!) \times (4! - 8) \times 8$
$35280 = (3! + 5!) \times 280$	$113490 = (1 + (1 + 3!)!/4) \times 90$	$154880 = (1 + 5!) \times (4! - 8) \times 80$
$3585 = (3!! + 5 - 8) \times 5$	$11495 = (1 + (1 + 4)!) \times 95$	$15552 = (15/5)!^5 \times 2$
$35850 = (3!! + 5 - 8) \times 50$	$114950 = (1 + (1 + 4)!) \times 950$	$155520 = (15/5)!^5 \times 20$
$3591 = (3!! \times 5 - 9) \times 1$	$11528 = (1 + (1 + 5)! \times 2) \times 8$	$15585 = 1 \times (5^5 - 8) \times 5$
$35910 = (3!! \times 5 - 9) \times 10$	$115280 = (1 + (1 + 5)! \times 2) \times 80$	$155850 = 1 \times (5^5 - 8) \times 50$
$3605 = (3!! + (6 \times 0)!) \times 5$	$12288 = (1 + 2)! \times 2^8 \times 8$	$16245 = (1 + 6!/2) \times 45$
$36050 = (3!! + (6 \times 0)!) \times 50$	$122880 = (1 + 2)! \times 2^8 \times 80$	$162450 = (1 + 6!/2) \times 450$
$3615 = (3 + 6!) \times 1 \times 5$	$12961 = (1 + 2 \times 9 \times 6!) \times 1$	$16795 = (-1 + 6 \times 7!/9) \times 5$
$36150 = (3 + 6!) \times 1 \times 50$	$129610 = (1 + 2 \times 9 \times 6!) \times 10$	$167950 = (-1 + 6 \times 7!/9) \times 50$
$3625 = (3 + 6! + 2) \times 5$	$13392 = ((1 + 3)! + 3!!) \times 9 \times 2$	$17283 = (1 + 7! + (-2 + 8)!) \times 3$
$36250 = (3 + 6! + 2) \times 50$	$133920 = ((1 + 3)! + 3!!) \times 9 \times 20$	$172830 = (1 + 7! + (-2 + 8)!) \times 30$
$3655 = (3!! + 6 + 5) \times 5$	$14335 = (-1 + 4 \times (-3 + 3!!)) \times 5$	$17284 = (1 + 7! - (-2 + 8)!) \times 4$
$36550 = (3!! + 6 + 5) \times 50$	$143350 = (-1 + 4 \times (-3 + 3!!)) \times 50$	$172840 = (1 + 7! - (-2 + 8)!) \times 40$
$3685 = (3^6 + 8) \times 5$	$14365 = (-1 + 4 \times 3!! - 6) \times 5$	$17647 = (1 + 7!/(6 - 4)) \times 7$
$36850 = (3^6 + 8) \times 50$	$143650 = (-1 + 4 \times 3!! - 6) \times 50$	$176470 = (1 + 7!/(6 - 4)) \times 70$
$4176 = (-4! + (-1 + 7)!) \times 6$	$14395 = (-1 + 4 \times (-3 + 9)!) \times 5$	$19323 = (-3!!/2 + 3^9) \times 1$
$41760 = (-4! + (-1 + 7)!) \times 60$	$143950 = (-1 + 4 \times (-3 + 9)!) \times 50$	$193230 = (-3!!/2 + 3^9) \times 10$

$19443 = (1 + 9 \times (4!/4!)) \times 3$	$25335 = ((2 + 5)! + 3^3) \times 5$	$32994 = (3!!/2 - 9) \times 94$
$194430 = (1 + 9 \times (4!/4!)) \times 30$	$253350 = ((2 + 5)! + 3^3) \times 50$	$329940 = (3!!/2 - 9) \times 940$
$19628 = (-19 + 6!) \times 28$	$25344 = ((2 + 5)! + 3!^4) \times 4$	$33408 = 3! \times (3!! - 4! \times 0!) \times 8$
$196280 = (-19 + 6!) \times 280$	$253440 = ((2 + 5)! + 3!^4) \times 40$	$334080 = 3! \times (3!! - 4! \times 0!) \times 80$
$19683 = 1 \times (9 - 6)^8 \times 3$	$25375 = (2^5 + 3 + 7!) \times 5$	$33495 = (3 + (3!! + 4!) \times 9) \times 5$
$196830 = 1 \times (9 - 6)^8 \times 30$	$253750 = (2^5 + 3 + 7!) \times 50$	$334950 = (3 + (3!! + 4!) \times 9) \times 50$
$20144 = (((2 + 0!)! + 1)! - 4) \times 4$	$25395 = ((2 + 5)! + 39) \times 5$	$33585 = (-3 + (3!! + 5!) \times 8) \times 5$
$201440 = (((2 + 0!)! + 1)! - 4) \times 40$	$253950 = ((2 + 5)! + 39) \times 50$	$335850 = (-3 + (3!! + 5!) \times 8) \times 50$
$20164 = ((2 \times 0!)! + (1 + 6)!) \times 4$	$25775 = (2 + 5! - 7 + 7!) \times 5$	$34368 = 3! \times (-4!/3! + 6!) \times 8$
$201640 = ((2 \times 0!)! + (1 + 6)!) \times 40$	$257750 = (2 + 5! - 7 + 7!) \times 50$	$343680 = 3! \times (-4!/3! + 6!) \times 80$
$20184 = ((2 + 0!)! + (-1 + 8)!) \times 4$	$26832 = (-(-2 + 6)! + 8!/3) \times 2$	$34377 = (-3 \times 43 + 7!) \times 7$
$201840 = ((2 + 0!)! + (-1 + 8)!) \times 40$	$268320 = (-(-2 + 6)! + 8!/3) \times 20$	$343770 = (-3 \times 43 + 7!) \times 70$
$20328 = ((2 + 0!)! + 3!!) \times 28$	$26864 = (2 - 6 + 8!/6) \times 4$	$34386 = (3 - (4 - 3!!) \times 8) \times 6$
$203280 = ((2 + 0!)! + 3!!) \times 280$	$268640 = (2 - 6 + 8!/6) \times 40$	$343860 = (3 - (4 - 3!!) \times 8) \times 60$
$20465 = (-2 - 0! + 4^6) \times 5$	$28224 = (2 + 82)^2 \times 4$	$34425 = 3^4 \times 425$
$204650 = (-2 - 0! + 4^6) \times 50$	$282240 = (2 + 82)^2 \times 40$	$344250 = 3^4 \times 4250$
$21575 = -(2 + 1)!! - 5 + 7!) \times 5$	$28576 = (2^8 + 5!) \times 76$	$34432 = (3!! \times 4! - 4^3) \times 2$
$215750 = -(2 + 1)!! - 5 + 7!) \times 50$	$285760 = (2^8 + 5!) \times 760$	$344320 = (3!! \times 4! - 4^3) \times 20$
$21605 = ((2 + 1)! \times 6! + 0!) \times 5$	$28775 = (2 + 8!/7 - 7) \times 5$	$34512 = (3!! \times 4! - (5 - 1)!) \times 2$
$216050 = ((2 + 1)! \times 6! + 0!) \times 50$	$287750 = (2 + 8!/7 - 7) \times 50$	$345120 = (3!! \times 4! - (5 - 1)!) \times 20$
$23328 = (2 \times 3^3)^2 \times 8$	$28805 = ((-2 + 8)! \times 8 + 0!) \times 5$	$34528 = (-3!! - 4 + (5 + 2)!) \times 8$
$233280 = (2 \times 3^3)^2 \times 80$	$288050 = ((-2 + 8)! \times 8 + 0!) \times 50$	$345280 = (-3!! - 4 + (5 + 2)!) \times 80$
$24276 = (2 + 4!)^2 \times 7 \times 6$	$29676 = (2 - 96 + 7!) \times 6$	$34542 = (3!! \times 4! - 5 - 4) \times 2$
$242760 = (2 + 4!)^2 \times 7 \times 60$	$296760 = (2 - 96 + 7!) \times 60$	$345420 = (3!! \times 4! - 5 - 4) \times 20$
$24576 = (-2 + 4)^{5+7} \times 6$	$30186 = ((3! + 0!)! - 1 - 8) \times 6$	$34544 = (3 \times 4! \times 5! - 4) \times 4$
$245760 = (-2 + 4)^{5+7} \times 60$	$301860 = ((3! + 0!)! - 1 - 8) \times 60$	$345440 = (3 \times 4! \times 5! - 4) \times 40$
$25075 = (-25 + (0 + 7)!) \times 5$	$30366 = (3! + 0!) \times (3 + 6!) \times 6$	$34602 = (-3 + 4! \times (6! + 0!)) \times 2$
$250750 = (-25 + (0 + 7)!) \times 50$	$303660 = (3! + 0!) \times (3 + 6!) \times 60$	$346020 = (-3 + 4! \times (6! + 0!)) \times 20$
$25135 = ((2 + 5)! - 13) \times 5$	$31995 = (3!! - 1 \times 9) \times 9 \times 5$	$34632 = 3! \times (4 \times 6! + 3!) \times 2$
$251350 = ((2 + 5)! - 13) \times 50$	$319950 = (3!! - 1 \times 9) \times 9 \times 50$	$346320 = 3! \times (4 \times 6! + 3!) \times 20$
$25165 = ((2 + 5)! - 1 - 6) \times 5$	$32256 = (3! - 2!)^2 \times 56$	$34686 = (-3 + 4! + 6! \times 8) \times 6$
$251650 = ((2 + 5)! - 1 - 6) \times 50$	$322560 = (3! - 2!)^2 \times 560$	$346860 = (-3 + 4! + 6! \times 8) \times 60$
$25185 = (2 - 5 + (-1 + 8)!) \times 5$	$32805 = (3!/2)^8 \times 05$	$34688 = (3! \times (4 + 6!) - 8) \times 8$
$251850 = (2 - 5 + (-1 + 8)!) \times 50$	$328050 = (3!/2)^8 \times 050$	$346880 = (3! \times (4 + 6!) - 8) \times 80$
$25195 = ((2 + 5)! - 1^9) \times 5$	$32835 = ((3!/2)^8 + 3!) \times 5$	$34727 = (-3^4 + 7! + 2) \times 7$
$251950 = ((2 + 5)! - 1^9) \times 50$	$328350 = ((3!/2)^8 + 3!) \times 50$	$347270 = (-3^4 + 7! + 2) \times 70$
$25215 = ((2 + 5)! + 2 + 1) \times 5$	$32977 = (-329 + 7!) \times 7$	$34848 = (3!! + (4!/8)!) \times 48$
$252150 = ((2 + 5)! + 2 + 1) \times 50$	$329770 = (-329 + 7!) \times 70$	$348480 = (3!! + (4!/8)!) \times 480$

$35077 = (-3! \times 5 + 0! + 7!) \times 7$	$40312 = 4 \times ((0! + 3!)! - 1) \times 2$	$47526 = (4! + 7 - 5!)^2 \times 6$
$350770 = (-3! \times 5 + 0! + 7!) \times 70$	$403120 = 4 \times ((0! + 3!)! - 1) \times 20$	$475260 = (4! + 7 - 5!)^2 \times 60$
$35721 = 3^5 \times 7 \times 21$	$40368 = ((4 - 0 + 3)! + 6) \times 8$	$47872 = (-4^7 + 8 \times 7!) \times 2$
$357210 = 3^5 \times 7 \times 210$	$403680 = ((4 - 0 + 3)! + 6) \times 80$	$478720 = (-4^7 + 8 \times 7!) \times 20$
$36025 = (3! + 6! + 0!) \times 25$	$40392 = 4 \times ((0! + 3!)! + 9) \times 2$	$48384 = 4! \times 8 \times 3 \times 84$
$360250 = (3! + 6! + 0!) \times 250$	$403920 = 4 \times ((0! + 3!)! + 9) \times 20$	$483840 = 4! \times 8 \times 3 \times 840$
$36432 = (3^6 \times 4! + 3!!) \times 2$	$40656 = ((4 - 0!)! + 6!) \times 56$	$49923 = ((-4 + 9)! + 9)^2 \times 3$
$364320 = (3^6 \times 4! + 3!!) \times 20$	$406560 = ((4 - 0!)! + 6!) \times 560$	$499230 = ((-4 + 9)! + 9)^2 \times 30$
$36477 = (3 + (6! + 4!) \times 7) \times 7$	$41472 = 4! \times 1 \times 4! \times 72$	$50688 = ((5 + 0!)^6 - 8!) \times 8$
$364770 = (3 + (6! + 4!) \times 7) \times 70$	$414720 = 4! \times 1 \times 4! \times 720$	$506880 = ((5 + 0!)^6 - 8!) \times 80$
$37044 = (3 \times 7)^{-0!+4} \times 4$	$43205 = (4! \times 3!!/2 + 0!) \times 5$	$50769 = (-5! + 0! + 7! + 6!) \times 9$
$370440 = (3 \times 7)^{-0!+4} \times 40$	$432050 = (4! \times 3!!/2 + 0!) \times 50$	$507690 = (-5! + 0! + 7! + 6!) \times 90$
$37344 = (3!! \times (7 + 3!) - 4!) \times 4$	$43775 = (4 \times 3^7 + 7) \times 5$	$51425 = (5! + 1) \times 425$
$373440 = (3!! \times (7 + 3!) - 4!) \times 40$	$437750 = (4 \times 3^7 + 7) \times 50$	$514250 = (5! + 1) \times 4250$
$37752 = (3! + 7!/7) \times 52$	$43776 = 4! \times (-3 + 7)! \times 76$	$51686 = (-5! + 1 + 6!) \times 86$
$377520 = (3! + 7!/7) \times 520$	$437760 = 4! \times (-3 + 7)! \times 760$	$516860 = (-5! + 1 + 6!) \times 860$
$38856 = (3^8 - 85) \times 6$	$44544 = 4! \times 4 \times (5! - 4) \times 4$	$52488 = (5 - 2 \times 4)^8 \times 8$
$388560 = (3^8 - 85) \times 60$	$445440 = 4! \times 4 \times (5! - 4) \times 40$	$524880 = (5 - 2 \times 4)^8 \times 80$
$38889 = (-3!! + (8 + 8!)/8) \times 9$	$45125 = (4! - 5! + 1)^2 \times 5$	$53448 = (5! + 3^{4+4}) \times 8$
$388890 = (-3!! + (8 + 8!)/8) \times 90$	$451250 = (4! - 5! + 1)^2 \times 50$	$534480 = (5! + 3^{4+4}) \times 80$
$39249 = (3!! + 9^2) \times 49$	$45189 = (-4! + 5 + (-1 + 8)!) \times 9$	$53557 = (-5 + 3!^5 - 5!) \times 7$
$392490 = (3!! + 9^2) \times 490$	$451890 = (-4! + 5 + (-1 + 8)!) \times 90$	$535570 = (-5 + 3!^5 - 5!) \times 70$
$39342 = (3^9 - 3 \times 4) \times 2$	$45927 = ((4 + 5) \times 9)^2 \times 7$	$54375 = (5!/4! + 3!!) \times 75$
$393420 = (3^9 - 3 \times 4) \times 20$	$459270 = ((4 + 5) \times 9)^2 \times 70$	$543750 = (5!/4! + 3!!) \times 750$
$39372 = (3 + 9 \times 3^7) \times 2$	$46072 = 4 \times (6! - 0! + 7!) \times 2$	$54675 = (5 + 4 + 6!) \times 75$
$393720 = (3 + 9 \times 3^7) \times 20$	$460720 = 4 \times (6! - 0! + 7!) \times 20$	$546750 = (5 + 4 + 6!) \times 750$
$39382 = ((3 \times 9)^3 + 8) \times 2$	$46082 = (-4! \times 6! + 0! + 8!) \times 2$	$54678 = (5 - 4! + 6!) \times 78$
$393820 = ((3 \times 9)^3 + 8) \times 20$	$460820 = (-4! \times 6! + 0! + 8!) \times 20$	$546780 = (5 - 4! + 6!) \times 780$
$39412 = (3^9 + 4! - 1) \times 2$	$46144 = 4 \times (6! + 1) \times 4 \times 4$	$55296 = (5!/5)^2 \times 96$
$394120 = (3^9 + 4! - 1) \times 20$	$461440 = 4 \times (6! + 1) \times 4 \times 40$	$552960 = (5!/5)^2 \times 960$
$39456 = (3!! \times 9 - 4! + 5!) \times 6$	$46368 = 4 \times (6! + 3^6) \times 8$	$56448 = (5! + 6) \times 448$
$394560 = (3!! \times 9 - 4! + 5!) \times 60$	$463680 = 4 \times (6! + 3^6) \times 80$	$564480 = (5! + 6) \times 4480$
$39768 = ((3!! - 9) \times 7 - 6) \times 8$	$46506 = (-4! + 6^5 - 0!) \times 6$	$56544 = (5! - 6) \times (5! + 4) \times 4$
$397680 = ((3!! - 9) \times 7 - 6) \times 80$	$465060 = (-4! + 6^5 - 0!) \times 60$	$565440 = (5! - 6) \times (5! + 4) \times 40$
$39837 = ((3!! - 9) \times 8 + 3) \times 7$	$46688 = (4 + 6^6/8) \times 8$	$56568 = 5! + (6^5 - 6!) \times 8$
$398370 = ((3!! - 9) \times 8 + 3) \times 70$	$466880 = (4 + 6^6/8) \times 80$	$565680 = 5! + (6^5 - 6!) \times 80$
$40128 = (-4! + (0! + (1 + 2)!)!) \times 8$	$47524 = (4 + 7 - 5!)^2 \times 4$	$56951 = -(5^6 + 9!/5) \times 1$
$401280 = (-4! + (0! + (1 + 2)!)!) \times 80$	$475240 = (4 + 7 - 5!)^2 \times 40$	$569510 = (-5^6 + 9!/5) \times 10$

$57602 = (5 \times (7! + 6!) + 0!) \times 2$	$75565 = (-7 + 5! \times (5! + 6)) \times 5$	$80662 = (8! - 0! + 6 + 6) \times 2$
$576020 = (5 \times (7! + 6!) + 0!) \times 20$	$755650 = (-7 + 5! \times (5! + 6)) \times 50$	$806620 = (8! - 0! + 6 + 6) \times 20$
$57625 = (5 + (7! + 6!) \times 2) \times 5$	$75603 = (7! \times 5 + (6 \times 0!)) \times 3$	$80802 = (8! + 0! + 80) \times 2$
$576250 = (5 + (7! + 6!) \times 2) \times 50$	$756030 = (7! \times 5 + (6 \times 0!)) \times 30$	$808020 = (8! + 0! + 80) \times 20$
$58962 = (5! \times 8 - 9) \times 62$	$75615 = (7! - 5 + 6) \times 15$	$82082 = ((8 - 2)! + 0! + 8!) \times 2$
$589620 = (5! \times 8 - 9) \times 620$	$756150 = (7! - 5 + 6) \times 150$	$820820 = ((8 - 2)! + 0! + 8!) \times 20$
$59319 = (5! + 9 \times (3!! - 1)) \times 9$	$76335 = (7 + 6!) \times 3 \times 35$	$83232 = (8! + 3!^{-2+3!}) \times 2$
$593190 = (5! + 9 \times (3!! - 1)) \times 90$	$763350 = (7 + 6!) \times 3 \times 350$	$832320 = (8! + 3!^{-2+3!}) \times 20$
$60432 = ((6 + 0!)! - 4) \times 3! \times 2$	$79335 = ((7! + 9) \times 3 + 3!!) \times 5$	$83755 = (-8!/3!! + 7^5) \times 5$
$604320 = ((6 + 0!)! - 4) \times 3! \times 20$	$793350 = ((7! + 9) \times 3 + 3!!) \times 50$	$837550 = (-8!/3!! + 7^5) \times 50$
$61285 = (6! + 1^2) \times 85$	$80352 = (8! - (0 + 3)!!/5) \times 2$	$86402 = (8! + 6! \times 4 + 0!) \times 2$
$612850 = (6! + 1^2) \times 850$	$803520 = (8! - (0 + 3)!!/5) \times 20$	$864020 = (8! + 6! \times 4 + 0!) \times 20$
$62208 = 6^{2 \times 2 + 0!} \times 8$	$80402 = (8! + 0! - ((4 + 0!)!)!) \times 2$	$86475 = (8 + 6! \times 4! + 7) \times 5$
$622080 = 6^{2 \times 2 + 0!} \times 80$	$804020 = (8! + 0! - ((4 + 0!)!)!) \times 20$	$864750 = (8 + 6! \times 4! + 7) \times 50$
$64776 = (6! - 4 + 7! + 7!) \times 6$	$80448 = ((8!/(0 + 4)) - 4!) \times 8$	$88832 = (8! + 8 \times 8^3) \times 2$
$647760 = (6! - 4 + 7! + 7!) \times 60$	$804480 = ((8!/(0 + 4)) - 4!) \times 80$	$888320 = (8! + 8 \times 8^3) \times 20$
$66144 = (-6! + (6! - 1) \times 4!) \times 4$	$80522 = (8! + 0! - 5!/2) \times 2$	$90702 = 9 \times (-0! + 7!) \times 02$
$661440 = (-6! + (6! - 1) \times 4!) \times 40$	$805220 = (8! + 0! - 5!/2) \times 20$	$907020 = 9 \times (-0! + 7!) \times 020$
$68544 = (6! - (8 - 5)!) \times 4! \times 4$	$80532 = (8! - 0! - 53) \times 2$	$90732 = (9 \times 07! + 3!) \times 2$
$685440 = (6! - (8 - 5)!) \times 4! \times 40$	$805320 = (8! - 0! - 53) \times 20$	$907320 = (9 \times 07! + 3!) \times 20$
$71568 = 71 \times (5! + 6) \times 8$	$80572 = (8! + 0! - 5 \times 7) \times 2$	$93312 = (9 - 3)^{3!} \times 1 \times 2$
$715680 = 71 \times (5! + 6) \times 80$	$805720 = (8! + 0! - 5 \times 7) \times 20$	$933120 = (9 - 3)^{3!} \times 1 \times 20$
$72035 = (7 + 20 \times 3!!) \times 5$	$80592 = (8! - (0 - 5 + 9)!) \times 2$	$93321 = (9 + 3!^{3!} \times 2) \times 1$
$720350 = (7 + 20 \times 3!!) \times 50$	$805920 = (8! - (0 - 5 + 9)!) \times 20$	$933210 = (9 + 3!^{3!} \times 2) \times 10$
$75375 = (7!/5 - 3) \times 75$	$80622 = (8! - 0! - 6 - 2) \times 2$	$93342 = (-9 + 3!^{3!} + 4!) \times 2$
$753750 = (7!/5 - 3) \times 750$	$806220 = (8! - 0! - 6 - 2) \times 20$	$933420 = (-9 + 3!^{3!} + 4!) \times 20$
$75525 = (7! - 5) \times (5 - 2) \times 5$	$80632 = (8! - 0! - 6 + 3) \times 2$	$98415 = 9^{8-4} \times 15$
$755250 = (7! - 5) \times (5 - 2) \times 50$	$806320 = (8! - 0! - 6 + 3) \times 20$	$984150 = 9^{8-4} \times 150$
$75543 = (7! \times 5 + 5 - 4!) \times 3$	$80652 = (8! + (0 \times 6)! + 5) \times 2$	
$755430 = (7! \times 5 + 5 - 4!) \times 30$	$806520 = (8! + (0 \times 6)! + 5) \times 20$	

## 6.2 Patterned Selfie Numbers In Decreasing Order of Digits

$126 = 6 \times 21$	$688 = 8 \times 86$	$1395 = 9 \times 5 \times 31$
$1260 = 6 \times 210$	$6880 = 8 \times 860$	$13950 = 9 \times 5 \times 310$
$354 = (5! - \sqrt{4}) \times 3$	$713 = (-7 + 3!!) \times 1$	$1432 = (-4 + 3!!) \times 2 \times 1$
$3540 = (5! - \sqrt{4}) \times 30$	$7130 = (-7 + 3!!) \times 10$	$14320 = (-4 + 3!!) \times 2 \times 10$
$456 = (-6 + 5!) \times 4$	$1345 = (5^4 + 3!!) \times 1$	$1436 = (6! - 4 + 3!!) \times 1$
$4560 = (-6 + 5!) \times 40$	$13450 = (5^4 + 3!!) \times 10$	$14360 = (6! - 4 + 3!!) \times 10$

$1827 = 87 \times 21$	$13435 = (-5 + (4!/3)!/3) \times 1$	$14168 = (-8 + 6^4) \times 11$
$18270 = 87 \times 210$	$134350 = (-5 + (4!/3)!/3) \times 10$	$141680 = (-8 + 6^4) \times 110$
$2916 = (9 \times 6)^2 \times 1$	$13438 = ((8! - 4!)/3 + 3!) \times 1$	$14395 = ((9! - 5!)/4! - 3!!) \times 1$
$29160 = (9 \times 6)^2 \times 10$	$134380 = ((8! - 4!)/3 + 3!) \times 10$	$143950 = ((9! - 5!)/4! - 3!!) \times 10$
$3125 = 5^{3+2} \times 1$	$13443 = ((4 + 4)!/3 + 3) \times 1$	$14397 = (-9 + 7^4 \times 3!) \times 1$
$31250 = 5^{3+2} \times 10$	$134430 = ((4 + 4)!/3 + 3) \times 10$	$143970 = (-9 + 7^4 \times 3!) \times 10$
$3372 = (7!/3 + 3!) \times 2$	$13444 = (4 + (4 + 4)!/3) \times 1$	$14635 = ((6 + 5)^4 - 3!) \times 1$
$33720 = (7!/3 + 3!) \times 20$	$134440 = (4 + (4 + 4)!/3) \times 10$	$146350 = ((6 + 5)^4 - 3!) \times 10$
$3591 = (-9 + 5 \times 3!!) \times 1$	$13445 = (5 + (4 + 4)!/3) \times 1$	$14645 = ((6 + 5)^4 + 4) \times 1$
$35910 = (-9 + 5 \times 3!!) \times 10$	$134450 = (5 + (4 + 4)!/3) \times 10$	$146450 = ((6 + 5)^4 + 4) \times 10$
$3864 = (-8 + 6^4) \times 3$	$13446 = (6 + (4 + 4)!/3) \times 1$	$15225 = (5 + (5 - 2)!!) \times 21$
$38640 = (-8 + 6^4) \times 30$	$134460 = (6 + (4 + 4)!/3) \times 10$	$152250 = (5 + (5 - 2)!!) \times 210$
$6552 = (6 + 5!) \times 52$	$13447 = (7 + (4 + 4)!/3) \times 1$	$15267 = (7 + 6 \times 5!) \times 21$
$65520 = (6 + 5!) \times 520$	$134470 = (7 + (4 + 4)!/3) \times 10$	$152670 = (7 + 6 \times 5!) \times 210$
$8448 = 88 \times 4! \times 4$	$13448 = (8 + (4 + 4)!/3) \times 1$	$15288 = (8 + (8 - 5)!!) \times 21$
$84480 = 88 \times 4! \times 40$	$134480 = (8 + (4 + 4)!/3) \times 10$	$152880 = (8 + (8 - 5)!!) \times 210$
$9216 = 96^2 \times 1$	$13449 = (9 + (4 + 4)!/3) \times 1$	$15372 = (7 + 5 + 3!!) \times 21$
$92160 = 96^2 \times 10$	$134490 = (9 + (4 + 4)!/3) \times 10$	$153720 = (7 + 5 + 3!!) \times 210$
$11664 = 6^6/4 \times 1 \times 1$	$13458 = (8! + 54)/3 \times 1$	$15498 = 9!/(8 \times 5!) \times 41$
$116640 = 6^6/4 \times 1 \times 10$	$134580 = (8! + 54)/3 \times 10$	$154980 = 9!/(8 \times 5!) \times 410$
$12544 = (5! - 4 - 4)^2 \times 1$	$13488 = 8 \times (8!/4! + 3!) \times 1$	$15562 = (6^5 + 5) \times 2 \times 1$
$125440 = (5! - 4 - 4)^2 \times 10$	$134880 = 8 \times (8!/4! + 3!) \times 10$	$155620 = (6^5 + 5) \times 2 \times 10$
$12768 = 8 \times 76 \times 21$	$13557 = ((-7 + 5!) \times 5! - 3) \times 1$	$15585 = (-8 + 5^5) \times 5 \times 1$
$127680 = 8 \times 76 \times 210$	$135570 = ((-7 + 5!) \times 5! - 3) \times 10$	$155850 = (-8 + 5^5) \times 5 \times 10$
$12962 = (9 \times 6! \times 2 + 2) \times 1$	$13644 = (-6!/4 + 4!^3) \times 1$	$15624 = 6 \times (5! + 4) \times 21$
$129620 = (9 \times 6! \times 2 + 2) \times 10$	$136440 = (-6!/4 + 4!^3) \times 10$	$156240 = 6 \times (5! + 4) \times 210$
$12969 = (9 + 9 \times 6! \times 2) \times 1$	$13682 = ((8! + 6!)/3 + 2) \times 1$	$15655 = (6 + 5^5) \times 5 \times 1$
$129690 = (9 + 9 \times 6! \times 2) \times 10$	$136820 = ((8! + 6!)/3 + 2) \times 10$	$156550 = (6 + 5^5) \times 5 \times 10$
$12996 = (9 + 9) \times (6! + 2) \times 1$	$13683 = ((8! + 6!)/3 + 3) \times 1$	$16254 = (6! + 54) \times 21$
$129960 = (9 + 9) \times (6! + 2) \times 10$	$136830 = ((8! + 6!)/3 + 3) \times 10$	$162540 = (6! + 54) \times 210$
$13225 = (-5 + (3 + 2)!)^2 \times 1$	$13688 = (8 + (8! + 6!)/3) \times 1$	$16368 = 8 \times 66 \times 31$
$132250 = (-5 + (3 + 2)!)^2 \times 10$	$136880 = (8 + (8! + 6!)/3) \times 10$	$163680 = 8 \times 66 \times 310$
$13248 = (8! - 4!^3)/2 \times 1$	$13689 = (9 + (8! + 6!)/3) \times 1$	$16464 = (-6! + (6! - 4) \times 4!) \times 1$
$132480 = (8! - 4!^3)/2 \times 10$	$136890 = (9 + (8! + 6!)/3) \times 10$	$164640 = (-6! + (6! - 4) \times 4!) \times 10$
$13368 = (8! - 6^3)/3 \times 1$	$13747 = (-77 + 4!^3) \times 1$	$17533 = (7^5 + 3! + 3!!) \times 1$
$133680 = (8! - 6^3)/3 \times 10$	$137470 = (-77 + 4!^3) \times 10$	$175330 = (7^5 + 3! + 3!!) \times 10$
$13434 = ((4 + 4)!/3 - 3!) \times 1$	$13944 = ((9 - 4)! + 4!^3) \times 1$	$17724 = 7 \times (7! + 4!)/2 \times 1$
$134340 = ((4 + 4)!/3 - 3!) \times 10$	$139440 = ((9 - 4)! + 4!^3) \times 10$	$177240 = 7 \times (7! + 4!)/2 \times 10$

$19368 = 9 \times (-8 + 6! \times 3) \times 1$	$31614 = (6! \times 4 - 3!) \times 11$	$38169 = (9 + 8! - 6! \times 3) \times 1$
$193680 = 9 \times (-8 + 6! \times 3) \times 10$	$316140 = (6! \times 4 - 3!) \times 110$	$381690 = (9 + 8! - 6! \times 3) \times 10$
$22976 = (9 + 7) \times (6! - 2) \times 2$	$33579 = 9 \times 7 \times 533$	$38416 = (8 + 6)^{4!/3!} \times 1$
$229760 = (9 + 7) \times (6! - 2) \times 20$	$335790 = 9 \times 7 \times 5330$	$384160 = (8 + 6)^{4!/3!} \times 10$
$23136 = (6! + 3) \times 32 \times 1$	$34266 = ((-6 + 6!) \times 4! - 3) \times 2$	$39816 = (-9! + 8! \times 6!)/3!! \times 1$
$231360 = (6! + 3) \times 32 \times 10$	$342660 = ((-6 + 6!) \times 4! - 3) \times 20$	$398160 = (-9! + 8! \times 6!)/3!! \times 10$
$23319 = (-9 + 3!^{3!}/2) \times 1$	$34452 = (-54 + 4! \times 3!!) \times 2$	$44544 = (5! - 4) \times 4! \times 4 \times 4$
$233190 = (-9 + 3!^{3!}/2) \times 10$	$344520 = (-54 + 4! \times 3!!) \times 20$	$445440 = (5! - 4) \times 4! \times 4 \times 40$
$24334 = (4! - 4 + 3)^3 \times 2$	$34476 = (-7 + 6! \times 4) \times 4 \times 3$	$45393 = ((9! + 5!)/4! + 3!) \times 3$
$243340 = (4! - 4 + 3)^3 \times 20$	$344760 = (-7 + 6! \times 4) \times 4 \times 30$	$453930 = ((9! + 5!)/4! + 3!) \times 30$
$25174 = (7! \times 5 - 4! - 2) \times 1$	$34542 = (-5 - 4 + 4! \times 3!!) \times 2$	$46464 = (6! + 6) \times 4 \times 4 \times 4$
$251740 = (7! \times 5 - 4! - 2) \times 10$	$345420 = (-5 - 4 + 4! \times 3!!) \times 20$	$464640 = (6! + 6) \times 4 \times 4 \times 40$
$26384 = (8! - 6! - 4!)/3 \times 2$	$34545 = (-5 + 5! \times 4 \times 4!) \times 3$	$46613 = (6^6 - 43) \times 1$
$263840 = (8! - 6! - 4!)/3 \times 20$	$345450 = (-5 + 5! \times 4 \times 4!) \times 30$	$466130 = (6^6 - 43) \times 10$
$26836 = (8! - 66)/3 \times 2$	$34584 = (8 + 5! \times 4 \times 4!) \times 3$	$46648 = (-8 + 6^6)/4 \times 4$
$268360 = (8! - 66)/3 \times 20$	$345840 = (8 + 5! \times 4 \times 4!) \times 30$	$466480 = (-8 + 6^6)/4 \times 40$
$26898 = (9 + (8! + 8!)/6) \times 2$	$34832 = (-8 + 4! \times (3! + 3!!)) \times 2$	$47952 = (-9 + 7!/5) \times 4! \times 2$
$268980 = (9 + (8! + 8!)/6) \times 20$	$348320 = (-8 + 4! \times (3! + 3!!)) \times 20$	$479520 = (-9 + 7!/5) \times 4! \times 20$
$27634 = (-7 + (6 \times 4)^3) \times 2$	$34992 = 9 \times 9 \times 432$	$48384 = 8 \times 84 \times 4! \times 3$
$276340 = (-7 + (6 \times 4)^3) \times 20$	$349920 = 9 \times 9 \times 4320$	$483840 = 8 \times 84 \times 4! \times 30$
$28224 = 84^2 \times 2 \times 2$	$35793 = 97 \times (5! + 3) \times 3$	$48996 = (9 + (9 + 8) \times 6!) \times 4$
$282240 = 84^2 \times 2 \times 20$	$357930 = 97 \times (5! + 3) \times 30$	$489960 = (9 + (9 + 8) \times 6!) \times 40$
$29583 = (-9 - 8 + (5! \times 3)^2) \times 1$	$35991 = 9 \times (9 + 5!) \times 31$	$52168 = 8 \times 6521$
$295830 = (-9 - 8 + (5! \times 3)^2) \times 10$	$359910 = 9 \times (9 + 5!) \times 310$	$521680 = 8 \times 65210$
$31252 = (5^{3!} \times 2 + 2) \times 1$	$36568 = 8!/6! \times 653$	$56544 = (-6 + 5!) \times (5! + 4) \times 4$
$312520 = (5^{3!} \times 2 + 2) \times 10$	$365680 = 8!/6! \times 6530$	$565440 = (-6 + 5!) \times (5! + 4) \times 40$
$31255 = (5 + 5^{3!} \times 2) \times 1$	$37584 = 87 \times (5! + 4!) \times 3$	$59145 = (9^5 + 5! - 4!) \times 1$
$312550 = (5 + 5^{3!} \times 2) \times 10$	$375840 = 87 \times (5! + 4!) \times 30$	$591450 = (9^5 + 5! - 4!) \times 10$
$31256 = (6 + 5^{3!} \times 2) \times 1$	$37742 = (7! + 7 + 4!^3) \times 2$	$59319 = (-9 \times 9 + 5!)^3 \times 1$
$312560 = (6 + 5^{3!} \times 2) \times 10$	$377420 = (7! + 7 + 4!^3) \times 20$	$593190 = (-9 \times 9 + 5!)^3 \times 10$
$31257 = (7 + 5^{3!} \times 2) \times 1$	$38162 = (8! - 6! \times 3 + 2) \times 1$	$62436 = (6! + 6) \times 43 \times 2$
$312570 = (7 + 5^{3!} \times 2) \times 10$	$381620 = (8! - 6! \times 3 + 2) \times 10$	$624360 = (6! + 6) \times 43 \times 20$
$31258 = (8 + 5^{3!} \times 2) \times 1$	$38163 = (8! - 6! \times 3 + 3) \times 1$	$63924 = 9! - (6 - 4!^3) \times 2$
$312580 = (8 + 5^{3!} \times 2) \times 10$	$381630 = (8! - 6! \times 3 + 3) \times 10$	$639240 = 9! - (6 - 4!^3) \times 20$
$31259 = (9 + 5^{3!} \times 2) \times 1$	$38166 = (8! + 6 - 6! \times 3) \times 1$	$66528 = (8! + 6! - 6^5) \times 2$
$312590 = (9 + 5^{3!} \times 2) \times 10$	$381660 = (8! + 6 - 6! \times 3) \times 10$	$665280 = (8! + 6! - 6^5) \times 20$
	$38167 = (8! + 7 - 6! \times 3) \times 1$	$69312 = 96 \times (3!! + 2) \times 1$
	$381670 = (8! + 7 - 6! \times 3) \times 10$	$693120 = 96 \times (3!! + 2) \times 10$
	$38168 = (8! + 8 - 6! \times 3) \times 1$	
	$381680 = (8! + 8 - 6! \times 3) \times 10$	

$69984 = 9 \times 9 \times 864$	$78975 = 9 \times 8775$	$93294 = (-9 + (9 \times 4)^3) \times 2$
$699840 = 9 \times 9 \times 8640$	$789750 = 9 \times 87750$	$932940 = (-9 + (9 \times 4)^3) \times 20$
$72576 = 7 \times (7! + 6!/5) \times 2$	$82528 = (8! + 8 \times (5! - 2)) \times 2$	$93312 = (9 - 3)^{3!} \times 2 \times 1$
$725760 = 7 \times (7! + 6!/5) \times 20$	$825280 = (8! + 8 \times (5! - 2)) \times 20$	$933120 = (9 - 3)^{3!} \times 2 \times 10$
$74183 = (-8 + 7^4) \times 31$	$85416 = ((-8 + 6!) \times 5! - 4!) \times 1$	$93321 = (9 + 3!^{3!} \times 2) \times 1$
$741830 = (-8 + 7^4) \times 310$	$854160 = ((-8 + 6!) \times 5! - 4!) \times 10$	$933210 = (9 + 3!^{3!} \times 2) \times 10$
$75453 = ((7! - 5) \times 5 - 4!) \times 3$	$88832 = (8! + (8 + 8)^3) \times 2$	$93324 = ((9 \times 4)^3 + 3!) \times 2$
$754530 = ((7! - 5) \times 5 - 4!) \times 30$	$888320 = (8! + (8 + 8)^3) \times 20$	$933240 = ((9 \times 4)^3 + 3!) \times 20$
$75543 = (7! \times 5 + 5 - 4!) \times 3$	$91125 = (9 \times 5)^{2+1} \times 1$	$93342 = (-9 + 4! + 3!^{3!}) \times 2$
$755430 = (7! \times 5 + 5 - 4!) \times 30$	$911250 = (9 \times 5)^{2+1} \times 10$	$933420 = (-9 + 4! + 3!^{3!}) \times 20$
$75565 = (-7 + (6 + 5!) \times 5!) \times 5$	$91434 = ((9! - 4!)/4 + 3!!) \times 1$	$94848 = 988 \times 4! \times 4$
$755650 = (-7 + (6 + 5!) \times 5!) \times 50$	$914340 = ((9! - 4!)/4 + 3!!) \times 10$	$948480 = 988 \times 4! \times 40$
$77739 = (9!/(7 + 7) - 7) \times 3$	$91438 = ((9! - 8)/4 + 3!!) \times 1$	$95922 = (99 + 5!)^2 \times 2$
$777390 = (9!/(7 + 7) - 7) \times 30$	$914380 = ((9! - 8)/4 + 3!!) \times 10$	$959220 = (99 + 5!)^2 \times 20$

## Acknowledgement

The author is thankful to T.J. Eckman, Georgia, USA (email: [jeek@jeek.net](mailto:jeek@jeek.net)) in programming the script to develop these representations.

## REFERENCES

- [1] ABRAHAMS, M, Lots more numbers, deemed "crazy consecutive", IMPROBABLE RESEACH, <http://www.improbable.com/2013/06/08/lots-more-numbers-deemed-crazy-consecutive>.
- [2] HEINZ, H., "Number Patterns. <http://www.magic-squares.net> and <http://www.magic-squares.net/square-update.htm>.
- [3] FREIDMAN, E., Problems of the Month (April 2012), <http://www2.stetson.edu/~efriedma/mathmagic/0412.html>.
- [4] MADACHY, J.S., Mathematics on Vacations, Charlers Scriber's Son, New York, 1966.
- [5] NEBUS, J., Counting From 52 to 11,108, nebusresearch, <http://nebusresearch.wordpress.com/2013/06/10/counting-from-52-to-11108/>.
- [6] ROSE, C., "Radical Narcissistic numbers", J. Recreational Mathematics, vol. 33, (2004-2005), pp. 250-254.
- [7] ROSE, C., "Pretty Wild Narcissistic numbers", "The On-Line Encyclopedia of Integer Sequences.", founded by N.J.A. Sloane, <https://oeis.org/A193069>, August 08, 2011.
- [8] ROSE, C., "Pretty Wild Narcissistic numbers", <http://www.tri.org.au/numQ/pwn/>.
- [9] SLOANE, N.J.A., Sequences A005188/M0488, A003321/M5403, A010344, A010346, A010348, A010350, A010353, A010354, A014576, A023052, A032799, A046074, A101337, and A114904 in "The On-Line Encyclopedia of Integer Sequences.", <https://oeis.org/>.
- [10] TANEJA, I.J., Crazy Sequential Representation: Numbers from 0 to 11111 in terms of Increasing and Decreasing Orders of 1 to 9, Jan. 2014, <http://arxiv.org/abs/1302.1479>.
- [11] TANEJA, I.J., Selfie Numbers: Consecutive Representations in Increasing and Decreasing Orders, RGMIA Research Report Collection, 17(2014), Article 140, pp. 1-57. <http://rgmia.org/papers/v17/v17a140.pdf>.
- [12] TANEJA, I.J., Single Digit Representations of Natural Numbers, Feb., 2015 <http://arxiv.org/abs/1502.03501>.
- [13] TANEJA, I.J., Single Letter Representations of Natural Numbers, Palindromic Symmetries and Number Patterns, RGMIA Research Report Collection, 18(2015), Article 40, pp. 1-30. <http://rgmia.org/papers/v18/v18a40.pdf>.
- [14] TANEJA, I.J., Running Expressions in Increasing and Decreasing Orders of Natural Numbers Separated by Equality Signs, RGMIA Research Report Collection, 18(2015), Article 27, pp. 1-54. <http://rgmia.org/papers/v18/v18a27.pdf>.
- [15] TANEJA, I.J., Different Types of Pretty Wild Narcissistic Numbers: Selfie Representations – I, RGMIA Research Report Collection, 18(2015), Article 32, pp. 1-43. <http://rgmia.org/papers/v18/v18a32.pdf>.

- [16] TANEJA, I.J., Selfie Numbers: Representations in Increasing and Decreasing Orders of Non Consecutive Digits, RGMIA Research Report Collection, 18(2015), Article 70, pp. 1-104. <http://rgmia.org/papers/v18/v18a70.pdf>.
  - [17] TANEJA, I.J., Single Letter Representations of Natural Numbers, RGMIA Research Report Collection, 18(2015), Article 73, pp. 1-44. <http://rgmia.org/papers/v18/v18a73.pdf>.
  - [18] TANEJA, I.J., Representations of Palindromic, Prime, and Fibonacci Sequence Patterns, RGMIA Research Report Collection, 18(2015), Article 99, pp. 1-24. <http://rgmia.org/papers/v18/v18a99.pdf>.
  - [19] TANEJA, I.J., Crazy Representations and Selfie Numbers, RGMIA Research Report Collection, 18(2015), Article 141, pp. 1-9. <http://rgmia.org/papers/v18/v18a141.pdf>.
  - [20] TANEJA, I.J., Unified Selfie Numbers, RGMIA Research Report Collection, 18(2015), Article 153, pp. 1-14. <http://rgmia.org/papers/v18/v18a153.pdf>.
  - [21] TANEJA, I.J., Patterns in Selfie Numbers, RGMIA Research Report Collection, 18(2015), Article 154, pp. 1-41. <http://rgmia.org/papers/v18/v18a154.pdf>.
  - [22] TANEJA, I.J., Selfie Numbers – I: Six Digits Symmetrical, Unified and Patterned Representations Without Factorial, RGMIA Research Report Collection, 18(2015), Article 174, pp. 1-94, <http://rgmia.org/papers/v18/v18a174.pdf>.
  - [23] TANEJA, I.J., Selfie Numbers – II: Six Digits Symmetrical, Unified and Patterned Representations Without Factorial, RGMIA Research Report Collection, 18(2015), Article 175, pp. 1-41, <http://rgmia.org/papers/v18/v18a175.pdf>.
-