

Received 05/09/16

Fibonacci Sequence and Selfie Numbers - II

Inder J. Taneja¹

Abstract

Numbers represented by their own digits by certain operations are considered as "Selfie Numbers". There are many ways of representing "Selfie Numbers", such as, numbers written in digit's order or its reverse. It can also be represented in increasing and/or decreasing order of digits. This is generally obtained by use of basis operations along with factorial and square-root, etc. In this work we have written "Selfie Numbers" using Fibonacci sequence value in composition form in terms of digit's order and its reverse.

The work of this paper is divided in sections and subsections given below:

- 1 Introduction;
 - 1.1 Selfie Numbers;
 - 1.2 Fibonacci Sequence;
- 2 Selfie Numbers with Fibonacci Sequence Values;
 - 2.1 Palindromic Selfie Numbers;
 - 2.2 Selfie Numbers in Digit's Order;
 - 2.3 Selfie Numbers in Reverse Order of Digits;
- 3 Symmetric Representations;
 - 3.1 Symmetric Representations in Both Ways;
 - 3.2 Symmetric Representations in Digit's Order;
 - 3.3 Symmetric Representations in Reverse Order of Digits;
- 4 Symmetric Representations in terms of F(2), F(3) and F(4);
 - 4.1 Symmetric Representations in Both Ways;
 - 4.2 Symmetric Representations in Digit's Order;
 - 4.3 Symmetric Representations in Reverse Order of Digits;
- 5 Symmetric Representations in F(F(3)) and F(F(4));
 - 5.1 Symmetric Representations in Both Ways;
 - 5.2 Symmetric Representations Reverse order of Digits;
- 6 Number Patterns with Fibonacci Sequence Values.

1 Introduction

This introductory sections deals with the explanations of two principal ideas. One is on *selfie numbers* and another on obtaining selfie numbers by use of *Fibonacci sequence* values.

1.1 Selfie Numbers

Numbers represented by their own digits by use of certain operations are considered as "Selfie Number". These numbers are divided in two categories. These two categories are again divided in two each, 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. See below examples in each category:

- Digit's Order

$$936 = (\sqrt{9})^3 + 6!;$$

$$1296 = \sqrt{(1+2)!^9}/6;$$

$$2896 = 2 \times (8 + (\sqrt{9})!! + 6!);$$

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

¹Formerly, Professor of Mathematics, Universidade Federal de Santa Catarina, 88.040-900 Florianópolis, SC, Brazil.
E-mail: ijtaneja@gmail.com; Web-site: www.numbersmagic.wordpress.com.

• Reverse Order of Digits

$$936 = 6! + (3!)^{\sqrt{9}};$$

$$1296 = 6^{(\sqrt{9}+2-1)};$$

$$2896 = (6! + (\sqrt{9})!! + 8) \times 2;$$

$$20167 = 7 + (6 + 1 + 0!)/2.$$

• Increasing Order of Digits

$$936 = 3!! + 6^{\sqrt{9}};$$

$$1296 = (1 + 2)! \times 6^{\sqrt{9}};$$

$$8397 = -3 - 7! + 8!/\sqrt{9};$$

$$241965 = (1 + (2 \times 4)! + 5) \times 6 + 9.$$

• Decreasing Order of Digits

$$936 = (\sqrt{9})!! + 6^3;$$

$$1296 = ((\sqrt{9})! \times 6)^2 \times 1;$$

$$20148 = (8! - 4)/2 - 10;$$

$$435609 = 9 + (6! - 5!/\sqrt{4})^{(3-0!)}.$$

We observe that in some case, the same number can be represented in more than one or in all the four ways. For more details on *selfie numbers* refer to author’s work [11, 14, 16], [20]-[24], For more work on numbers in different situations refer also author’s work [10]-[13], [17]-[19], [25]-[44]. Also refer [1, 3, 4, 7, 8, 9] for more studies. Few basic examples connecting Fibonacci sequence values can be seen in [2].

Above we have given examples of *selfie numbers* in four different ways. This has been done using the basic operations along with *factorial* and *square-root*.

1.2 Fibonacci Sequence

Fibonacci sequence numbers are well known in literature [5, 6]. This sequence is defined as

$$F(0) = 0, \quad F(1) = 1, \quad F(n + 1) = F(n) + F(n - 1), \quad n \geq 1.$$

Initial values of Fibonacci sequence are given by

$F(1) = 1$	$F(6) = 8$	$F(11) = 89$	$F(16) = 987$	$F(21) = 10946$
$F(2) = 1$	$F(7) = 13$	$F(12) = 144$	$F(17) = 1597$	$F(22) = 17711$
$F(3) = 2$	$F(8) = 21$	$F(13) = 233$	$F(18) = 2584$	$F(23) = 28657$
$F(4) = 3$	$F(9) = 34$	$F(14) = 377$	$F(19) = 4181$	$F(24) = 46368$
$F(5) = 5$	$F(10) = 55$	$F(15) = 610$	$F(20) = 6765$	$F(25) = 75025, \text{ etc,}$

Interestingly, natural numbers can be written in terms of *Fibonacci sequence* values. Below are examples:

$0 = F(0)$	$6 = F(2) + F(5)$	$12 = F(2) + F(4) + F(6)$	$18 = F(5) + F(7)$
$1 = F(1) = F(2)$	$7 = F(3) + F(5)$	$13 = F(7)$	$19 = F(2) + F(5) + F(7)$
$2 = F(3)$	$8 = F(6)$	$14 = F(2) + F(7)$	$20 = F(3) + F(5) + F(7)$
$3 = F(4)$	$9 = F(2) + F(6)$	$15 = F(3) + F(7)$	$21 = F(8)$
$4 = F(2) + F(4)$	$10 = F(3) + F(6)$	$16 = F(4) + F(7)$	$22 = F(2) + F(8)$
$5 = F(5)$	$11 = F(4) + F(6)$	$17 = F(2) + F(4) + F(7)$	$23 = F(3) + F(8)$ etc,

Based on values of $F(.)$, we can write composition values, such as, $F(F(1))$, $F(F(2))$, etc. See examples below:

$F(F(0)) = 0$	$F(F(7)) = 233$
$F(F(1)) = 1$	$F(F(8)) = 10946$
$F(F(2)) = 1$	$F(F(9)) = 5702887$
$F(F(3)) = 1$	$F(F(10)) = 139583862445$
$F(F(4)) = 2$	$F(F(11)) = 1779979416004714189$
$F(F(5)) = 5$	$F(F(12)) = 555565404224292694404015791808$
$F(F(6)) = 21$	$F(F(13)) = 2211236406303914545699412969744873993387956988653$, etc.

Similarly, we can write values for $F(F(F(.)))$, $F(F(F(F(.))))$, etc. The work on *selfie numbers* based on *Fibonacci sequence* values is divided in three parts. See below this division:

(i) In first paper, [45], we worked with selfie numbers just using the terms of Fibonacci sequences as $F(.)$. No composition in terms of F is used. See some examples, below:

$$256 = 2^5 \times F(6).$$

$$46493 = F(4 \times 6) + (-4 + 9)^3 .882 = 2 \times F(8) \times F(8).$$

$$1631 = F(13) \times (6 + 1).$$

$$54128 = 8 \times (F(2) + F(1 \times 4 \times 5)).$$

The first two examples are in digit’s order and last three in reverse order of digits. For details refer [45].

(ii) In the second paper, we used *composition of Fibonacci sequence* values to write numbers. See some examples, below:

$$235 = 2 + F(F(F(3) + 5)).$$

$$4427 = (F(4) + 4^2) \times F(F(7)).$$

$$63 = 3 \times F(F(6)).$$

$$43956 = (F(F(F(6))) + 5 \times 9 - F(3)) \times 4.$$

The first two examples are in order of digits, and last two examples are in reverse order of digits. Here compositions function like, $F(F(.))$, $F(F(F(.)))$, arising due to Fibonacci sequence values are used. This is done in this paper.

(iii) The third paper is a combination of parts (i) and (ii) along with *factorial* and *square-root*, for example,

$$447 = (F(4))! - F(F((F(4))!)) \times F(7).$$

$$954 = F((\sqrt{9})!) \times 5! - F(4)!.$$

$$433 = F(F(3!))^{F(3)} - F(F(4)!).$$

$$1919 = (F((\sqrt{9})!)) / F(-1 + 9) - 1.$$

The first two examples are in order of digits, and last two examples are in reverse order of digits. The composition functions, like, $F(F(.))$, $F(F(F(.)))$, arising due to Fibonacci sequence values are used. Also the idea of *factorial* and *square-roots* is used.

2 Selfie Numbers with Fibonacci Sequence Values

Initially, we shall write *selfie numbers with Fibonacci sequence values*. In this case we have values with $F(\cdot)$, $F(F(\cdot))$, etc. It is divided in three subsections, one on palindromic numbers, another on numbers with increasing order and finally last one with in reverse order of digits. For palindromic numbers the work is up to 5 digits. The rest is up to 4 digits.

2.1 Palindromic Selfie Numbers

$$\begin{aligned}
 55 &= F(5 + 5). \\
 474 &= (4 + F(F(7))) \times F(F(4)). \\
 484 &= (F(F(F(4))) + F(8))^{F(F(4))}. \\
 2772 &= (-2 + F(F(7))) \times (F(7) - F(2)). \\
 3773 &= (-F(3) + F(7)) \times 7^3. \\
 13531 &= F((1 + 3) \times 5) \times F(3) + 1. \\
 14641 &= 1 + (F(4) + F(6))^4 - 1. \\
 15251 &= F(15) \times 25 + 1. \\
 21961 &= 2 \times 1 \times (F(9) + F(F(F(6)))) + 1. \\
 23732 &= (-F(2) + 3 \times F(F(7))) \times F(3^2). \\
 28882 &= F(2 + F(8)) - 8 + F(F(8 - F(2))). \\
 32823 &= (-3 - 2 + F(F(8))) \times (F(2) + F(3)). \\
 39393 &= 3^9 \times F(3) + 9 \times 3. \\
 44944 &= ((4 + 49) \times 4)^{F(F(4))}. \\
 46264 &= F(4 \times 6) - 26 \times 4. \\
 46364 &= F(4 \times 6) - F(3) - 6 + 4. \\
 46464 &= F(4 \times 6) + 4 \times 6 \times 4. \\
 46664 &= 4 + 6^6 + F(6) - 4. \\
 46764 &= 4 \times (F(F(F(6))) + F(F(7)) + F(6))^{F(4)}. \\
 47374 &= (F(F(F(4)) \times 7)^{F(3)} - 7)/F(4). \\
 47574 &= F(4) \times (F(F(7)) + 5^{7-F(F(F(4)))}). \\
 48384 &= (F(4) \times 8)^{F(3)} \times 84. \\
 48384 &= (F(4) \times 8)^{F(3)} \times 84. \\
 49994 &= F(F(4)) \times (-F(9) + F(F(9) - 9))/F(4). \\
 54645 &= (F(F(5 + F(4))) - F(F(6)) + 4) \times 5. \\
 54745 &= 5 \times F(F(4) \times 7) + F(4) \times 5. \\
 54845 &= (5^{F(F(4))} + F(F(8)) - F(F(4))) \times 5. \\
 62426 &= (F(6) - F(2))^4 \times 26. \\
 62426 &= (F(6) - F(2))^4 \times 26. \\
 63936 &= 6^3 \times (F(9) + 3) \times F(6). \\
 65556 &= (F(F(F(6))) - 5 \times 5 + 5) \times 6. \\
 66666 &= (F(F(F(6))) + F(6 + 6) + F(F(6))) \times 6. \\
 67176 &= (F(F(F(6))) + F(F(7)) + 17) \times 6. \\
 68286 &= (-6 + F(8)^2 + F(F(8))) \times 6. \\
 69696 &= (F(6) \times F(9) - F(6))^{F(9-6)}. \\
 73793 &= (7 + F(3))^{F(7)} \times 9 + F(3). \\
 75257 &= F(F(7)) + F(5^2) - F(-5 + 7). \\
 75457 &= 7 \times F(F(5 + F(4))) - 5 \times F(F(7)). \\
 75957 &= (F(F(F(7) - 5)) - 95) \times 7. \\
 76167 &= (-F(7) \times (6 - 1) + F(F(F(6)))) \times 7. \\
 76367 &= 7 \times F(F(F(6))) - F(F(3)) - F(F(6)) - F(F(7)). \\
 76467 &= F(7) + (F(F(F(6))) - 4 \times 6) \times 7. \\
 76567 &= 7 \times F(F(F(6))) - F(-5 + F(6) + 7). \\
 76667 &= 7 \times (F(F(F(6))) + 6) + F(F(6))/7. \\
 76867 &= (-7 + F(F(6)) + F(F(8)) + F(F(6))) \times 7. \\
 78487 &= 7 \times F(F(8)) + F(F(F(4))) + 8 \times F(F(7)). \\
 78987 &= (F(F(7)) + 8 + 98) \times F(F(7)). \\
 84284 &= F(F(8) + 4) - 2 + F(8)^{F(4)}. \\
 86368 &= (F(F(8)) - 6 - F(F(3) \times 6)) \times 8. \\
 86968 &= (F(F(8)) - 69 - 6) \times 8. \\
 87878 &= (F(F(8)) + 7) \times 8 + F(F(7)) + F(8). \\
 88288 &= (F(F(8)) + 82 + 8) \times 8. \\
 88788 &= 8 \times F(F(8)) + F(F(7)) + F(8 + 8). \\
 98289 &= (-F(9) + F(F(8)) + F(2) + 8) \times 9. \\
 98389 &= -98 + (-3 + F(F(8))) \times 9. \\
 98489 &= -F(9) + (F(8/4) + F(F(8))) \times 9. \\
 98589 &= 9 + F(8) + (5 + F(F(8))) \times 9. \\
 98789 &= 9 \times F(F(8)) + F(F(7)) + 8 + F(9).
 \end{aligned}$$

2.2 Selfie Numbers in Digit's Order

$$34 = F(3 \times F(4)).$$

$$63 = F(F(6)) \times 3.$$

$$64 = F(6)^{F(F(4))}.$$

$$84 = F(8) \times 4.$$

$$143 = -1 + F(4 \times 3).$$

$$144 = F((-1 + 4) \times 4).$$

$$168 = 1 \times F(6) \times F(8).$$

$$189 = 1 \times F(8) \times 9.$$

$$233 = F(F(-2 + 3 \times 3)).$$

$$234 = F(2) + F(F(3 + 4)).$$

$$235 = 2 + F(F(F(3) + 5)).$$

$$237 = F(2) + 3 + F(F(7)).$$

$$245 = 2 + F(4)^5.$$

$$256 = 2^5 \times F(6).$$

$$267 = F(F(2) + F(6)) + F(F(7)).$$

$$374 = F(F(3) \times 7) - F(4).$$

$$376 = -F(F(3)) + F(-7 + F(F(6))).$$

$$377 = F(3 \times 7 - 7).$$

$$378 = F(F(3)) + F(-7 + F(8)).$$

$$466 = F(F(4)) \times F(-F(6) + F(F(6))).$$

$$472 = (F(4) + F(F(7))) \times 2.$$

$$630 = F(F(6)) \times 30.$$

$$693 = F(F(6)) \times (F(9) - F(F(3))).$$

$$784 = (7 + F(8))^{F(F(4))}.$$

$$840 = F(8) \times 40.$$

$$882 = F(8) \times F(8) \times 2.$$

$$986 = F(9) \times (F(8) + F(6)).$$

$$1042 = F(10) + F(4^2).$$

$$1165 = F(F(1 \times 1 + 6)) \times 5.$$

$$1175 = (1 + 1 + F(F(7))) \times 5.$$

$$1178 = F(11) \times F(7) + F(8).$$

$$1292 = F(1 \times 2 \times 9)/2.$$

$$1293 = F(12) \times 9 - 3.$$

$$1294 = F(12) \times 9 - F(F(4)).$$

$$1364 = -F(13) + F(F(F(6))) - 4.$$

$$1365 = 13 \times F(F(6)) \times 5.$$

$$1368 = (1 - 3 + F(F(F(6))))/8.$$

$$1397 = -1 + (-3 + 9) \times F(F(7)).$$

$$1429 = 1 + 42 \times F(9).$$

$$1487 = -F(14) + 8 \times F(F(7)).$$

$$1525 = F(15)/2 \times 5.$$

$$1536 = (1 + 5) \times F(3)^{F(6)}.$$

$$1575 = F(F(1 + 5)) \times 75.$$

$$1576 = F(-1 + 5 + F(7)) - F(F(6)).$$

$$1589 = -F(1 + 5) + F(8 + 9).$$

$$1592 = -1 \times 5 + F(F(9)/2).$$

$$1593 = 1 - 5 + F(F(9)/F(3)).$$

$$1594 = F(F(1 + 5) + 9) - F(4).$$

$$1596 = -1^5 + F(9 + F(6)).$$

$$1597 = F(1^5 + 9 + 7).$$

$$1598 = 1^5 + F(9 + 8).$$

$$1617 = -1 + F(F(6)) + F(17).$$

$$1618 = F(16 + 1) + F(8).$$

$$1645 = F(16)/F(4) \times 5.$$

$$1680 = 1 \times F(F(6)) \times 80.$$

$$1684 = -1 + F(F(F(6))) - F(8)^{F(4)}.$$

$$1687 = (F(F(1 + 6)) + 8) \times 7.$$

$$1736 = (-1 + F(7))^3 + F(6).$$

$$1763 = -1 + (7 \times 6)^{F(3)}.$$

$$1764 = 1 \times (7 \times 6)^{F(F(4))}.$$

$$1778 = 1 \times 7 \times (F(F(7)) + F(8)).$$

$$1785 = F(1 + 7) \times 85.$$

$$1824 = (-1 + F(F(8))/2)/F(4).$$

$$1847 = -1 - 8 \times (F(F(4)) - F(F(7))).$$

$$1848 = (1 + F(8)) \times 4 \times F(8).$$

$$1856 = (-1 + F(8 + 5)) \times F(6).$$

$$1862 = F(F(-1 + 8)) \times F(6) - 2.$$

$$1863 = F(F(-1 + 8)) \times F(6) - F(F(3)).$$

$$1864 = F(F(-1 + 8)) \times (6 + F(F(4))).$$

$$1865 = 1 + 8 \times F(F(6) + 5).$$

$$1871 = -1 + 8 \times (F(F(7)) + 1).$$

$$1872 = F(-1 + 8) \times F(F(7) - F(2)).$$

$$1873 = 1 + 8 \times (F(F(7)) + F(F(3))).$$

$$1877 = 1 \times 8 \times F(F(7)) + F(7).$$

$$1885 = F(1 + F(8) - 8) \times 5.$$

$$1890 = 1 \times F(8) \times 90.$$

$$1897 = (-1 + 8 \times F(9)) \times 7.$$

$$1925 = (1 + F(9)) \times F(2 \times 5).$$

$$1972 = (-1 + F(9 + 7)) \times 2.$$

$$1973 = -1 + F(9 + 7) \times F(3).$$

$$1974 = F(1 \times 9 + 7) \times F(F(4)).$$

$$1976 = 19 \times F(7) \times F(6).$$

$$1995 = F(-1 + 9) \times 95.$$

$$2048 = 2^{F(04)+8}.$$

$$2079 = (-2 + F(F(07))) \times 9.$$

$$2097 = (2 \times 0 + 9) \times F(F(7)).$$

$$2185 = (F(21) - F(8))/5.$$

$$2529 = -F(2 \times 5) + F(2 \times 9).$$

$$2563 = F(F(2 + 5)) \times (F(6) + 3).$$

$$2576 = F(25 - 7) - F(6).$$

$$2577 = F(25 - 7) - 7.$$

$$2578 = 2 + F(5 + F(7)) - 8.$$

$$2582 = F(2 \times 5 + 8) - 2.$$

$$2583 = -F(2) + F(-5 + F(8) + F(3)).$$

$$2584 = F(2 \times (5 + 8 - 4)).$$

$$2585 = F(2) + F(5 + 8 + 5).$$

$$2586 = 2 + F((-5 + 8) \times 6).$$

$$2594 = 2 \times 5 + F(9 \times F(F(4))).$$

$$2597 = F(F(-2 + 5) \times 9) + F(7).$$

$$2618 = F(F(2) + F(6)) + F(18).$$

$$2639 = F(2 + F(6)) + F(F(3) \times 9).$$

$$2645 = (2 + F(F(6)))^{F(F(4))} \times 5.$$

$$2646 = 2 \times F(F(6)) \times F(4) \times F(F(6)).$$

$$2648 = 2^6 + F(-F(4) + F(8)).$$

$$2688 = 2 \times F(6) \times F(8) \times 8.$$

$$2736 = (2 \times 7)^3 - F(6).$$

$$2742 = (2 \times 7)^{F(4)} - 2.$$

$$2743 = (2 \times 7)^{F(4)} - F(F(3)).$$

$$2744 = (-2 + F(7) + F(4))^{F(4)}.$$

$$2746 = 2 + 7^{F(4)} \times F(6).$$

$$2754 = -2^{F(7)} + F(F(5 + F(4))).$$

$$2767 = -2^{F(7)} + F(F(F(6))) + F(7).$$

$$2784 = (-F(2) + F(F(7))) \times (8 + 4).$$

$$2794 = -2 + F(F(7)) \times (9 + F(4)).$$

$$2796 = F(2) \times F(F(7)) \times (-9 + F(F(6))).$$

$$2798 = 2 + F(F(7)) \times (-9 + F(8)).$$

$$2817 = F(2 \times (8 + 1)) + F(F(7)).$$

$$2937 = (-F(2) + F(9)) \times F(-F(3) + F(7)).$$

$$3178 = F(3) \times (F(17) - 8).$$

$$3192 = F(3) \times (-1 + F(F(9)/2)).$$

$$3194 = F(3) \times F(19 - F(F(4))).$$

$$3196 = F(3) \times (1 + F(9 + F(6))).$$

$$3364 = (3 + F(F(3) + F(6)))^{F(F(4))}.$$

$$3367 = (3 + F(3)^{F(6)}) \times F(7).$$

$$3373 = -F(3) + (F(3) + F(7))^3.$$

$$3374 = -F(F(3)) + (F(3) + F(7))^{F(4)}.$$

$$3382 = (-F(F(3)) + F(-F(F(3)) + F(8)))/2.$$

$$3383 = (F(F(3)) + F(-F(F(3)) + F(8)))/F(3).$$

$$3384 = (3 + F(-F(F(3)) + F(8)))/F(F(4)).$$

$$3495 = 3 \times F(4 + 9) \times 5.$$

$$3528 = F(3 + 5)^2 \times 8.$$

$$3569 = -F(F(3)) + 5 \times F(F(6)) \times F(9).$$

$$3575 = F(F(3) \times 5) \times F(7) \times 5.$$

$$3584 = (F(3) + 5) \times 8^{F(4)}.$$

$$3602 = F(3) + 60^2.$$

$$3603 = 3 + 60^{F(3)}.$$

$$3635 = (3^6 - F(3)) \times 5.$$

$$3639 = (-F(3) + F(F(F(6))))/3 - 9.$$

$$3644 = (-F(3) + F(F(F(6))))/F(4) - 4.$$

$$3645 = (3 + 6)^{F(4)} \times 5.$$

$$3648 = (-F(3) + F(F(F(6))))/F(-4 + 8).$$

$$3649 = (3 \times F(F(F(6))) + F(4))/9.$$

$$3666 = (F(F(3)) + F(-6 + F(F(6)))) \times 6.$$

$$3726 = -F(3) + F(F(7)) \times 2 \times F(6).$$

$$3728 = F(3) \times F(F(7)) \times F(2) \times 8.$$

$$3736 = (F(3) \times F(F(7)) + F(F(3))) \times F(6).$$

$$3738 = F(3) \times F(F(7) - F(3)) \times F(8).$$

$$3744 = F(3) \times F(7) \times F(F(4) \times 4).$$

$$3773 = (-F(3) + F(7)) \times 7^3.$$

$$3784 = 3^7 + F(F(8) - 4).$$

$$3786 = (F(F(3) + F(7)) + F(8)) \times 6.$$

$$3844 = (-F(3) + 8^{F(F(4))})^{F(F(4))}.$$

$$3948 = F(3) \times 94 \times F(8).$$

$$3966 = -3 + 9 \times F(F(6)) \times F(F(6)).$$

$$3968 = (-F(F(3)) + 9 \times F(F(6))) \times F(8).$$

$$3969 = F(F(-3 + 9)) \times F(F(6)) \times 9.$$

$$3979 = F(F(3)) + 9 \times F(7) \times F(9).$$

$$4176 = -4 - 1 + F(F(7) + 6).$$

$$4177 = -4 + F(-1 + 7 + F(7)).$$

$$4181 = F(-4 + 1 + F(8)) + 1.$$

$$4182 = F(F(4 - 1)) + F(F(8) - 2).$$

$$4183 = F(F(4)) + 1 \times F(F(8) - F(3)).$$

$$4184 = F(4) + F(1 + F(8) - F(4)).$$

$$4197 = F(4) + F(19) + F(7).$$

$$4198 = -4 + F(19) + F(8).$$

$$4277 = (F(F(F(4))) + F(2 + F(7))) \times 7.$$

$$4372 = F(F(4)) \times (3^7 - F(2)).$$

$$4373 = F(F(4)) \times 3^7 - F(F(3)).$$

$$4374 = (F(F(4)) + F(F(3)))^7 \times F(F(4)).$$

$$4386 = F(F(F(4))) - 3^8 + F(F(F(6))).$$

$$4388 = F(4) - 3^8 + F(F(8)).$$

$$4394 = F(F(4)) \times (F(-F(3) + 9))^{F(4)}.$$

$$4427 = (F(4) + 4^2) \times F(F(7)).$$

$$4455 = F(4)^4 \times 55.$$

$$4536 = (F(F(F(4))) + 5)^3 \times F(F(6)).$$

$$4576 = 4 \times (5 \times F(F(7)) - F(F(6))).$$

$$4578 = (-F(4) \times 5 + F(F(7))) \times F(8).$$

$$4624 = (4 + F(6)^2)^{F(F(4))}.$$

$$4632 = (F(4) + F(F(6))^3)/2.$$

$$4647 = F(-F(F(4)) + F(F(6))) + F(F(4)) \times F(F(7)).$$

$$4720 = (F(4) + F(F(7))) \times 20.$$

$$4746 = (-4 + F(F(7)) - F(4)) \times F(F(6)).$$

$$4765 = (4 \times F(F(7)) + F(F(6))) \times 5.$$

$$4766 = -F(F(F(4))) + (F(F(7)) - 6) \times F(F(6)).$$

$$4767 = F(4) \times (F(F(7)) - 6) \times 7.$$

$$4768 = F(F(F(4))) + (F(F(7)) - 6) \times F(8).$$

$$4776 = (F(F(F(4)) + F(7)) - F(7)) \times F(6).$$

$$4788 = (F(4) + F(F(7)) - 8) \times F(8).$$

$$4791 = F(4) \times F(7 + 9 + 1).$$

$$4794 = 47 \times F(9) \times F(4).$$

$$4847 = -4 - F(8) \times (F(F(4)) - F(F(7))).$$

$$4864 = F(F(4))^8 \times (F(F(6)) - F(F(4))).$$

$$4871 = -F(F(F(4))) + F(8) \times (F(F(7)) - 1).$$

$$4872 = F(F(F(4))) \times F(8) \times (F(F(7)) - F(2)).$$

$$4873 = F(F(F(4))) + F(8) \times (F(F(7)) - F(F(3))).$$

$$4874 = F(F(4)) + F(8) \times (F(F(7)) - F(F(F(4)))).$$

$$4876 = -4 + F(8 + 7) \times F(6).$$

$$4877 = -F(4) + F(8) \times F(F(7)) - F(7).$$

$$4878 = -F(F(4)) + 8 \times F(7 + 8).$$

$$4887 = F(F(4)) - 8 + F(8) \times F(F(7)).$$

$$4889 = -4 + F(8) \times F(-F(8) + F(9)).$$

$$4892 = -F(F(F(4))) + F(8) \times F(F(9 - 2)).$$

$$4893 = F(4 + 8) \times F(9) - 3.$$

$$4894 = F(4 + 8) \times F(9) - F(F(4)).$$

$$4896 = F(4) \times 8 \times F(9) \times 6.$$

$$4899 = F(4) + F(F(8) - 9) \times F(9).$$

$$4913 = (-4 + F(9 - 1))^3.$$

$$4935 = F(4 + 9 + 3) \times 5.$$

$$4998 = (-F(F(4)) + 9) \times F(9) \times F(8).$$

$$5184 = (51 + F(8))^{F(F(4))}.$$

$$5439 = F(F(5 + F(4)))/F(3) - F(9).$$

$$5463 = (-5 \times 4 + F(F(F(6))))/F(3).$$

$$5464 = (-5) - 4 + F(F(F(6)))/F(F(4)).$$

$$5468 = -5 + 4 \times F(F(F(6))) \times (1/8).$$

$$5473 = F(F(5 - 4 + 7))/F(3).$$

$$5482 = 5 + 4 + (1/2) \times F(F(8)).$$

$$5483 = (5 \times 4 + F(F(8)))/F(3).$$

$$5490 = F(5 \times F(4)) \times 9 + 0.$$

$$5491 = F(5 \times F(4)) \times 9 + 1.$$

$$5492 = F(5 \times F(4)) \times 9 + 2.$$

$$5493 = F(5 \times F(4)) \times 9 + 3.$$

$$5494 = F(5 \times F(4)) \times 9 + 4.$$

$$5495 = F(5 \times F(4)) \times 9 + 5.$$

$$5496 = F(5 \times F(4)) \times 9 + 6.$$

$$5497 = F(5 \times F(4)) \times 9 + 7.$$

$$5498 = F(5 \times F(4)) \times 9 + 8.$$

$$5499 = F(5 \times F(4)) \times 9 + 9.$$

$$5675 = -5 \times (5 \times (6 - F(F(7)))).$$

$$5785 = (5 \times F(F(7)) - 8) \times 5.$$

$$5825 = 25 \times F(5 + 8).$$

$$6300 = 300 \times F(F(6)).$$

$$6548 = -F(6) - 5 + F(4)^8.$$

$$6561 = (F(6) - 5)^{F(6)}.$$

$$6562 = (F(6) - 5)^{F(6)} + F(2).$$

$$6563 = (F(6) - 5)^{F(6)} + F(3).$$

$$6564 = (F(6) - 5)^{F(6)} + F(4).$$

$$\begin{aligned}
6615 &= 15 \times (F(F(6)) \times F(F(6))) \\
6676 &= -F(-6 + F(F(6))) \times 7 + F(F(F(6))). \\
6728 &= (F(F(F(6)))/F(7) - F(2)) \times 8 \\
6736 &= F(F(F(6)))/F(7) \times (F(3) + 6). \\
6744 &= -F(F(6)) + F(F(7) + F(4) + 4). \\
6746 &= -6 - F(7) + F(-F(F(F(4)))) + F(F(6)). \\
6757 &= (-6 + 7 \times 5) \times F(F(7)). \\
6762 &= -F(F(6))/7 + F(F(F(6)) - F(2)).
\end{aligned}$$

$$\begin{aligned}
6763 &= F(F(F(6))) - F(F(7) + 6) - F(3). \\
6764 &= F(F(F(6)) - 7 + 6) - F(F(F(4))). \\
6765 &= F(6 + F(7) + 6 - 5). \\
6771 &= 6 + F(F(7) + 7 \times 1). \\
6772 &= 6 + F(F(7) + 7) + F(2). \\
6773 &= 6 + F(F(7) + 7) + F(3). \\
6774 &= 6 + F(F(7) + 7) + F(4). \\
6778 &= -F(6) + F(F(7) + 7) + F(8).
\end{aligned}$$

$$\begin{aligned}
6784 &= (-F(F(6)) + F(F(7))) \times 8 \times 4. \\
6786 &= F(F(6)) + F(-7 + F(8) + 6). \\
6794 &= F(6 + 7) + 9^4. \\
6799 &= F(F(F(6)) - F(-7 + 9)) + F(9). \\
6845 &= F(F(F(6))) - 8^4 - 5. \\
6867 &= (-6 + F(8 + F(6))) \times 7. \\
6924 &= 6 \times (F(9)^2 - F(F(4))). \\
6928 &= 6 \times F(9)^2 - 8.
\end{aligned}$$

$$\begin{aligned}
6933 &= 6 \times F(9)^{F(3)} - 3. \\
6934 &= 6 \times F(9)^{F(3)} - F(F(4)). \\
6936 &= 6 \times F(9) \times F(3 + 6). \\
6942 &= 6 \times (F(9)^{F(F(4))} + F(2)). \\
6954 &= F(F(6)) \times 9 + F(5 \times 4). \\
6977 &= (F(F(6)) + 9) \times F(F(7)) - F(7). \\
6993 &= F(F(6)) \times 9 \times (F(9) + 3). \\
7163 &= F(F(7) + 1) \times (F(F(6)) - F(3)).
\end{aligned}$$

$$\begin{aligned}
7392 &= (F(F(7)) - F(3)) \times (F(9) - 2). \\
7448 &= (F(F(7)) \times 4 - F(F(F(4)))) \times 8. \\
7453 &= F(F(7)) \times F(F(4))^5 - 3. \\
7454 &= F(F(7)) \times F(F(4))^5 - F(F(4)). \\
7456 &= F(F(7)) \times (F(F(4)) + 5 \times 6). \\
7464 &= F(F(7)) \times F(4) + F(F(F(6)) - F(F(F(4)))). \\
7476 &= (7^{F(4)} + F(7)) \times F(F(6)). \\
7645 &= (F(F(7)) + 6^4) \times 5.
\end{aligned}$$

$$\begin{aligned}
7648 &= (F(F(7)) + 6) \times 4 \times 8. \\
7663 &= -F(F(7)) + F(6) \times F(F(6)) \times F(3). \\
7689 &= F(F(7)) \times (-F(6)/8 + F(9)). \\
7697 &= F(7) \times F(6 + 9) - F(F(7)). \\
7744 &= (F(7) \times 7 - F(4))^{F(F(4))}. \\
7759 &= 7 + (F(F(7)) - 5) \times F(9). \\
7776 &= (-7 + F(7))^{F(7)-F(6)}.
\end{aligned}$$

$$\begin{aligned}
7865 &= F(7) \times (F(F(8)) - 6) - 5). \\
7875 &= (F(F(7)) - 8) \times 7 \times 5. \\
7883 &= -F(7) + 8 \times F(8 \times F(3)). \\
7911 &= F(F(7)) \times F(9) - 11. \\
7916 &= F(F(7)) \times F(9) - 1 \times 6. \\
7917 &= (-F(7) + F(9)) \times F(1 + F(7)).
\end{aligned}$$

$$\begin{aligned}
7920 &= F(F(7)) \times F(9) - 2 + 0. \\
7921 &= F(F(7)) \times F(9) - 2 + 1. \\
7922 &= F(F(7)) \times F(9) - 2 + 2. \\
7923 &= F(F(7)) \times F(9) - 2 + 3. \\
7924 &= F(F(7)) \times F(9) - 2 + 4. \\
7925 &= F(F(7)) \times F(9) - 2 + 5. \\
7926 &= F(F(7)) \times F(9) - 2 + 6. \\
7927 &= F(F(7)) \times F(9) - 2 + 7. \\
7928 &= F(F(7)) \times F(9) - 2 + 8. \\
7929 &= F(F(7)) \times F(9) - 2 + 9.
\end{aligned}$$

$$\begin{aligned}
7934 &= F(F(7)) \times F(9) + 3 \times 4. \\
7935 &= F(F(7)) \times F(9) + F(F(3) + 5). \\
7937 &= F(F(7)) \times F(9) + F(3) + F(7). \\
7938 &= F(F(7)) \times F(9) + F(3) \times 8. \\
7943 &= F(F(7)) \times F(9) + F(4 \times F(3)). \\
7946 &= F(F(7)) \times F(9) + 4 \times 6. \\
7949 &= F(F(7)) \times F(9) + F(4) \times 9. \\
7957 &= F(F(7)) \times F(9) + 5 \times 7.
\end{aligned}$$

$$\begin{aligned}
7964 &= F(F(7)) \times F(9) + F(F(6)) \times F(F(4)). \\
7974 &= F(F(7)) \times F(9) + F(7) \times 4. \\
7978 &= F(F(7)) \times F(9) + 7 \times 8. \\
7985 &= F(-F(7) + 9 + F(8)) \times 5. \\
7986 &= F(F(7)) \times F(9) + 8 \times F(6). \\
8213 &= F(8) + 2^{13}. \\
8247 &= F(8 + 2) + F(F(4))^{F(7)}. \\
8294 &= (F(F(8)) - 2) - F(9) \times F(F(4)).
\end{aligned}$$

$$\begin{aligned}
8352 &= (F(F(8) - F(3)) - 5) \times 2. \\
8361 &= F(F(8)) - F(3 \times 6) - 1. \\
8362 &= F(F(8)) - F((3 + 6) \times 2). \\
8363 &= F(F(8)) + F(F(3)) - F(6 \times 3). \\
8364 &= F(F(8)) + F(3) - F(6 \times F(4)). \\
8367 &= -F(8) + 36 \times F(F(7)). \\
8368 &= -F(F(8) - 3) + 6 + F(F(8)). \\
8383 &= F(8) + F(3) \times F(F(8) - F(3)). \\
8396 &= -F(F(8) - 3) + F(9) + F(F(F(6))). \\
8400 &= 400 \times F(8). \\
8464 &= (84 + F(6))^{F(F(4))}. \\
8820 &= 20 \times (F(8) \times F(8)). \\
8849 &= F(F(8)) - F(F(F(8)/F(4))) \times 9. \\
8883 &= F(8 + 8) \times (8 + F(F(3))). \\
8972 &= F(F(8)) - F(9 + 7) \times 2. \\
9248 &= F(9)^{-2+4} \times 8. \\
9346 &= -F(F(9)/F(3)) - F(4) + F(F(F(6))). \\
9348 &= -F(F(9)/F(3)) - F(F(F(4))) + F(F(8)). \\
9349 &= -F(F(9)/F(3)) + F(F(F(-F(4) + 9))). \\
9363 &= F(9) \times 3 + F(F(6))^3. \\
9474 &= 9^{F(4)} \times F(7) - F(4). \\
9477 &= 9^{-4+7} \times F(7). \\
9586 &= -F(9) \times 5 \times 8 + F(F(F(6))). \\
9756 &= -F(9) \times 7 \times 5 + F(F(F(6))). \\
9792 &= F(9) \times (F(F(7)) + F(9 + F(2))). \\
9837 &= 98^{F(3)} + F(F(7)).
\end{aligned}$$

2.3 Selfie Numbers in Reverse Order of Digits

$$\begin{aligned}
34 &= F(F(4))^{F(3)}. \\
36 &= 6^{F(3)}. \\
63 &= 3 \times F(F(6)). \\
64 &= F(F(4))^6. \\
84 &= 4 \times F(8). \\
143 &= F(3 \times 4) - 1. \\
144 &= F(4 \times (4 - 1)). \\
168 &= F(8) \times F(6) \times 1. \\
189 &= 9 \times F(8) \times 1. \\
231 &= F(13) - 2. \\
233 &= F(F(3 \times 3 - 2)). \\
234 &= F(F(4 + 3)) + F(2). \\
235 &= F(F(5 + F(3))) + 2. \\
237 &= F(F(7)) + F(3) + 2. \\
243 &= 3^{F(4)+2}. \\
256 &= (F(F(6)) - 5)^2. \\
267 &= F(F(7)) + F(F(6) + F(2)). \\
374 &= -F(4) + F(7 \times F(3)). \\
376 &= F(F(F(6)) - 7) - F(F(3)). \\
377 &= F(-7 + 7 \times 3). \\
378 &= F(F(8) - 7) + F(F(3)). \\
438 &= F(8)^{F(3)} - F(4). \\
466 &= F(-F(6) + F(F(6))) \times F(F(4)). \\
472 &= 2 \times (F(F(7)) + F(4)). \\
693 &= -(((F(F(3)) - F(9)) \times F(F(6)))). \\
882 &= 2 \times F(8) \times F(8). \\
986 &= (F(6) + F(8)) \times F(9). \\
1165 &= 5 \times F(F(6 \times 1 + 1)). \\
1175 &= 5 \times (F(F(7)) + 1 + 1). \\
1178 &= F(8) + F(7) \times F(11). \\
1292 &= F(2 \times 9)/2 \times 1. \\
1293 &= F(F(3) \times 9)/2 + 1. \\
1367 &= F(F(7)) \times 6 - 31. \\
1397 &= F(F(7)) \times (9 - 3) - 1. \\
1536 &= F(6)^3 \times F(5 - 1). \\
1546 &= F(F(F(6)) - 4) - 51. \\
1576 &= F(F(6)) \times 75 + 1. \\
1589 &= F(9 + 8) - F(5 + 1). \\
1594 &= -F(4) + F(9 + F(5 + 1)). \\
1596 &= F(F(6) + 9) - F(F(F(5 - 1))). \\
1597 &= F(F(7) + 9 - 5 \times 1). \\
1598 &= F(F(8) - 9 + 5) + 1. \\
1618 &= F(8) + F(16 + 1). \\
1631 &= F(13) \times (6 + 1). \\
1684 &= F(F(4)) \times F(F(8))/F(6 + 1). \\
1687 &= (F(F(7)) + 8) \times (6 + 1). \\
1764 &= 4 \times F(F(6)) \times F(7 + 1). \\
1778 &= (F(8) + F(F(7))) \times 7 \times 1. \\
1847 &= (F(F(7)) - F(F(4))) \times 8 - 1. \\
1848 &= 84 \times (F(8) + 1). \\
1856 &= F(6) \times (F(5 + 8) - 1).
\end{aligned}$$

$$1862 = -2 + F(6) \times F(F(8 - 1)).$$

$$1863 = (F(3) + F(F(6))) \times 81.$$

$$1864 = (F(F(4)) + 6) \times F(F(8 - 1)).$$

$$1865 = F(5 + F(6)) \times 8 + 1.$$

$$1871 = (1 + F(F(7))) \times 8 - 1.$$

$$1872 = (F(2) + F(F(7))) \times 8 \times 1.$$

$$1873 = (F(F(3)) + F(F(7))) \times 8 + 1.$$

$$1877 = F(7) + F(F(7)) \times 8 \times 1.$$

$$1885 = 5 \times F(F(8) - 8 + 1).$$

$$1897 = 7 \times (F(9) \times 8 - 1).$$

$$1925 = F(5 \times 2) \times (F(9) + 1).$$

$$1972 = 2 \times (F(7 + 9) - 1).$$

$$1973 = F(3) \times F(7 + 9) - 1.$$

$$1974 = F(F(4)) \times F(7 + 9 \times 1).$$

$$2079 = 9 \times (F(F(7)) - 02).$$

$$2097 = F(F(7)) \times (9 + 0 \times 2).$$

$$2176 = -F(F(6)) + F(7)^{1+2}.$$

$$2197 = F(7)^{9/(1+2)}.$$

$$2296 = (-F(6) + F(9)^2) \times 2.$$

$$2478 = F(8) \times (F(F(7)) + F(4))/2.$$

$$2529 = F(9 \times 2) - F(5 \times 2).$$

$$2563 = (3 + F(6)) \times F(F(5 + 2)).$$

$$2576 = -F(6) + F(-7 + 5^2).$$

$$2577 = -7 + F(-7 + 5^2).$$

$$2578 = -8 + F(F(7) + 5) + 2.$$

$$2581 = (F(18) - 5 + 2).$$

$$2582 = -2 + F(8 + 5 \times 2).$$

$$2583 = F(-3 + F(8)) - F(F(5 - 2)).$$

$$2584 = F((-4 + 8) \times 5 - 2).$$

$$2585 = F(5 + 8 + 5) + F(2).$$

$$2586 = F(6 \times (8 - 5)) + 2.$$

$$2592 = F(2 \times 9) + F(5 + F(2)).$$

$$2594 = F(F(F(4)) \times 9) + 5 \times 2.$$

$$2597 = F(7) + F(9 \times F(5 - 2)).$$

$$2639 = F(9 \times F(3)) + F(F(6) + 2).$$

$$2645 = 5 \times (F(F(4)) + F(F(6)))^2.$$

$$2646 = F(6 \times F(4)) + 62.$$

$$2648 = F(F(8) - F(4)) + F(6)^2.$$

$$2667 = (F(F(7)) + F(F(6))) \times F(F(6))/2.$$

$$2688 = 8 \times F(8) \times F(6) \times 2.$$

$$2704 = (4 \times F(07))^2.$$

$$2736 = (F(F(6)) - F(3)) \times F(F(7) - F(2)).$$

$$2784 = (4 + 8) \times (F(F(7)) - F(2)).$$

$$2794 = (F(4) + 9) \times F(F(7)) - 2.$$

$$2796 = (F(F(6)) - 9) \times F(F(7) \times F(2)).$$

$$2798 = (F(8) - 9) \times F(F(7)) + 2.$$

$$2817 = F(F(7)) + F((1 + 8) \times 2).$$

$$2937 = (F(F(7) - F(3))) \times (F(9) - F(2)).$$

$$3025 = F(5 \times 2)^{F(03)}.$$

$$3087 = 7 \times F(8)^{F(03)}.$$

$$3136 = (F(F(6) + F(3)) + 1)^{F(3)}.$$

$$3249 = (F(9 + F(F(F(4)))) + 2)^{F(3)}.$$

$$3364 = (F(4 + 6) + 3)^{F(3)}.$$

$$3372 = (2 + F(7))^3 - 3.$$

$$3373 = (F(3) + F(7))^3 - F(3).$$

$$3372 = (2 + F(7))^3 - 3.$$

$$3373 = (F(3) + F(7))^3 - F(3).$$

$$3374 = (F(F(4)) + F(7))^3 - F(F(3)).$$

$$3376 = (F(6) + 7)^3 + F(F(3)).$$

$$3381 = (F(-1 + F(8)) - 3)/F(3).$$

$$3382 = (-F(2) + F(F(8) - F(F(3))))/F(3).$$

$$3383 = (F(F(3)) + F(F(8) - F(F(3))))/F(3).$$

$$3384 = (F(4) + F(F(8) - F(F(3))))/F(3).$$

$$3385 = (5 + F(F(8) - F(F(3))))/F(3).$$

$$3495 = 5 \times F(9 + 4) \times 3.$$

$$3528 = F(8)^2 \times (5 + 3).$$

$$3569 = F(9) \times F(F(6)) \times 5 - F(F(3)).$$

$$3575 = 5 \times F(7) \times F(5 \times F(3)).$$

$$3628 = -F(8) + (F(2) + F(F(F(6))))/3.$$

$$3635 = 5 \times (3^6 - F(3)).$$

$$3639 = -9 + (-F(3) + F(F(F(6))))/3.$$

$$3644 = -4 + (-F(F(4)) + F(F(F(6))))/3.$$

$$3645 = 5 \times (F(4) + 6)^3.$$

$$3646 = (F(F(F(6))) - F(F(4)) - 6)/3.$$

$$3647 = (-7 + F(F(4)) + F(F(F(6))))/3.$$

$$3648 = (F(F(8)) - F(F(4)))/(6 - 3).$$

$$3649 = (F(F(9/F(4))) + F(F(F(6))))/3.$$

$$3652 = (2 \times 5 + F(F(F(6))))/3.$$

$$3653 = (F(F(3) + 5) + F(F(F(6))))/3.$$

$$\begin{aligned}
3664 &= (46 + F(F(F(6))))/3. \\
3666 &= 6 \times (F(-6 + F(F(6))) + F(F(3))). \\
3694 &= (4 \times F(9) + F(F(F(6))))/3. \\
3718 &= (F(8) + 1) \times F(7)^{F(3)}. \\
3726 &= F(6) \times 2 \times F(F(7)) - F(3). \\
3728 &= 8 \times F(F(2) \times F(7)) \times F(3). \\
3736 &= F(6) \times (F(3) \times F(F(7)) + F(F(3))). \\
3738 &= F(8) \times F(3) \times F(F(7) - F(3)).
\end{aligned}$$

$$\begin{aligned}
3744 &= F(F(4) \times 4) \times F(7) \times F(3). \\
3786 &= 6 \times (F(8) + F(F(7) + F(3))). \\
3789 &= 9 \times F(F(8))/(F(7) \times F(3)). \\
3796 &= (F(F(F(6))) + F(9) \times F(7))/3. \\
3844 &= (-F(F(F(4))) + F(4) \times F(8))^{F(3)}. \\
3864 &= -4 \times (F(F(6)) - F(8 \times F(3))). \\
3927 &= (F(F(7)) - 2) \times F(9)/F(3).
\end{aligned}$$

$$\begin{aligned}
3948 &= F(F(8) - F(F(4))) - F(F(9 - F(3))). \\
3961 &= F(F(1 + 6)) \times F(9)/F(3). \\
3966 &= F(F(6)) \times F(F(6)) \times 9 - 3. \\
3968 &= F(8) \times F(F(6)) \times 9 - F(F(3)). \\
3969 &= (9 \times 6 + 9)^{F(3)}. \\
3979 &= F(9) \times F(7) \times 9 + F(F(3)). \\
3999 &= (9 + F(9)) \times 93. \\
4096 &= F(6)^{9 \times 04}.
\end{aligned}$$

$$\begin{aligned}
4147 &= (7 + 4) \times F(14). \\
4167 &= F(F(7) + 6) - 14. \\
4176 &= F(6 + F(7)) - 1 - 4. \\
4177 &= F(F(7) + 7 - 1) - 4. \\
4181 &= F(18 + 1^4). \\
4182 &= F(2) + F(F(8) + 1 - F(4)). \\
4183 &= F(3) + F(F(8) + 1 - F(4)). \\
4184 &= F(4) + F(F(8) + 1 - F(4)).
\end{aligned}$$

$$\begin{aligned}
4277 &= 7 \times (F(F(7) + 2) + F(F(F(4)))). \\
4356 &= (65 + F(F(3)))^{F(F(4))}. \\
4373 &= 3^7 \times F(3) - F(F(F(4))). \\
4374 &= F(4)^7 \times (-F(3) + 4). \\
4378 &= (-8 + F(7)^3) \times F(F(4)). \\
4394 &= (4 + 9)^3 \times F(F(4)). \\
4427 &= F(F(7)) \times (-2 + F(4 + 4)). \\
4428 &= (F(F(8) + F(2)) + F(F(F(4))))/4.
\end{aligned}$$

$$\begin{aligned}
4455 &= 55 \times F(4)^4. \\
4536 &= 6^3 \times F(5 + F(4)). \\
4576 &= (-F(F(6)) + F(F(7)) \times 5) \times 4. \\
4578 &= F(8) \times (F(F(7)) - 5 \times F(4)). \\
4624 &= (4 + 2^6)^{F(F(4))}. \\
4647 &= F(F(7)) \times F(F(4)) + F(F(F(6)) - F(F(4))). \\
4693 &= F(3)^9 + F(F(F(6)) - F(F(4))). \\
4736 &= F(6)^{F(3)} \times 74.
\end{aligned}$$

$$\begin{aligned}
4746 &= F(F(6)) \times (-F(4) + F(F(7)) - 4). \\
4765 &= 5 \times (F(F(6)) + F(F(7)) \times 4). \\
4766 &= F(F(6)) \times (-6 + F(F(7)) - F(F(F(4)))). \\
4767 &= (F(F(7)) - 6) \times 7 \times F(4). \\
4768 &= F(8) \times (-6 + F(F(7))) + F(F(F(4))). \\
4776 &= F(6) \times (-F(7) + F(F(7) + F(F(4)))). \\
4781 &= F(18) + F(7)^{F(4)}. \\
4788 &= F(8) \times (-8 + F(F(7)) + F(4)).
\end{aligned}$$

$$\begin{aligned}
4791 &= F(1 + 9 + 7) \times F(4). \\
4847 &= (F(F(7)) - F(F(4))) \times F(8) - 4. \\
4864 &= F(F(4))^{F(6)} \times (F(8) - F(F(4))). \\
4871 &= (-1 + F(F(7))) \times F(8) - F(F(F(4))). \\
4872 &= (-F(2) + F(F(7))) \times F(8) \times F(F(F(4))). \\
4873 &= (-F(F(3)) + F(F(7))) \times F(8) + F(F(F(4))). \\
4874 &= (-F(F(F(4))) + F(F(7))) \times F(8) + F(F(4)). \\
4876 &= F(6) \times F(7 + 8) - 4.
\end{aligned}$$

$$\begin{aligned}
4877 &= -F(7) + F(F(7)) \times F(8) - F(4). \\
4878 &= 8 \times F(7 + 8) - F(F(4)). \\
4887 &= F(F(7)) \times F(8) - 8 + F(F(4)). \\
4889 &= F(F(9) - F(8)) \times F(8) - 4. \\
4892 &= F(F(-2 + 9)) \times F(8) - F(F(F(4))). \\
4893 &= -3 + F(9) \times F(8 + 4). \\
4894 &= -F(F(4)) + F(9) \times F(8 + 4). \\
4896 &= 6 \times F(9) \times 8 \times F(4).
\end{aligned}$$

$$\begin{aligned}
4899 &= F(9) \times F(-9 + F(8)) + F(4). \\
4913 &= (-F(3) + 19)^{F(4)}. \\
4935 &= 5 \times F(3 + 9 + 4). \\
4956 &= F(F(6)) \times 59 \times 4. \\
4964 &= F(4)^{F(6)} - F(F(9)/F(F(4))). \\
4987 &= F(F(7)) \times F(8) + 94. \\
4998 &= F(8) \times F(9) \times (9 - F(F(4))). \\
5346 &= (F(F(6)) + F(F(F(4)))) \times 3^5.
\end{aligned}$$

$$5376 = F(F(6)) \times (F(7) + 3^5).$$

$$5428 = F(F(8))/2 - 45.$$

$$5464 = -4 + F(F(F(6)))/F(F(4)) - 5.$$

$$5468 = F(F(8))/(6 - 4) - 5.$$

$$5469 = -9 + F(F(F(6)))/F(F(4)) + 5.$$

$$5473 = F(3 \times 7)/(-F(4) + 5).$$

$$5478 = F(F(8))/F(7 - 4) + 5.$$

$$5486 = F(6) + F(F(8))/F(F(4)) + 5.$$

$$5491 = 1 + 9 \times F(F(4) \times 5).$$

$$5492 = 2 + 9 \times F(F(4) \times 5).$$

$$5493 = 3 + 9 \times F(F(4) \times 5).$$

$$5494 = 4 + 9 \times F(F(4) \times 5).$$

$$5495 = 5 + 9 \times F(F(4) \times 5).$$

$$5496 = 6 + 9 \times F(F(4) \times 5).$$

$$5497 = 7 + 9 \times F(F(4) \times 5).$$

$$5498 = 8 + 9 \times F(F(4) \times 5).$$

$$5499 = 9 + 9 \times F(F(4) \times 5).$$

$$5528 = F(F(8))/2 + 55.$$

$$5675 = 5 \times (F(F(7)) - 6) \times 5.$$

$$5679 = -9 \times F(F(7)) + 6^5.$$

$$5728 = F(8)^2 \times F(7) - 5.$$

$$5738 = F(8)^{F(3)} \times F(7) + 5.$$

$$5785 = 5 \times (-8 + F(F(7))) \times 5.$$

$$5825 = 5^2 \times F(8 + 5).$$

$$6327 = -F(F(7)) - F(2) + 3^{F(6)}.$$

$$6328 = -F(F(8 - F(2))) + 3^{F(6)}.$$

$$6394 = 4 \times F(F(9))/F(3) + 6.$$

$$6408 = 80^{F(F(4))} + F(6).$$

$$6417 = -F(F(7) - 1) + F(4)^{F(6)}.$$

$$6456 = -F(F(6)) \times 5 + F(4)^{F(6)}.$$

$$6472 = -F(-2 + F(7)) + F(4)^{F(6)}.$$

$$6489 = -9 \times 8 + F(4)^{F(6)}.$$

$$6493 = -F(3) \times F(9) + F(4)^{F(6)}.$$

$$6561 = (F(1 \times 6) - 5)^{F(6)}.$$

$$6562 = F(2) + (F(6) - 5)^{F(6)}.$$

$$6563 = F(3) + (F(6) - 5)^{F(6)}.$$

$$6564 = F(4) + (F(6) - 5)^{F(6)}.$$

$$6676 = F(F(F(6))) - 7 \times F(-6 + F(F(6))).$$

$$6736 = F(F(F(6)))/(F(F(3)) \times F(7)) \times F(6).$$

$$6744 = F(F(4)^{F(4)} - 7) - F(F(6)).$$

$$6757 = F(F(7)) \times (5 \times 7 - 6).$$

$$6763 = -F(3) + F(F(F(6))) - 7 + 6.$$

$$6764 = (F(F(4) + F(6))) \times 76.$$

$$6765 = F(-56 + 76).$$

$$6771 = F(1 \times 7 + F(7)) + 6.$$

$$6772 = -F(2) + F(F(7) + 7) + F(6).$$

$$6773 = F(F(3)) \times F(F(7) + 7) + F(6).$$

$$6774 = F(4) + F(F(7) + 7) + 6.$$

$$6778 = F(F(8)) + F(7) - F(F(7) + 6).$$

$$6784 = 4 \times (-F(8) + F(F(7))) \times F(6).$$

$$6786 = F(F(6)) + F(F(8) - 7 + 6).$$

$$6799 = F(9) + F(F(9) + 7 - F(F(6))).$$

$$6867 = 7 \times (-6 + F(8 + F(6))).$$

$$6936 = F(6 + 3) \times F(9) \times 6.$$

$$6954 = F(4 \times 5) + 9 \times F(F(6)).$$

$$6977 = -F(7) + F(F(7)) \times (9 + F(F(6))).$$

$$6993 = (3 + F(9)) \times 9 \times F(F(6)).$$

$$7163 = (-F(3) + F(F(6))) \times F(1 + F(7)).$$

$$7223 = (32 - F(2)) \times F(F(7)).$$

$$7392 = (-2 + F(9)) \times (-F(3) + F(F(7))).$$

$$7448 = 8 \times (-F(F(F(4))) + 4 \times F(F(7))).$$

$$7456 = (F(F(6)) - 5) \times F(F(4)) \times F(F(7)).$$

$$7458 = 85^{F(F(4))} + F(F(7)).$$

$$7463 = -3^6 + F(F(4))^{F(7)}.$$

$$7464 = F(-F(F(F(4)))) + F(F(6))) + F(4) \times F(F(7)).$$

$$7476 = F(F(6)) \times (7^{F(4)} + F(7)).$$

$$7543 = (F(3) + 4)^5 - F(F(7)).$$

$$7648 = 8 \times 4 \times (6 + F(F(7))).$$

$$7663 = F(F(3) \times F(6)) \times F(6) - F(F(7)).$$

$$7689 = (F(9) - F(8 - 6)) \times F(F(7)).$$

$$7697 = F(7) \times F(9 + 6) - F(F(7)).$$

$$7756 = 6^5 - F(7) - 7.$$

$$7759 = F(9) \times (-5 + F(F(7))) + 7.$$

$$7776 = 6^{F(7) - F(-7 + F(7))}.$$

$$7865 = (-5 + F(-6 + F(8))) \times F(7).$$

$$7875 = 5 \times (F(F(7)) - 8) \times 7.$$

$$7883 = F(F(3) \times 8) \times 8 - F(7).$$

$$7896 = F(6) \times 987.$$

$$7902 = -20 + F(9) \times F(F(7)).$$

$$7911 = -11 + F(9) \times F(F(7)).$$

$$7916 = -6 + 1 \times F(9) \times F(F(7)).$$

$$7917 = F(F(7) + 1) \times (F(9) - F(7)).$$

$$7921 = -1 + F(2) \times F(9) \times F(F(7)).$$

$$7922 = F(2 - 2 + 9) \times F(F(7)).$$

$$7923 = F(F(3)) + F(2) \times F(9) \times F(F(7)).$$

$$7924 = F(F(4)) + F(2) \times F(9) \times F(F(7)).$$

$$7925 = 5 - 2 + F(9) \times F(F(7)).$$

$$7926 = 6 - 2 + F(9) \times F(F(7)).$$

$$7927 = 7 - 2 + F(9) \times F(F(7)).$$

$$7928 = 8 - 2 + F(9) \times F(F(7)).$$

$$7929 = 9 - 2 + F(9) \times F(F(7)).$$

$$7934 = 4 \times 3 + F(9) \times F(F(7)).$$

$$7935 = F(5 + F(3)) + F(9) \times F(F(7)).$$

$$7937 = F(7) + F(3) + F(9) \times F(F(7)).$$

$$7938 = 8 \times F(3) + F(9) \times F(F(7)).$$

$$7939 = F(9)/F(3) + F(9) \times F(F(7)).$$

$$7943 = F(F(3)^{F(4)}) + F(9) \times F(F(7)).$$

$$7946 = 6 \times 4 + F(9) \times F(F(7)).$$

$$7949 = 9 \times F(4) + F(9) \times F(F(7)).$$

$$7954 = F(F(4))^5 + F(9) \times F(F(7)).$$

$$7957 = 7 \times 5 + F(9) \times F(F(7)).$$

$$7964 = F(F(4)) \times F(F(6)) + F(9) \times F(F(7)).$$

$$7974 = 4 \times F(7) + F(9) \times F(F(7)).$$

$$7978 = 8 \times 7 + F(9) \times F(F(7)).$$

$$7985 = 5 \times F(F(8)) + 9 - F(7).$$

$$7986 = F(6) \times 8 + F(9) \times F(F(7)).$$

$$8172 = 2^{F(7)} + 1 - F(8).$$

$$8174 = F(F(4))^{F(7)} - 18.$$

$$8184 = F(F(4))^{F(8-1)} - 8.$$

$$8294 = F(F(4)) \times (-F(9) + F(-2 + F(8))).$$

$$8352 = 2 \times (-5 + F(-F(3) + F(8))).$$

$$8361 = -1 - F(6 \times 3) + F(F(8)).$$

$$8362 = 2 \times F(F(6) + 3 + 8).$$

$$8363 = F(F(3)) - F(6 \times 3) + F(F(8)).$$

$$8364 = F(F(4)) - F(6 \times 3) + F(F(8)).$$

$$8367 = F(F(7)) \times 6^{F(3)} - F(8).$$

$$8368 = F(F(8)) + 6 - F(-3 + F(8)).$$

$$8383 = F(3) \times F(F(8) - F(3)) + F(8).$$

$$8396 = F(F(F(6))) + F(9) - F(-3 + F(8)).$$

$$8738 = F(F(8)) - 3^7 - F(8).$$

$$8759 = -F(9 - 5)^7 + F(F(8)).$$

$$8849 = -9 \times F(F(F(F(4))) - 8) + F(F(8)).$$

$$8883 = (F(F(3)) + 8) \times F(8 + 8).$$

$$8906 = -60 \times F(9) + F(F(8)).$$

$$8972 = -2 \times F(7 + 9) + F(F(8)).$$

$$9248 = F(8)^{F(4)} - F(-2 + 9).$$

$$9349 = -F(F(9)/F(F(4))) + F(F(F(-3 + 9))).$$

$$9586 = F(F(F(6))) - 8 \times 5 \times F(9).$$

$$9756 = F(F(F(6))) - 5 \times 7 \times F(9).$$

$$9792 = (F(F(2) + 9) + F(F(7))) \times F(9).$$

3 Symmetric Representations

In this section, we shall give *selfie numbers* in terms of Fibonacci sequence values along with basic operations. These representations are in symmetric way, i.e., all is same except the digits 0 to 9. This happens in both ways, i.e., in digit's order and in reverse order of digits. In some cases, the numbers can be written in both the ways. The following subsections give the symmetric numbers three situations. In this section, we have worked up to width 5, i.e., numbers having maximum 5 digits.

3.1 Symmetric Representations in Both Ways

Below are examples of numbers written in digit's order and its reverse:

$$\begin{aligned}
 5490 &= F(5 \times F(4)) \times 9 + 0 = 0 + 9 \times F(F(4) \times 5) \\
 5491 &= F(5 \times F(4)) \times 9 + 1 = 1 + 9 \times F(F(4) \times 5) \\
 5492 &= F(5 \times F(4)) \times 9 + 2 = 2 + 9 \times F(F(4) \times 5) \\
 5493 &= F(5 \times F(4)) \times 9 + 3 = 3 + 9 \times F(F(4) \times 5) \\
 5494 &= F(5 \times F(4)) \times 9 + 4 = 4 + 9 \times F(F(4) \times 5) \\
 5495 &= F(5 \times F(4)) \times 9 + 5 = 5 + 9 \times F(F(4) \times 5) \\
 5496 &= F(5 \times F(4)) \times 9 + 6 = 6 + 9 \times F(F(4) \times 5) \\
 5497 &= F(5 \times F(4)) \times 9 + 7 = 7 + 9 \times F(F(4) \times 5) \\
 5498 &= F(5 \times F(4)) \times 9 + 8 = 8 + 9 \times F(F(4) \times 5) \\
 5499 &= F(5 \times F(4)) \times 9 + 9 = 9 + 9 \times F(F(4) \times 5).
 \end{aligned}$$

$$\begin{aligned}
 10980 &= 1 \times F(09) + F(F(8)) + 0 = 0 + F(F(8)) + F(9 \times 01) \\
 10981 &= 1 \times F(09) + F(F(8)) + 1 = 1 + F(F(8)) + F(9 \times 01) \\
 10982 &= 1 \times F(09) + F(F(8)) + 2 = 2 + F(F(8)) + F(9 \times 01) \\
 10983 &= 1 \times F(09) + F(F(8)) + 3 = 3 + F(F(8)) + F(9 \times 01) \\
 10984 &= 1 \times F(09) + F(F(8)) + 4 = 4 + F(F(8)) + F(9 \times 01) \\
 10985 &= 1 \times F(09) + F(F(8)) + 5 = 5 + F(F(8)) + F(9 \times 01) \\
 10986 &= 1 \times F(09) + F(F(8)) + 6 = 6 + F(F(8)) + F(9 \times 01) \\
 10987 &= 1 \times F(09) + F(F(8)) + 7 = 7 + F(F(8)) + F(9 \times 01) \\
 10988 &= 1 \times F(09) + F(F(8)) + 8 = 8 + F(F(8)) + F(9 \times 01) \\
 10989 &= 1 \times F(09) + F(F(8)) + 9 = 9 + F(F(8)) + F(9 \times 01).
 \end{aligned}$$

$$\begin{aligned}
 21960 &= 2 \times 1 \times (F(9) + F(F(F(6)))) + 0 = 0 + (F(F(F(6))) + F(9)) \times 1 \times 2 \\
 21961 &= 2 \times 1 \times (F(9) + F(F(F(6)))) + 1 = 1 + (F(F(F(6))) + F(9)) \times 1 \times 2 \\
 21962 &= 2 \times 1 \times (F(9) + F(F(F(6)))) + 2 = 2 + (F(F(F(6))) + F(9)) \times 1 \times 2 \\
 21963 &= 2 \times 1 \times (F(9) + F(F(F(6)))) + 3 = 3 + (F(F(F(6))) + F(9)) \times 1 \times 2 \\
 21964 &= 2 \times 1 \times (F(9) + F(F(F(6)))) + 4 = 4 + (F(F(F(6))) + F(9)) \times 1 \times 2 \\
 21965 &= 2 \times 1 \times (F(9) + F(F(F(6)))) + 5 = 5 + (F(F(F(6))) + F(9)) \times 1 \times 2 \\
 21966 &= 2 \times 1 \times (F(9) + F(F(F(6)))) + 6 = 6 + (F(F(F(6))) + F(9)) \times 1 \times 2 \\
 21967 &= 2 \times 1 \times (F(9) + F(F(F(6)))) + 7 = 7 + (F(F(F(6))) + F(9)) \times 1 \times 2 \\
 21968 &= 2 \times 1 \times (F(9) + F(F(F(6)))) + 8 = 8 + (F(F(F(6))) + F(9)) \times 1 \times 2 \\
 21969 &= 2 \times 1 \times (F(9) + F(F(F(6)))) + 9 = 9 + (F(F(F(6))) + F(9)) \times 1 \times 2.
 \end{aligned}$$

$$\begin{aligned}
 25840 &= 2 \times 5 \times F(F(8) - F(4)) + 0 = 0 + F(-F(4) + F(8)) \times 5 \times 2 \\
 25841 &= 2 \times 5 \times F(F(8) - F(4)) + 1 = 1 + F(-F(4) + F(8)) \times 5 \times 2 \\
 25842 &= 2 \times 5 \times F(F(8) - F(4)) + 2 = 2 + F(-F(4) + F(8)) \times 5 \times 2 \\
 25843 &= 2 \times 5 \times F(F(8) - F(4)) + 3 = 3 + F(-F(4) + F(8)) \times 5 \times 2 \\
 25844 &= 2 \times 5 \times F(F(8) - F(4)) + 4 = 4 + F(-F(4) + F(8)) \times 5 \times 2 \\
 25845 &= 2 \times 5 \times F(F(8) - F(4)) + 5 = 5 + F(-F(4) + F(8)) \times 5 \times 2 \\
 25846 &= 2 \times 5 \times F(F(8) - F(4)) + 6 = 6 + F(-F(4) + F(8)) \times 5 \times 2 \\
 25847 &= 2 \times 5 \times F(F(8) - F(4)) + 7 = 7 + F(-F(4) + F(8)) \times 5 \times 2 \\
 25848 &= 2 \times 5 \times F(F(8) - F(4)) + 8 = 8 + F(-F(4) + F(8)) \times 5 \times 2 \\
 25849 &= 2 \times 5 \times F(F(8) - F(4)) + 9 = 9 + F(-F(4) + F(8)) \times 5 \times 2.
 \end{aligned}$$

$$\begin{aligned}
28670 &= F(2 + F(8)) + 6 + 7 + 0 = 0 + 7 + 6 + F(F(8) + 2) \\
28671 &= F(2 + F(8)) + 6 + 7 + 1 = 1 + 7 + 6 + F(F(8) + 2) \\
28672 &= F(2 + F(8)) + 6 + 7 + 2 = 2 + 7 + 6 + F(F(8) + 2) \\
28673 &= F(2 + F(8)) + 6 + 7 + 3 = 3 + 7 + 6 + F(F(8) + 2) \\
28674 &= F(2 + F(8)) + 6 + 7 + 4 = 4 + 7 + 6 + F(F(8) + 2) \\
28675 &= F(2 + F(8)) + 6 + 7 + 5 = 5 + 7 + 6 + F(F(8) + 2) \\
28676 &= F(2 + F(8)) + 6 + 7 + 6 = 6 + 7 + 6 + F(F(8) + 2) \\
28677 &= F(2 + F(8)) + 6 + 7 + 7 = 7 + 7 + 6 + F(F(8) + 2) \\
28678 &= F(2 + F(8)) + 6 + 7 + 8 = 8 + 7 + 6 + F(F(8) + 2) \\
28679 &= F(2 + F(8)) + 6 + 7 + 9 = 9 + 7 + 6 + F(F(8) + 2),
\end{aligned}$$

$$\begin{aligned}
28890 &= F(2 + F(8)) + F(-F(8) + F(9)) + 0 = 0 + F(F(9) - F(8)) + F(F(8) + 2) \\
28891 &= F(2 + F(8)) + F(-F(8) + F(9)) + 1 = 1 + F(F(9) - F(8)) + F(F(8) + 2) \\
28892 &= F(2 + F(8)) + F(-F(8) + F(9)) + 2 = 2 + F(F(9) - F(8)) + F(F(8) + 2) \\
28893 &= F(2 + F(8)) + F(-F(8) + F(9)) + 3 = 3 + F(F(9) - F(8)) + F(F(8) + 2) \\
28894 &= F(2 + F(8)) + F(-F(8) + F(9)) + 4 = 4 + F(F(9) - F(8)) + F(F(8) + 2) \\
28895 &= F(2 + F(8)) + F(-F(8) + F(9)) + 5 = 5 + F(F(9) - F(8)) + F(F(8) + 2) \\
28896 &= F(2 + F(8)) + F(-F(8) + F(9)) + 6 = 6 + F(F(9) - F(8)) + F(F(8) + 2) \\
28897 &= F(2 + F(8)) + F(-F(8) + F(9)) + 7 = 7 + F(F(9) - F(8)) + F(F(8) + 2) \\
28898 &= F(2 + F(8)) + F(-F(8) + F(9)) + 8 = 8 + F(F(9) - F(8)) + F(F(8) + 2) \\
28899 &= F(2 + F(8)) + F(-F(8) + F(9)) + 9 = 9 + F(F(9) - F(8)) + F(F(8) + 2).
\end{aligned}$$

$$\begin{aligned}
32850 &= 3 \times (-F(2) + F(F(8)) + 5) + 0 = 0 + (5 + F(F(8)) - F(2)) \times 3 \\
32851 &= 3 \times (-F(2) + F(F(8)) + 5) + 1 = 1 + (5 + F(F(8)) - F(2)) \times 3 \\
32852 &= 3 \times (-F(2) + F(F(8)) + 5) + 2 = 2 + (5 + F(F(8)) - F(2)) \times 3 \\
32853 &= 3 \times (-F(2) + F(F(8)) + 5) + 3 = 3 + (5 + F(F(8)) - F(2)) \times 3 \\
32854 &= 3 \times (-F(2) + F(F(8)) + 5) + 4 = 4 + (5 + F(F(8)) - F(2)) \times 3 \\
32855 &= 3 \times (-F(2) + F(F(8)) + 5) + 5 = 5 + (5 + F(F(8)) - F(2)) \times 3 \\
32856 &= 3 \times (-F(2) + F(F(8)) + 5) + 6 = 6 + (5 + F(F(8)) - F(2)) \times 3 \\
32857 &= 3 \times (-F(2) + F(F(8)) + 5) + 7 = 7 + (5 + F(F(8)) - F(2)) \times 3 \\
32858 &= 3 \times (-F(2) + F(F(8)) + 5) + 8 = 8 + (5 + F(F(8)) - F(2)) \times 3 \\
32859 &= 3 \times (-F(2) + F(F(8)) + 5) + 9 = 9 + (5 + F(F(8)) - F(2)) \times 3.
\end{aligned}$$

$$\begin{aligned}
32940 &= (F(F(F(3 \times 2))) + F(9)) \times F(4) + 0 = 0 + F(4) \times (F(9) + F(F(2^3))) \\
32941 &= (F(F(F(3 \times 2))) + F(9)) \times F(4) + 1 = 1 + F(4) \times (F(9) + F(F(2^3))) \\
32942 &= (F(F(F(3 \times 2))) + F(9)) \times F(4) + 2 = 2 + F(4) \times (F(9) + F(F(2^3))) \\
32943 &= (F(F(F(3 \times 2))) + F(9)) \times F(4) + 3 = 3 + F(4) \times (F(9) + F(F(2^3))) \\
32944 &= (F(F(F(3 \times 2))) + F(9)) \times F(4) + 4 = 4 + F(4) \times (F(9) + F(F(2^3))) \\
32945 &= (F(F(F(3 \times 2))) + F(9)) \times F(4) + 5 = 5 + F(4) \times (F(9) + F(F(2^3))) \\
32946 &= (F(F(F(3 \times 2))) + F(9)) \times F(4) + 6 = 6 + F(4) \times (F(9) + F(F(2^3))) \\
32947 &= (F(F(F(3 \times 2))) + F(9)) \times F(4) + 7 = 7 + F(4) \times (F(9) + F(F(2^3))) \\
32948 &= (F(F(F(3 \times 2))) + F(9)) \times F(4) + 8 = 8 + F(4) \times (F(9) + F(F(2^3))) \\
32949 &= (F(F(F(3 \times 2))) + F(9)) \times F(4) + 9 = 9 + F(4) \times (F(9) + F(F(2^3))).
\end{aligned}$$

$$\begin{aligned}
33490 &= (-F(3) + F(F(3)^4)) \times F(9) + 0 = 0 + F(9) \times (F(4^{F(3)}) - F(3)) \\
33491 &= (-F(3) + F(F(3)^4)) \times F(9) + 1 = 1 + F(9) \times (F(4^{F(3)}) - F(3)) \\
33492 &= (-F(3) + F(F(3)^4)) \times F(9) + 2 = 2 + F(9) \times (F(4^{F(3)}) - F(3)) \\
33493 &= (-F(3) + F(F(3)^4)) \times F(9) + 3 = 3 + F(9) \times (F(4^{F(3)}) - F(3)) \\
33494 &= (-F(3) + F(F(3)^4)) \times F(9) + 4 = 4 + F(9) \times (F(4^{F(3)}) - F(3)) \\
33495 &= (-F(3) + F(F(3)^4)) \times F(9) + 5 = 5 + F(9) \times (F(4^{F(3)}) - F(3)) \\
33496 &= (-F(3) + F(F(3)^4)) \times F(9) + 6 = 6 + F(9) \times (F(4^{F(3)}) - F(3)) \\
33497 &= (-F(3) + F(F(3)^4)) \times F(9) + 7 = 7 + F(9) \times (F(4^{F(3)}) - F(3)) \\
33498 &= (-F(3) + F(F(3)^4)) \times F(9) + 8 = 8 + F(9) \times (F(4^{F(3)}) - F(3)) \\
33499 &= (-F(3) + F(F(3)^4)) \times F(9) + 9 = 9 + F(9) \times (F(4^{F(3)}) - F(3)).
\end{aligned}$$

$$\begin{aligned}
38760 &= F(-3 + F(8)) \times (7 + F(6)) + 0 = 0 + (F(6) + 7) \times F(F(8) - 3) \\
38761 &= F(-3 + F(8)) \times (7 + F(6)) + 1 = 1 + (F(6) + 7) \times F(F(8) - 3) \\
38762 &= F(-3 + F(8)) \times (7 + F(6)) + 2 = 2 + (F(6) + 7) \times F(F(8) - 3) \\
38763 &= F(-3 + F(8)) \times (7 + F(6)) + 3 = 3 + (F(6) + 7) \times F(F(8) - 3) \\
38764 &= F(-3 + F(8)) \times (7 + F(6)) + 4 = 4 + (F(6) + 7) \times F(F(8) - 3) \\
38765 &= F(-3 + F(8)) \times (7 + F(6)) + 5 = 5 + (F(6) + 7) \times F(F(8) - 3) \\
38766 &= F(-3 + F(8)) \times (7 + F(6)) + 6 = 6 + (F(6) + 7) \times F(F(8) - 3) \\
38767 &= F(-3 + F(8)) \times (7 + F(6)) + 7 = 7 + (F(6) + 7) \times F(F(8) - 3) \\
38768 &= F(-3 + F(8)) \times (7 + F(6)) + 8 = 8 + (F(6) + 7) \times F(F(8) - 3) \\
38769 &= F(-3 + F(8)) \times (7 + F(6)) + 9 = 9 + (F(6) + 7) \times F(F(8) - 3).
\end{aligned}$$

$$\begin{aligned}
43640 &= -F(4 \times 3) + F(F(F(6))) \times 4 + 0 = 0 + 4 \times F(F(F(6))) - F(3 \times 4) \\
43641 &= -F(4 \times 3) + F(F(F(6))) \times 4 + 1 = 1 + 4 \times F(F(F(6))) - F(3 \times 4) \\
43642 &= -F(4 \times 3) + F(F(F(6))) \times 4 + 2 = 2 + 4 \times F(F(F(6))) - F(3 \times 4) \\
43643 &= -F(4 \times 3) + F(F(F(6))) \times 4 + 3 = 3 + 4 \times F(F(F(6))) - F(3 \times 4) \\
43644 &= -F(4 \times 3) + F(F(F(6))) \times 4 + 4 = 4 + 4 \times F(F(F(6))) - F(3 \times 4) \\
43645 &= -F(4 \times 3) + F(F(F(6))) \times 4 + 5 = 5 + 4 \times F(F(F(6))) - F(3 \times 4) \\
43646 &= -F(4 \times 3) + F(F(F(6))) \times 4 + 6 = 6 + 4 \times F(F(F(6))) - F(3 \times 4) \\
43647 &= -F(4 \times 3) + F(F(F(6))) \times 4 + 7 = 7 + 4 \times F(F(F(6))) - F(3 \times 4) \\
43648 &= -F(4 \times 3) + F(F(F(6))) \times 4 + 8 = 8 + 4 \times F(F(F(6))) - F(3 \times 4) \\
43649 &= -F(4 \times 3) + F(F(F(6))) \times 4 + 9 = 9 + 4 \times F(F(F(6))) - F(3 \times 4).
\end{aligned}$$

$$\begin{aligned}
43780 &= 4 \times (-F(F(3)) + F(F(7) + 8)) + 0 = 0 + (F(8 + F(7)) - F(F(3))) \times 4 \\
43781 &= 4 \times (-F(F(3)) + F(F(7) + 8)) + 1 = 1 + (F(8 + F(7)) - F(F(3))) \times 4 \\
43782 &= 4 \times (-F(F(3)) + F(F(7) + 8)) + 2 = 2 + (F(8 + F(7)) - F(F(3))) \times 4 \\
43783 &= 4 \times (-F(F(3)) + F(F(7) + 8)) + 3 = 3 + (F(8 + F(7)) - F(F(3))) \times 4 \\
43784 &= 4 \times (-F(F(3)) + F(F(7) + 8)) + 4 = 4 + (F(8 + F(7)) - F(F(3))) \times 4 \\
43785 &= 4 \times (-F(F(3)) + F(F(7) + 8)) + 5 = 5 + (F(8 + F(7)) - F(F(3))) \times 4 \\
43786 &= 4 \times (-F(F(3)) + F(F(7) + 8)) + 6 = 6 + (F(8 + F(7)) - F(F(3))) \times 4 \\
43787 &= 4 \times (-F(F(3)) + F(F(7) + 8)) + 7 = 7 + (F(8 + F(7)) - F(F(3))) \times 4 \\
43788 &= 4 \times (-F(F(3)) + F(F(7) + 8)) + 8 = 8 + (F(8 + F(7)) - F(F(3))) \times 4 \\
43789 &= 4 \times (-F(F(3)) + F(F(7) + 8)) + 9 = 9 + (F(8 + F(7)) - F(F(3))) \times 4.
\end{aligned}$$

$$\begin{aligned}
43860 &= 4 \times (-F(3) + F(F(8)) + F(F(6))) + 0 = 0 + (F(F(6)) + F(F(8)) - F(3)) \times 4 \\
43861 &= 4 \times (-F(3) + F(F(8)) + F(F(6))) + 1 = 1 + (F(F(6)) + F(F(8)) - F(3)) \times 4 \\
43862 &= 4 \times (-F(3) + F(F(8)) + F(F(6))) + 2 = 2 + (F(F(6)) + F(F(8)) - F(3)) \times 4 \\
43863 &= 4 \times (-F(3) + F(F(8)) + F(F(6))) + 3 = 3 + (F(F(6)) + F(F(8)) - F(3)) \times 4 \\
43864 &= 4 \times (-F(3) + F(F(8)) + F(F(6))) + 4 = 4 + (F(F(6)) + F(F(8)) - F(3)) \times 4 \\
43865 &= 4 \times (-F(3) + F(F(8)) + F(F(6))) + 5 = 5 + (F(F(6)) + F(F(8)) - F(3)) \times 4 \\
43866 &= 4 \times (-F(3) + F(F(8)) + F(F(6))) + 6 = 6 + (F(F(6)) + F(F(8)) - F(3)) \times 4 \\
43867 &= 4 \times (-F(3) + F(F(8)) + F(F(6))) + 7 = 7 + (F(F(6)) + F(F(8)) - F(3)) \times 4 \\
43868 &= 4 \times (-F(3) + F(F(8)) + F(F(6))) + 8 = 8 + (F(F(6)) + F(F(8)) - F(3)) \times 4 \\
43869 &= 4 \times (-F(3) + F(F(8)) + F(F(6))) + 9 = 9 + (F(F(6)) + F(F(8)) - F(3)) \times 4.
\end{aligned}$$

$$\begin{aligned}
43880 &= 4 \times (3 + F(F(8)) + F(8)) + 0 = 0 + (F(F(8)) + 8 \times 3) \times 4 \\
43881 &= 4 \times (3 + F(F(8)) + F(8)) + 1 = 1 + (F(F(8)) + 8 \times 3) \times 4 \\
43882 &= 4 \times (3 + F(F(8)) + F(8)) + 2 = 2 + (F(F(8)) + 8 \times 3) \times 4 \\
43883 &= 4 \times (3 + F(F(8)) + F(8)) + 3 = 3 + (F(F(8)) + 8 \times 3) \times 4 \\
43884 &= 4 \times (3 + F(F(8)) + F(8)) + 4 = 4 + (F(F(8)) + 8 \times 3) \times 4 \\
43885 &= 4 \times (3 + F(F(8)) + F(8)) + 5 = 5 + (F(F(8)) + 8 \times 3) \times 4 \\
43886 &= 4 \times (3 + F(F(8)) + F(8)) + 6 = 6 + (F(F(8)) + 8 \times 3) \times 4 \\
43887 &= 4 \times (3 + F(F(8)) + F(8)) + 7 = 7 + (F(F(8)) + 8 \times 3) \times 4 \\
43888 &= 4 \times (3 + F(F(8)) + F(8)) + 8 = 8 + (F(F(8)) + 8 \times 3) \times 4 \\
43889 &= 4 \times (3 + F(F(8)) + F(8)) + 9 = 9 + (F(F(8)) + 8 \times 3) \times 4.
\end{aligned}$$

$$\begin{aligned}
44360 &= 4 \times (F(4 \times 3) + F(F(F(6)))) + 0 = 0 + (F(F(F(6))) + F(3 \times 4)) \times 4 \\
44361 &= 4 \times (F(4 \times 3) + F(F(F(6)))) + 1 = 1 + (F(F(F(6))) + F(3 \times 4)) \times 4 \\
44362 &= 4 \times (F(4 \times 3) + F(F(F(6)))) + 2 = 2 + (F(F(F(6))) + F(3 \times 4)) \times 4 \\
44363 &= 4 \times (F(4 \times 3) + F(F(F(6)))) + 3 = 3 + (F(F(F(6))) + F(3 \times 4)) \times 4 \\
44364 &= 4 \times (F(4 \times 3) + F(F(F(6)))) + 4 = 4 + (F(F(F(6))) + F(3 \times 4)) \times 4 \\
44365 &= 4 \times (F(4 \times 3) + F(F(F(6)))) + 5 = 5 + (F(F(F(6))) + F(3 \times 4)) \times 4 \\
44366 &= 4 \times (F(4 \times 3) + F(F(F(6)))) + 6 = 6 + (F(F(F(6))) + F(3 \times 4)) \times 4 \\
44367 &= 4 \times (F(4 \times 3) + F(F(F(6)))) + 7 = 7 + (F(F(F(6))) + F(3 \times 4)) \times 4 \\
44368 &= 4 \times (F(4 \times 3) + F(F(F(6)))) + 8 = 8 + (F(F(F(6))) + F(3 \times 4)) \times 4 \\
44369 &= 4 \times (F(4 \times 3) + F(F(F(6)))) + 9 = 9 + (F(F(F(6))) + F(3 \times 4)) \times 4.
\end{aligned}$$

$$\begin{aligned}
46370 &= F(4 \times 6) + F(F(-3 + 7)) + 0 = 0 + F(F(7 - 3)) + F(6 \times 4) \\
46371 &= F(4 \times 6) + F(F(-3 + 7)) + 1 = 1 + F(F(7 - 3)) + F(6 \times 4) \\
46372 &= F(4 \times 6) + F(F(-3 + 7)) + 2 = 2 + F(F(7 - 3)) + F(6 \times 4) \\
46373 &= F(4 \times 6) + F(F(-3 + 7)) + 3 = 3 + F(F(7 - 3)) + F(6 \times 4) \\
46374 &= F(4 \times 6) + F(F(-3 + 7)) + 4 = 4 + F(F(7 - 3)) + F(6 \times 4) \\
46375 &= F(4 \times 6) + F(F(-3 + 7)) + 5 = 5 + F(F(7 - 3)) + F(6 \times 4) \\
46376 &= F(4 \times 6) + F(F(-3 + 7)) + 6 = 6 + F(F(7 - 3)) + F(6 \times 4) \\
46377 &= F(4 \times 6) + F(F(-3 + 7)) + 7 = 7 + F(F(7 - 3)) + F(6 \times 4) \\
46378 &= F(4 \times 6) + F(F(-3 + 7)) + 8 = 8 + F(F(7 - 3)) + F(6 \times 4) \\
46379 &= F(4 \times 6) + F(F(-3 + 7)) + 9 = 9 + F(F(7 - 3)) + F(6 \times 4).
\end{aligned}$$

$$\begin{aligned}
46670 &= F(F(F(4))) + 6^6 + F(7) + 0 = 0 + F(7) + 6^6 + F(F(F(4))) \\
46671 &= F(F(F(4))) + 6^6 + F(7) + 1 = 1 + F(7) + 6^6 + F(F(F(4))) \\
46672 &= F(F(F(4))) + 6^6 + F(7) + 2 = 2 + F(7) + 6^6 + F(F(F(4))) \\
46673 &= F(F(F(4))) + 6^6 + F(7) + 3 = 3 + F(7) + 6^6 + F(F(F(4))) \\
46674 &= F(F(F(4))) + 6^6 + F(7) + 4 = 4 + F(7) + 6^6 + F(F(F(4))) \\
46675 &= F(F(F(4))) + 6^6 + F(7) + 5 = 5 + F(7) + 6^6 + F(F(F(4))) \\
46676 &= F(F(F(4))) + 6^6 + F(7) + 6 = 6 + F(7) + 6^6 + F(F(F(4))) \\
46677 &= F(F(F(4))) + 6^6 + F(7) + 7 = 7 + F(7) + 6^6 + F(F(F(4))) \\
46678 &= F(F(F(4))) + 6^6 + F(7) + 8 = 8 + F(7) + 6^6 + F(F(F(4))) \\
46679 &= F(F(F(4))) + 6^6 + F(7) + 9 = 9 + F(7) + 6^6 + F(F(F(4))).
\end{aligned}$$

$$\begin{aligned}
54290 &= F(5 \times F(4)) \times F(2 + 9) + 0 = 0 + F(9 + 2) \times F(F(4) \times 5) \\
54291 &= F(5 \times F(4)) \times F(2 + 9) + 1 = 1 + F(9 + 2) \times F(F(4) \times 5) \\
54292 &= F(5 \times F(4)) \times F(2 + 9) + 2 = 2 + F(9 + 2) \times F(F(4) \times 5) \\
54293 &= F(5 \times F(4)) \times F(2 + 9) + 3 = 3 + F(9 + 2) \times F(F(4) \times 5) \\
54294 &= F(5 \times F(4)) \times F(2 + 9) + 4 = 4 + F(9 + 2) \times F(F(4) \times 5) \\
54295 &= F(5 \times F(4)) \times F(2 + 9) + 5 = 5 + F(9 + 2) \times F(F(4) \times 5) \\
54296 &= F(5 \times F(4)) \times F(2 + 9) + 6 = 6 + F(9 + 2) \times F(F(4) \times 5) \\
54297 &= F(5 \times F(4)) \times F(2 + 9) + 7 = 7 + F(9 + 2) \times F(F(4) \times 5) \\
54298 &= F(5 \times F(4)) \times F(2 + 9) + 8 = 8 + F(9 + 2) \times F(F(4) \times 5) \\
54299 &= F(5 \times F(4)) \times F(2 + 9) + 9 = 9 + F(9 + 2) \times F(F(4) \times 5).
\end{aligned}$$

$$\begin{aligned}
54560 &= 5 \times (-F(4 + 5) + F(F(F(6)))) + 0 = 0 + (F(F(F(6))) - F(5 + 4)) \times 5 \\
54561 &= 5 \times (-F(4 + 5) + F(F(F(6)))) + 1 = 1 + (F(F(F(6))) - F(5 + 4)) \times 5 \\
54562 &= 5 \times (-F(4 + 5) + F(F(F(6)))) + 2 = 2 + (F(F(F(6))) - F(5 + 4)) \times 5 \\
54563 &= 5 \times (-F(4 + 5) + F(F(F(6)))) + 3 = 3 + (F(F(F(6))) - F(5 + 4)) \times 5 \\
54564 &= 5 \times (-F(4 + 5) + F(F(F(6)))) + 4 = 4 + (F(F(F(6))) - F(5 + 4)) \times 5 \\
54565 &= 5 \times (-F(4 + 5) + F(F(F(6)))) + 5 = 5 + (F(F(F(6))) - F(5 + 4)) \times 5 \\
54566 &= 5 \times (-F(4 + 5) + F(F(F(6)))) + 6 = 6 + (F(F(F(6))) - F(5 + 4)) \times 5 \\
54567 &= 5 \times (-F(4 + 5) + F(F(F(6)))) + 7 = 7 + (F(F(F(6))) - F(5 + 4)) \times 5 \\
54568 &= 5 \times (-F(4 + 5) + F(F(F(6)))) + 8 = 8 + (F(F(F(6))) - F(5 + 4)) \times 5 \\
54569 &= 5 \times (-F(4 + 5) + F(F(F(6)))) + 9 = 9 + (F(F(F(6))) - F(5 + 4)) \times 5.
\end{aligned}$$

$$\begin{aligned}
54670 &= 5 \times (F(F(F(4))) + F(F(F(6))) - F(7)) + 0 = 0 + (-F(7) + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54671 &= 5 \times (F(F(F(4))) + F(F(F(6))) - F(7)) + 1 = 1 + (-F(7) + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54672 &= 5 \times (F(F(F(4))) + F(F(F(6))) - F(7)) + 2 = 2 + (-F(7) + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54673 &= 5 \times (F(F(F(4))) + F(F(F(6))) - F(7)) + 3 = 3 + (-F(7) + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54674 &= 5 \times (F(F(F(4))) + F(F(F(6))) - F(7)) + 4 = 4 + (-F(7) + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54675 &= 5 \times (F(F(F(4))) + F(F(F(6))) - F(7)) + 5 = 5 + (-F(7) + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54676 &= 5 \times (F(F(F(4))) + F(F(F(6))) - F(7)) + 6 = 6 + (-F(7) + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54677 &= 5 \times (F(F(F(4))) + F(F(F(6))) - F(7)) + 7 = 7 + (-F(7) + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54678 &= 5 \times (F(F(F(4))) + F(F(F(6))) - F(7)) + 8 = 8 + (-F(7) + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54679 &= 5 \times (F(F(F(4))) + F(F(F(6))) - F(7)) + 9 = 9 + (-F(7) + F(F(F(6))) + F(F(F(4)))) \times 5.
\end{aligned}$$

$$\begin{aligned}
54680 &= 5 \times (-4 - 6 + F(F(8))) + 0 = 0 + (F(F(8)) - 6 - 4) \times 5 \\
54681 &= 5 \times (-4 - 6 + F(F(8))) + 1 = 1 + (F(F(8)) - 6 - 4) \times 5 \\
54682 &= 5 \times (-4 - 6 + F(F(8))) + 2 = 2 + (F(F(8)) - 6 - 4) \times 5 \\
54683 &= 5 \times (-4 - 6 + F(F(8))) + 3 = 3 + (F(F(8)) - 6 - 4) \times 5 \\
54684 &= 5 \times (-4 - 6 + F(F(8))) + 4 = 4 + (F(F(8)) - 6 - 4) \times 5 \\
54685 &= 5 \times (-4 - 6 + F(F(8))) + 5 = 5 + (F(F(8)) - 6 - 4) \times 5 \\
54686 &= 5 \times (-4 - 6 + F(F(8))) + 6 = 6 + (F(F(8)) - 6 - 4) \times 5 \\
54687 &= 5 \times (-4 - 6 + F(F(8))) + 7 = 7 + (F(F(8)) - 6 - 4) \times 5 \\
54688 &= 5 \times (-4 - 6 + F(F(8))) + 8 = 8 + (F(F(8)) - 6 - 4) \times 5 \\
54689 &= 5 \times (-4 - 6 + F(F(8))) + 9 = 9 + (F(F(8)) - 6 - 4) \times 5.
\end{aligned}$$

$$\begin{aligned}
54690 &= 5 \times (F(F(F(4))) + F(F(F(6))) - 9) + 0 = 0 + (-9 + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54691 &= 5 \times (F(F(F(4))) + F(F(F(6))) - 9) + 1 = 1 + (-9 + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54692 &= 5 \times (F(F(F(4))) + F(F(F(6))) - 9) + 2 = 2 + (-9 + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54693 &= 5 \times (F(F(F(4))) + F(F(F(6))) - 9) + 3 = 3 + (-9 + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54694 &= 5 \times (F(F(F(4))) + F(F(F(6))) - 9) + 4 = 4 + (-9 + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54695 &= 5 \times (F(F(F(4))) + F(F(F(6))) - 9) + 5 = 5 + (-9 + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54696 &= 5 \times (F(F(F(4))) + F(F(F(6))) - 9) + 6 = 6 + (-9 + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54697 &= 5 \times (F(F(F(4))) + F(F(F(6))) - 9) + 7 = 7 + (-9 + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54698 &= 5 \times (F(F(F(4))) + F(F(F(6))) - 9) + 8 = 8 + (-9 + F(F(F(6))) + F(F(F(4)))) \times 5 \\
54699 &= 5 \times (F(F(F(4))) + F(F(F(6))) - 9) + 9 = 9 + (-9 + F(F(F(6))) + F(F(F(4)))) \times 5.
\end{aligned}$$

$$\begin{aligned}
54710 &= 5 \times (-4 + F(F(7 + 1))) + 0 = 0 + (F(F(1 + 7)) - 4) \times 5 \\
54711 &= 5 \times (-4 + F(F(7 + 1))) + 1 = 1 + (F(F(1 + 7)) - 4) \times 5 \\
54712 &= 5 \times (-4 + F(F(7 + 1))) + 2 = 2 + (F(F(1 + 7)) - 4) \times 5 \\
54713 &= 5 \times (-4 + F(F(7 + 1))) + 3 = 3 + (F(F(1 + 7)) - 4) \times 5 \\
54714 &= 5 \times (-4 + F(F(7 + 1))) + 4 = 4 + (F(F(1 + 7)) - 4) \times 5 \\
54715 &= 5 \times (-4 + F(F(7 + 1))) + 5 = 5 + (F(F(1 + 7)) - 4) \times 5 \\
54716 &= 5 \times (-4 + F(F(7 + 1))) + 6 = 6 + (F(F(1 + 7)) - 4) \times 5 \\
54717 &= 5 \times (-4 + F(F(7 + 1))) + 7 = 7 + (F(F(1 + 7)) - 4) \times 5 \\
54718 &= 5 \times (-4 + F(F(7 + 1))) + 8 = 8 + (F(F(1 + 7)) - 4) \times 5 \\
54719 &= 5 \times (-4 + F(F(7 + 1))) + 9 = 9 + (F(F(1 + 7)) - 4) \times 5.
\end{aligned}$$

$$\begin{aligned}
54720 &= 5 \times (F(F(4) \times 7) - 2) + 0 = 0 + (-2 + F(7 \times F(4))) \times 5 \\
54721 &= 5 \times (F(F(4) \times 7) - 2) + 1 = 1 + (-2 + F(7 \times F(4))) \times 5 \\
54722 &= 5 \times (F(F(4) \times 7) - 2) + 2 = 2 + (-2 + F(7 \times F(4))) \times 5 \\
54723 &= 5 \times (F(F(4) \times 7) - 2) + 3 = 3 + (-2 + F(7 \times F(4))) \times 5 \\
54724 &= 5 \times (F(F(4) \times 7) - 2) + 4 = 4 + (-2 + F(7 \times F(4))) \times 5 \\
54725 &= 5 \times (F(F(4) \times 7) - 2) + 5 = 5 + (-2 + F(7 \times F(4))) \times 5 \\
54726 &= 5 \times (F(F(4) \times 7) - 2) + 6 = 6 + (-2 + F(7 \times F(4))) \times 5 \\
54727 &= 5 \times (F(F(4) \times 7) - 2) + 7 = 7 + (-2 + F(7 \times F(4))) \times 5 \\
54728 &= 5 \times (F(F(4) \times 7) - 2) + 8 = 8 + (-2 + F(7 \times F(4))) \times 5 \\
54729 &= 5 \times (F(F(4) \times 7) - 2) + 9 = 9 + (-2 + F(7 \times F(4))) \times 5.
\end{aligned}$$

$$\begin{aligned}
54730 &= 5 \times F(F(4) \times 7) \times F(F(3)) + 0 = 0 + F(F(3)) \times F(7 \times F(4)) \times 5 \\
54731 &= 5 \times F(F(4) \times 7) \times F(F(3)) + 1 = 1 + F(F(3)) \times F(7 \times F(4)) \times 5 \\
54732 &= 5 \times F(F(4) \times 7) \times F(F(3)) + 2 = 2 + F(F(3)) \times F(7 \times F(4)) \times 5 \\
54733 &= 5 \times F(F(4) \times 7) \times F(F(3)) + 3 = 3 + F(F(3)) \times F(7 \times F(4)) \times 5 \\
54734 &= 5 \times F(F(4) \times 7) \times F(F(3)) + 4 = 4 + F(F(3)) \times F(7 \times F(4)) \times 5 \\
54735 &= 5 \times F(F(4) \times 7) \times F(F(3)) + 5 = 5 + F(F(3)) \times F(7 \times F(4)) \times 5 \\
54736 &= 5 \times F(F(4) \times 7) \times F(F(3)) + 6 = 6 + F(F(3)) \times F(7 \times F(4)) \times 5 \\
54737 &= 5 \times F(F(4) \times 7) \times F(F(3)) + 7 = 7 + F(F(3)) \times F(7 \times F(4)) \times 5 \\
54738 &= 5 \times F(F(4) \times 7) \times F(F(3)) + 8 = 8 + F(F(3)) \times F(7 \times F(4)) \times 5 \\
54739 &= 5 \times F(F(4) \times 7) \times F(F(3)) + 9 = 9 + F(F(3)) \times F(7 \times F(4)) \times 5.
\end{aligned}$$

$$\begin{aligned}
54740 &= 5 \times (F(F(4) \times 7) + F(F(4))) + 0 = 0 + (F(F(4)) + F(7 \times F(4))) \times 5 \\
54741 &= 5 \times (F(F(4) \times 7) + F(F(4))) + 1 = 1 + (F(F(4)) + F(7 \times F(4))) \times 5 \\
54742 &= 5 \times (F(F(4) \times 7) + F(F(4))) + 2 = 2 + (F(F(4)) + F(7 \times F(4))) \times 5 \\
54743 &= 5 \times (F(F(4) \times 7) + F(F(4))) + 3 = 3 + (F(F(4)) + F(7 \times F(4))) \times 5 \\
54744 &= 5 \times (F(F(4) \times 7) + F(F(4))) + 4 = 4 + (F(F(4)) + F(7 \times F(4))) \times 5 \\
54745 &= 5 \times (F(F(4) \times 7) + F(F(4))) + 5 = 5 + (F(F(4)) + F(7 \times F(4))) \times 5 \\
54746 &= 5 \times (F(F(4) \times 7) + F(F(4))) + 6 = 6 + (F(F(4)) + F(7 \times F(4))) \times 5 \\
54747 &= 5 \times (F(F(4) \times 7) + F(F(4))) + 7 = 7 + (F(F(4)) + F(7 \times F(4))) \times 5 \\
54748 &= 5 \times (F(F(4) \times 7) + F(F(4))) + 8 = 8 + (F(F(4)) + F(7 \times F(4))) \times 5 \\
54749 &= 5 \times (F(F(4) \times 7) + F(F(4))) + 9 = 9 + (F(F(4)) + F(7 \times F(4))) \times 5
\end{aligned}$$

$$\begin{aligned}
54750 &= 5 \times (4 + F(F(F(7) - 5))) + 0 = 0 + (F(F(-5 + F(7))) + 4) \times 5 \\
54751 &= 5 \times (4 + F(F(F(7) - 5))) + 1 = 1 + (F(F(-5 + F(7))) + 4) \times 5 \\
54752 &= 5 \times (4 + F(F(F(7) - 5))) + 2 = 2 + (F(F(-5 + F(7))) + 4) \times 5 \\
54753 &= 5 \times (4 + F(F(F(7) - 5))) + 3 = 3 + (F(F(-5 + F(7))) + 4) \times 5 \\
54754 &= 5 \times (4 + F(F(F(7) - 5))) + 4 = 4 + (F(F(-5 + F(7))) + 4) \times 5 \\
54755 &= 5 \times (4 + F(F(F(7) - 5))) + 5 = 5 + (F(F(-5 + F(7))) + 4) \times 5 \\
54756 &= 5 \times (4 + F(F(F(7) - 5))) + 6 = 6 + (F(F(-5 + F(7))) + 4) \times 5 \\
54757 &= 5 \times (4 + F(F(F(7) - 5))) + 7 = 7 + (F(F(-5 + F(7))) + 4) \times 5 \\
54758 &= 5 \times (4 + F(F(F(7) - 5))) + 8 = 8 + (F(F(-5 + F(7))) + 4) \times 5 \\
54759 &= 5 \times (4 + F(F(F(7) - 5))) + 9 = 9 + (F(F(-5 + F(7))) + 4) \times 5.
\end{aligned}$$

$$\begin{aligned}
54760 &= 5 \times (F(F(4) \times 7) + 6) + 0 = 0 + (6 + F(7 \times F(4))) \times 5 \\
54761 &= 5 \times (F(F(4) \times 7) + 6) + 1 = 1 + (6 + F(7 \times F(4))) \times 5 \\
54762 &= 5 \times (F(F(4) \times 7) + 6) + 2 = 2 + (6 + F(7 \times F(4))) \times 5 \\
54763 &= 5 \times (F(F(4) \times 7) + 6) + 3 = 3 + (6 + F(7 \times F(4))) \times 5 \\
54764 &= 5 \times (F(F(4) \times 7) + 6) + 4 = 4 + (6 + F(7 \times F(4))) \times 5 \\
54765 &= 5 \times (F(F(4) \times 7) + 6) + 5 = 5 + (6 + F(7 \times F(4))) \times 5 \\
54766 &= 5 \times (F(F(4) \times 7) + 6) + 6 = 6 + (6 + F(7 \times F(4))) \times 5 \\
54767 &= 5 \times (F(F(4) \times 7) + 6) + 7 = 7 + (6 + F(7 \times F(4))) \times 5 \\
54768 &= 5 \times (F(F(4) \times 7) + 6) + 8 = 8 + (6 + F(7 \times F(4))) \times 5 \\
54769 &= 5 \times (F(F(4) \times 7) + 6) + 9 = 9 + (6 + F(7 \times F(4))) \times 5.
\end{aligned}$$

$$\begin{aligned}
54780 &= 5 \times (-F(4) + F(7) + F(F(8))) + 0 = 0 + (F(F(8)) + F(7) - F(4)) \times 5 \\
54781 &= 5 \times (-F(4) + F(7) + F(F(8))) + 1 = 1 + (F(F(8)) + F(7) - F(4)) \times 5 \\
54782 &= 5 \times (-F(4) + F(7) + F(F(8))) + 2 = 2 + (F(F(8)) + F(7) - F(4)) \times 5 \\
54783 &= 5 \times (-F(4) + F(7) + F(F(8))) + 3 = 3 + (F(F(8)) + F(7) - F(4)) \times 5 \\
54784 &= 5 \times (-F(4) + F(7) + F(F(8))) + 4 = 4 + (F(F(8)) + F(7) - F(4)) \times 5 \\
54785 &= 5 \times (-F(4) + F(7) + F(F(8))) + 5 = 5 + (F(F(8)) + F(7) - F(4)) \times 5 \\
54786 &= 5 \times (-F(4) + F(7) + F(F(8))) + 6 = 6 + (F(F(8)) + F(7) - F(4)) \times 5 \\
54787 &= 5 \times (-F(4) + F(7) + F(F(8))) + 7 = 7 + (F(F(8)) + F(7) - F(4)) \times 5 \\
54788 &= 5 \times (-F(4) + F(7) + F(F(8))) + 8 = 8 + (F(F(8)) + F(7) - F(4)) \times 5 \\
54789 &= 5 \times (-F(4) + F(7) + F(F(8))) + 9 = 9 + (F(F(8)) + F(7) - F(4)) \times 5.
\end{aligned}$$

$$\begin{aligned}
54890 &= 5 \times (-F(F(4)) + F(F(8)) + F(9)) + 0 = 0 + (F(9) + F(F(8)) - F(F(4))) \times 5 \\
54891 &= 5 \times (-F(F(4)) + F(F(8)) + F(9)) + 1 = 1 + (F(9) + F(F(8)) - F(F(4))) \times 5 \\
54892 &= 5 \times (-F(F(4)) + F(F(8)) + F(9)) + 2 = 2 + (F(9) + F(F(8)) - F(F(4))) \times 5 \\
54893 &= 5 \times (-F(F(4)) + F(F(8)) + F(9)) + 3 = 3 + (F(9) + F(F(8)) - F(F(4))) \times 5 \\
54894 &= 5 \times (-F(F(4)) + F(F(8)) + F(9)) + 4 = 4 + (F(9) + F(F(8)) - F(F(4))) \times 5 \\
54895 &= 5 \times (-F(F(4)) + F(F(8)) + F(9)) + 5 = 5 + (F(9) + F(F(8)) - F(F(4))) \times 5 \\
54896 &= 5 \times (-F(F(4)) + F(F(8)) + F(9)) + 6 = 6 + (F(9) + F(F(8)) - F(F(4))) \times 5 \\
54897 &= 5 \times (-F(F(4)) + F(F(8)) + F(9)) + 7 = 7 + (F(9) + F(F(8)) - F(F(4))) \times 5 \\
54898 &= 5 \times (-F(F(4)) + F(F(8)) + F(9)) + 8 = 8 + (F(9) + F(F(8)) - F(F(4))) \times 5 \\
54899 &= 5 \times (-F(F(4)) + F(F(8)) + F(9)) + 9 = 9 + (F(9) + F(F(8)) - F(F(4))) \times 5.
\end{aligned}$$

$$\begin{aligned}
55870 &= 5 \times (-5 + F(F(8)) + F(F(7))) + 0 = 0 + (F(F(7)) + F(F(8)) - 5) \times 5 \\
55871 &= 5 \times (-5 + F(F(8)) + F(F(7))) + 1 = 1 + (F(F(7)) + F(F(8)) - 5) \times 5 \\
55872 &= 5 \times (-5 + F(F(8)) + F(F(7))) + 2 = 2 + (F(F(7)) + F(F(8)) - 5) \times 5 \\
55873 &= 5 \times (-5 + F(F(8)) + F(F(7))) + 3 = 3 + (F(F(7)) + F(F(8)) - 5) \times 5 \\
55874 &= 5 \times (-5 + F(F(8)) + F(F(7))) + 4 = 4 + (F(F(7)) + F(F(8)) - 5) \times 5 \\
55875 &= 5 \times (-5 + F(F(8)) + F(F(7))) + 5 = 5 + (F(F(7)) + F(F(8)) - 5) \times 5 \\
55876 &= 5 \times (-5 + F(F(8)) + F(F(7))) + 6 = 6 + (F(F(7)) + F(F(8)) - 5) \times 5 \\
55877 &= 5 \times (-5 + F(F(8)) + F(F(7))) + 7 = 7 + (F(F(7)) + F(F(8)) - 5) \times 5 \\
55878 &= 5 \times (-5 + F(F(8)) + F(F(7))) + 8 = 8 + (F(F(7)) + F(F(8)) - 5) \times 5 \\
55879 &= 5 \times (-5 + F(F(8)) + F(F(7))) + 9 = 9 + (F(F(7)) + F(F(8)) - 5) \times 5.
\end{aligned}$$

$$\begin{aligned}
65660 &= -F(F(6)) + 5 + F(F(F(6))) \times 6 + 0 = 0 + F(F(F(6))) \times 6 + 5 - F(F(6)) \\
65661 &= -F(F(6)) + 5 + F(F(F(6))) \times 6 + 1 = 1 + F(F(F(6))) \times 6 + 5 - F(F(6)) \\
65662 &= -F(F(6)) + 5 + F(F(F(6))) \times 6 + 2 = 2 + F(F(F(6))) \times 6 + 5 - F(F(6)) \\
65663 &= -F(F(6)) + 5 + F(F(F(6))) \times 6 + 3 = 3 + F(F(F(6))) \times 6 + 5 - F(F(6)) \\
65664 &= -F(F(6)) + 5 + F(F(F(6))) \times 6 + 4 = 4 + F(F(F(6))) \times 6 + 5 - F(F(6)) \\
65665 &= -F(F(6)) + 5 + F(F(F(6))) \times 6 + 5 = 5 + F(F(F(6))) \times 6 + 5 - F(F(6)) \\
65666 &= -F(F(6)) + 5 + F(F(F(6))) \times 6 + 6 = 6 + F(F(F(6))) \times 6 + 5 - F(F(6)) \\
65667 &= -F(F(6)) + 5 + F(F(F(6))) \times 6 + 7 = 7 + F(F(F(6))) \times 6 + 5 - F(F(6)) \\
65668 &= -F(F(6)) + 5 + F(F(F(6))) \times 6 + 8 = 8 + F(F(F(6))) \times 6 + 5 - F(F(6)) \\
65669 &= -F(F(6)) + 5 + F(F(F(6))) \times 6 + 9 = 9 + F(F(F(6))) \times 6 + 5 - F(F(6)).
\end{aligned}$$

$$\begin{aligned}
76720 &= 7 \times (F(F(F(6))) + 7 \times 2) + 0 = 0 + (2 \times 7 + F(F(F(6)))) \times 7 \\
76721 &= 7 \times (F(F(F(6))) + 7 \times 2) + 1 = 1 + (2 \times 7 + F(F(F(6)))) \times 7 \\
76722 &= 7 \times (F(F(F(6))) + 7 \times 2) + 2 = 2 + (2 \times 7 + F(F(F(6)))) \times 7 \\
76723 &= 7 \times (F(F(F(6))) + 7 \times 2) + 3 = 3 + (2 \times 7 + F(F(F(6)))) \times 7 \\
76724 &= 7 \times (F(F(F(6))) + 7 \times 2) + 4 = 4 + (2 \times 7 + F(F(F(6)))) \times 7 \\
76725 &= 7 \times (F(F(F(6))) + 7 \times 2) + 5 = 5 + (2 \times 7 + F(F(F(6)))) \times 7 \\
76726 &= 7 \times (F(F(F(6))) + 7 \times 2) + 6 = 6 + (2 \times 7 + F(F(F(6)))) \times 7 \\
76727 &= 7 \times (F(F(F(6))) + 7 \times 2) + 7 = 7 + (2 \times 7 + F(F(F(6)))) \times 7 \\
76728 &= 7 \times (F(F(F(6))) + 7 \times 2) + 8 = 8 + (2 \times 7 + F(F(F(6)))) \times 7 \\
76729 &= 7 \times (F(F(F(6))) + 7 \times 2) + 9 = 9 + (2 \times 7 + F(F(F(6)))) \times 7.
\end{aligned}$$

$$\begin{aligned}
76860 &= F(7 + F(6)) \times F(8) \times 6 + 0 = 0 + 6 \times F(8) \times F(F(6) + 7) \\
76861 &= F(7 + F(6)) \times F(8) \times 6 + 1 = 1 + 6 \times F(8) \times F(F(6) + 7) \\
76862 &= F(7 + F(6)) \times F(8) \times 6 + 2 = 2 + 6 \times F(8) \times F(F(6) + 7) \\
76863 &= F(7 + F(6)) \times F(8) \times 6 + 3 = 3 + 6 \times F(8) \times F(F(6) + 7) \\
76864 &= F(7 + F(6)) \times F(8) \times 6 + 4 = 4 + 6 \times F(8) \times F(F(6) + 7) \\
76865 &= F(7 + F(6)) \times F(8) \times 6 + 5 = 5 + 6 \times F(8) \times F(F(6) + 7) \\
76866 &= F(7 + F(6)) \times F(8) \times 6 + 6 = 6 + 6 \times F(8) \times F(F(6) + 7) \\
76867 &= F(7 + F(6)) \times F(8) \times 6 + 7 = 7 + 6 \times F(8) \times F(F(6) + 7) \\
76868 &= F(7 + F(6)) \times F(8) \times 6 + 8 = 8 + 6 \times F(8) \times F(F(6) + 7) \\
76869 &= F(7 + F(6)) \times F(8) \times 6 + 9 = 9 + 6 \times F(8) \times F(F(6) + 7).
\end{aligned}$$

$$\begin{aligned}
76890 &= F(F(7)) \times 6 \times (F(8) + F(9)) + 0 = 0 + (F(9) + F(8)) \times 6 \times F(F(7)) \\
76891 &= F(F(7)) \times 6 \times (F(8) + F(9)) + 1 = 1 + (F(9) + F(8)) \times 6 \times F(F(7)) \\
76892 &= F(F(7)) \times 6 \times (F(8) + F(9)) + 2 = 2 + (F(9) + F(8)) \times 6 \times F(F(7)) \\
76893 &= F(F(7)) \times 6 \times (F(8) + F(9)) + 3 = 3 + (F(9) + F(8)) \times 6 \times F(F(7)) \\
76894 &= F(F(7)) \times 6 \times (F(8) + F(9)) + 4 = 4 + (F(9) + F(8)) \times 6 \times F(F(7)) \\
76895 &= F(F(7)) \times 6 \times (F(8) + F(9)) + 5 = 5 + (F(9) + F(8)) \times 6 \times F(F(7)) \\
76896 &= F(F(7)) \times 6 \times (F(8) + F(9)) + 6 = 6 + (F(9) + F(8)) \times 6 \times F(F(7)) \\
76897 &= F(F(7)) \times 6 \times (F(8) + F(9)) + 7 = 7 + (F(9) + F(8)) \times 6 \times F(F(7)) \\
76898 &= F(F(7)) \times 6 \times (F(8) + F(9)) + 8 = 8 + (F(9) + F(8)) \times 6 \times F(F(7)) \\
76899 &= F(F(7)) \times 6 \times (F(8) + F(9)) + 9 = 9 + (F(9) + F(8)) \times 6 \times F(F(7)).
\end{aligned}$$

$$\begin{aligned}
7920 &= F(F(7)) \times F(9) - 2 + 0 = 0 - 2 + F(9) \times F(F(7)) \\
7921 &= F(F(7)) \times F(9) - 2 + 1 = 1 - 2 + F(9) \times F(F(7)) \\
7922 &= F(F(7)) \times F(9) - 2 + 2 = 2 - 2 + F(9) \times F(F(7)) \\
7923 &= F(F(7)) \times F(9) - 2 + 3 = 3 - 2 + F(9) \times F(F(7)) \\
7924 &= F(F(7)) \times F(9) - 2 + 4 = 4 - 2 + F(9) \times F(F(7)) \\
7925 &= F(F(7)) \times F(9) - 2 + 5 = 5 - 2 + F(9) \times F(F(7)) \\
7926 &= F(F(7)) \times F(9) - 2 + 6 = 6 - 2 + F(9) \times F(F(7)) \\
7927 &= F(F(7)) \times F(9) - 2 + 7 = 7 - 2 + F(9) \times F(F(7)) \\
7928 &= F(F(7)) \times F(9) - 2 + 8 = 8 - 2 + F(9) \times F(F(7)) \\
7929 &= F(F(7)) \times F(9) - 2 + 9 = 9 - 2 + F(9) \times F(F(7)).
\end{aligned}$$

$$\begin{aligned}
83620 &= F(F(8) - F(3)) \times (F(F(6)) - F(2)) + 0 = 0 + F(-2 + F(F(6))) \times (-F(F(3)) + F(8)) \\
83621 &= F(F(8) - F(3)) \times (F(F(6)) - F(2)) + 1 = 1 + F(-2 + F(F(6))) \times (-F(F(3)) + F(8)) \\
83622 &= F(F(8) - F(3)) \times (F(F(6)) - F(2)) + 2 = 2 + F(-2 + F(F(6))) \times (-F(F(3)) + F(8)) \\
83623 &= F(F(8) - F(3)) \times (F(F(6)) - F(2)) + 3 = 3 + F(-2 + F(F(6))) \times (-F(F(3)) + F(8)) \\
83624 &= F(F(8) - F(3)) \times (F(F(6)) - F(2)) + 4 = 4 + F(-2 + F(F(6))) \times (-F(F(3)) + F(8)) \\
83625 &= F(F(8) - F(3)) \times (F(F(6)) - F(2)) + 5 = 5 + F(-2 + F(F(6))) \times (-F(F(3)) + F(8)) \\
83626 &= F(F(8) - F(3)) \times (F(F(6)) - F(2)) + 6 = 6 + F(-2 + F(F(6))) \times (-F(F(3)) + F(8)) \\
83627 &= F(F(8) - F(3)) \times (F(F(6)) - F(2)) + 7 = 7 + F(-2 + F(F(6))) \times (-F(F(3)) + F(8)) \\
83628 &= F(F(8) - F(3)) \times (F(F(6)) - F(2)) + 8 = 8 + F(-2 + F(F(6))) \times (-F(F(3)) + F(8)) \\
83629 &= F(F(8) - F(3)) \times (F(F(6)) - F(2)) + 9 = 9 + F(-2 + F(F(6))) \times (-F(F(3)) + F(8)).
\end{aligned}$$

$$\begin{aligned}
86880 &= (-86 + F(F(8))) \times 8 + 0 = 0 + (F(F(8)) - 86) \times 8 \\
86881 &= (-86 + F(F(8))) \times 8 + 1 = 1 + (F(F(8)) - 86) \times 8 \\
86882 &= (-86 + F(F(8))) \times 8 + 2 = 2 + (F(F(8)) - 86) \times 8 \\
86883 &= (-86 + F(F(8))) \times 8 + 3 = 3 + (F(F(8)) - 86) \times 8 \\
86884 &= (-86 + F(F(8))) \times 8 + 4 = 4 + (F(F(8)) - 86) \times 8 \\
86885 &= (-86 + F(F(8))) \times 8 + 5 = 5 + (F(F(8)) - 86) \times 8 \\
86886 &= (-86 + F(F(8))) \times 8 + 6 = 6 + (F(F(8)) - 86) \times 8 \\
86887 &= (-86 + F(F(8))) \times 8 + 7 = 7 + (F(F(8)) - 86) \times 8 \\
86888 &= (-86 + F(F(8))) \times 8 + 8 = 8 + (F(F(8)) - 86) \times 8 \\
86889 &= (-86 + F(F(8))) \times 8 + 9 = 9 + (F(F(8)) - 86) \times 8,
\end{aligned}$$

$$\begin{aligned}
87360 &= (F(F(8)) - F(7) \times F(3)) \times F(6) + 0 = 0 + F(6) \times (-F(3) \times F(7) + F(F(8))) \\
87361 &= (F(F(8)) - F(7) \times F(3)) \times F(6) + 1 = 1 + F(6) \times (-F(3) \times F(7) + F(F(8))) \\
87362 &= (F(F(8)) - F(7) \times F(3)) \times F(6) + 2 = 2 + F(6) \times (-F(3) \times F(7) + F(F(8))) \\
87363 &= (F(F(8)) - F(7) \times F(3)) \times F(6) + 3 = 3 + F(6) \times (-F(3) \times F(7) + F(F(8))) \\
87364 &= (F(F(8)) - F(7) \times F(3)) \times F(6) + 4 = 4 + F(6) \times (-F(3) \times F(7) + F(F(8))) \\
87365 &= (F(F(8)) - F(7) \times F(3)) \times F(6) + 5 = 5 + F(6) \times (-F(3) \times F(7) + F(F(8))) \\
87366 &= (F(F(8)) - F(7) \times F(3)) \times F(6) + 6 = 6 + F(6) \times (-F(3) \times F(7) + F(F(8))) \\
87367 &= (F(F(8)) - F(7) \times F(3)) \times F(6) + 7 = 7 + F(6) \times (-F(3) \times F(7) + F(F(8))) \\
87368 &= (F(F(8)) - F(7) \times F(3)) \times F(6) + 8 = 8 + F(6) \times (-F(3) \times F(7) + F(F(8))) \\
87369 &= (F(F(8)) - F(7) \times F(3)) \times F(6) + 9 = 9 + F(6) \times (-F(3) \times F(7) + F(F(8))).
\end{aligned}$$

$$\begin{aligned}
87480 &= (F(F(8)) - 7 - 4) \times 8 + 0 = 0 + (F(F(8)) - 4 - 7) \times 8 \\
87481 &= (F(F(8)) - 7 - 4) \times 8 + 1 = 1 + (F(F(8)) - 4 - 7) \times 8 \\
87482 &= (F(F(8)) - 7 - 4) \times 8 + 2 = 2 + (F(F(8)) - 4 - 7) \times 8 \\
87483 &= (F(F(8)) - 7 - 4) \times 8 + 3 = 3 + (F(F(8)) - 4 - 7) \times 8 \\
87484 &= (F(F(8)) - 7 - 4) \times 8 + 4 = 4 + (F(F(8)) - 4 - 7) \times 8 \\
87485 &= (F(F(8)) - 7 - 4) \times 8 + 5 = 5 + (F(F(8)) - 4 - 7) \times 8 \\
87486 &= (F(F(8)) - 7 - 4) \times 8 + 6 = 6 + (F(F(8)) - 4 - 7) \times 8 \\
87487 &= (F(F(8)) - 7 - 4) \times 8 + 7 = 7 + (F(F(8)) - 4 - 7) \times 8 \\
87488 &= (F(F(8)) - 7 - 4) \times 8 + 8 = 8 + (F(F(8)) - 4 - 7) \times 8 \\
87489 &= (F(F(8)) - 7 - 4) \times 8 + 9 = 9 + (F(F(8)) - 4 - 7) \times 8.
\end{aligned}$$

$$\begin{aligned}
87560 &= (F(F(8)) - F(7 - 5)) \times F(6) + 0 = 0 - F(6) + (-5 + F(7)) \times F(F(8)) \\
87561 &= (F(F(8)) - F(7 - 5)) \times F(6) + 1 = 1 - F(6) + (-5 + F(7)) \times F(F(8)) \\
87562 &= (F(F(8)) - F(7 - 5)) \times F(6) + 2 = 2 - F(6) + (-5 + F(7)) \times F(F(8)) \\
87563 &= (F(F(8)) - F(7 - 5)) \times F(6) + 3 = 3 - F(6) + (-5 + F(7)) \times F(F(8)) \\
87564 &= (F(F(8)) - F(7 - 5)) \times F(6) + 4 = 4 - F(6) + (-5 + F(7)) \times F(F(8)) \\
87565 &= (F(F(8)) - F(7 - 5)) \times F(6) + 5 = 5 - F(6) + (-5 + F(7)) \times F(F(8)) \\
87566 &= (F(F(8)) - F(7 - 5)) \times F(6) + 6 = 6 - F(6) + (-5 + F(7)) \times F(F(8)) \\
87567 &= (F(F(8)) - F(7 - 5)) \times F(6) + 7 = 7 - F(6) + (-5 + F(7)) \times F(F(8)) \\
87568 &= (F(F(8)) - F(7 - 5)) \times F(6) + 8 = 8 - F(6) + (-5 + F(7)) \times F(F(8)) \\
87569 &= (F(F(8)) - F(7 - 5)) \times F(6) + 9 = 9 - F(6) + (-5 + F(7)) \times F(F(8)).
\end{aligned}$$

$$\begin{aligned}
87640 &= 8 \times (7 + F(F(F(6))) + F(F(4))) + 0 = 0 + (-4 + F(F(F(6))) + F(7)) \times 8 \\
87641 &= 8 \times (7 + F(F(F(6))) + F(F(4))) + 1 = 1 + (-4 + F(F(F(6))) + F(7)) \times 8 \\
87642 &= 8 \times (7 + F(F(F(6))) + F(F(4))) + 2 = 2 + (-4 + F(F(F(6))) + F(7)) \times 8 \\
87643 &= 8 \times (7 + F(F(F(6))) + F(F(4))) + 3 = 3 + (-4 + F(F(F(6))) + F(7)) \times 8 \\
87644 &= 8 \times (7 + F(F(F(6))) + F(F(4))) + 4 = 4 + (-4 + F(F(F(6))) + F(7)) \times 8 \\
87645 &= 8 \times (7 + F(F(F(6))) + F(F(4))) + 5 = 5 + (-4 + F(F(F(6))) + F(7)) \times 8 \\
87646 &= 8 \times (7 + F(F(F(6))) + F(F(4))) + 6 = 6 + (-4 + F(F(F(6))) + F(7)) \times 8 \\
87647 &= 8 \times (7 + F(F(F(6))) + F(F(4))) + 7 = 7 + (-4 + F(F(F(6))) + F(7)) \times 8 \\
87648 &= 8 \times (7 + F(F(F(6))) + F(F(4))) + 8 = 8 + (-4 + F(F(F(6))) + F(7)) \times 8 \\
87649 &= 8 \times (7 + F(F(F(6))) + F(F(4))) + 9 = 9 + (-4 + F(F(F(6))) + F(7)) \times 8.
\end{aligned}$$

$$\begin{aligned}
87680 &= (F(F(8)) - 7 + F(F(6))) \times 8 + 0 = 0 + (F(F(8)) + F(F(6)) - 7) \times 8 \\
87681 &= (F(F(8)) - 7 + F(F(6))) \times 8 + 1 = 1 + (F(F(8)) + F(F(6)) - 7) \times 8 \\
87682 &= (F(F(8)) - 7 + F(F(6))) \times 8 + 2 = 2 + (F(F(8)) + F(F(6)) - 7) \times 8 \\
87683 &= (F(F(8)) - 7 + F(F(6))) \times 8 + 3 = 3 + (F(F(8)) + F(F(6)) - 7) \times 8 \\
87684 &= (F(F(8)) - 7 + F(F(6))) \times 8 + 4 = 4 + (F(F(8)) + F(F(6)) - 7) \times 8 \\
87685 &= (F(F(8)) - 7 + F(F(6))) \times 8 + 5 = 5 + (F(F(8)) + F(F(6)) - 7) \times 8 \\
87686 &= (F(F(8)) - 7 + F(F(6))) \times 8 + 6 = 6 + (F(F(8)) + F(F(6)) - 7) \times 8 \\
87687 &= (F(F(8)) - 7 + F(F(6))) \times 8 + 7 = 7 + (F(F(8)) + F(F(6)) - 7) \times 8 \\
87688 &= (F(F(8)) - 7 + F(F(6))) \times 8 + 8 = 8 + (F(F(8)) + F(F(6)) - 7) \times 8 \\
87689 &= (F(F(8)) - 7 + F(F(6))) \times 8 + 9 = 9 + (F(F(8)) + F(F(6)) - 7) \times 8.
\end{aligned}$$

$$\begin{aligned}
88450 &= (-F(8) + F(F(8) + F(F(F(4)))) \times 5 + 0 = 0 + 5 \times (F((F(F(F(4))) + F(8))) - F(8)) \\
88451 &= (-F(8) + F(F(8) + F(F(F(4)))) \times 5 + 1 = 1 + 5 \times (F((F(F(F(4))) + F(8))) - F(8)) \\
88452 &= (-F(8) + F(F(8) + F(F(F(4)))) \times 5 + 2 = 2 + 5 \times (F((F(F(F(4))) + F(8))) - F(8)) \\
88453 &= (-F(8) + F(F(8) + F(F(F(4)))) \times 5 + 3 = 3 + 5 \times (F((F(F(F(4))) + F(8))) - F(8)) \\
88454 &= (-F(8) + F(F(8) + F(F(F(4)))) \times 5 + 4 = 4 + 5 \times (F((F(F(F(4))) + F(8))) - F(8)) \\
88455 &= (-F(8) + F(F(8) + F(F(F(4)))) \times 5 + 5 = 5 + 5 \times (F((F(F(F(4))) + F(8))) - F(8)) \\
88456 &= (-F(8) + F(F(8) + F(F(F(4)))) \times 5 + 6 = 6 + 5 \times (F((F(F(F(4))) + F(8))) - F(8)) \\
88457 &= (-F(8) + F(F(8) + F(F(F(4)))) \times 5 + 7 = 7 + 5 \times (F((F(F(F(4))) + F(8))) - F(8)) \\
88458 &= (-F(8) + F(F(8) + F(F(F(4)))) \times 5 + 8 = 8 + 5 \times (F((F(F(F(4))) + F(8))) - F(8)) \\
88459 &= (-F(8) + F(F(8) + F(F(F(4)))) \times 5 + 9 = 9 + 5 \times (F((F(F(F(4))) + F(8))) - F(8)).
\end{aligned}$$

$$\begin{aligned}
88720 &= 8 \times (F(F(8)) + F(F(7) - F(2))) + 0 = 0 + (F(-F(2) + F(7)) + F(F(8))) \times 8 \\
88721 &= 8 \times (F(F(8)) + F(F(7) - F(2))) + 1 = 1 + (F(-F(2) + F(7)) + F(F(8))) \times 8 \\
88722 &= 8 \times (F(F(8)) + F(F(7) - F(2))) + 2 = 2 + (F(-F(2) + F(7)) + F(F(8))) \times 8 \\
88723 &= 8 \times (F(F(8)) + F(F(7) - F(2))) + 3 = 3 + (F(-F(2) + F(7)) + F(F(8))) \times 8 \\
88724 &= 8 \times (F(F(8)) + F(F(7) - F(2))) + 4 = 4 + (F(-F(2) + F(7)) + F(F(8))) \times 8 \\
88725 &= 8 \times (F(F(8)) + F(F(7) - F(2))) + 5 = 5 + (F(-F(2) + F(7)) + F(F(8))) \times 8 \\
88726 &= 8 \times (F(F(8)) + F(F(7) - F(2))) + 6 = 6 + (F(-F(2) + F(7)) + F(F(8))) \times 8 \\
88727 &= 8 \times (F(F(8)) + F(F(7) - F(2))) + 7 = 7 + (F(-F(2) + F(7)) + F(F(8))) \times 8 \\
88728 &= 8 \times (F(F(8)) + F(F(7) - F(2))) + 8 = 8 + (F(-F(2) + F(7)) + F(F(8))) \times 8 \\
88729 &= 8 \times (F(F(8)) + F(F(7) - F(2))) + 9 = 9 + (F(-F(2) + F(7)) + F(F(8))) \times 8.
\end{aligned}$$

$$\begin{aligned}
89670 &= F(8) \times F(9 + 6) \times 7 + 0 = 0 + 7 \times F(6 + 9) \times F(8) \\
89671 &= F(8) \times F(9 + 6) \times 7 + 1 = 1 + 7 \times F(6 + 9) \times F(8) \\
89672 &= F(8) \times F(9 + 6) \times 7 + 2 = 2 + 7 \times F(6 + 9) \times F(8) \\
89673 &= F(8) \times F(9 + 6) \times 7 + 3 = 3 + 7 \times F(6 + 9) \times F(8) \\
89674 &= F(8) \times F(9 + 6) \times 7 + 4 = 4 + 7 \times F(6 + 9) \times F(8) \\
89675 &= F(8) \times F(9 + 6) \times 7 + 5 = 5 + 7 \times F(6 + 9) \times F(8) \\
89676 &= F(8) \times F(9 + 6) \times 7 + 6 = 6 + 7 \times F(6 + 9) \times F(8) \\
89677 &= F(8) \times F(9 + 6) \times 7 + 7 = 7 + 7 \times F(6 + 9) \times F(8) \\
89678 &= F(8) \times F(9 + 6) \times 7 + 8 = 8 + 7 \times F(6 + 9) \times F(8) \\
89679 &= F(8) \times F(9 + 6) \times 7 + 9 = 9 + 7 \times F(6 + 9) \times F(8).
\end{aligned}$$

$$\begin{aligned}
98370 &= 9 \times (F(F(8)) - 3 - F(7)) + 0 = 0 + (-F(7) - 3 + F(F(8))) \times 9 \\
98371 &= 9 \times (F(F(8)) - 3 - F(7)) + 1 = 1 + (-F(7) - 3 + F(F(8))) \times 9 \\
98372 &= 9 \times (F(F(8)) - 3 - F(7)) + 2 = 2 + (-F(7) - 3 + F(F(8))) \times 9 \\
98373 &= 9 \times (F(F(8)) - 3 - F(7)) + 3 = 3 + (-F(7) - 3 + F(F(8))) \times 9 \\
98374 &= 9 \times (F(F(8)) - 3 - F(7)) + 4 = 4 + (-F(7) - 3 + F(F(8))) \times 9 \\
98375 &= 9 \times (F(F(8)) - 3 - F(7)) + 5 = 5 + (-F(7) - 3 + F(F(8))) \times 9 \\
98376 &= 9 \times (F(F(8)) - 3 - F(7)) + 6 = 6 + (-F(7) - 3 + F(F(8))) \times 9 \\
98377 &= 9 \times (F(F(8)) - 3 - F(7)) + 7 = 7 + (-F(7) - 3 + F(F(8))) \times 9 \\
98378 &= 9 \times (F(F(8)) - 3 - F(7)) + 8 = 8 + (-F(7) - 3 + F(F(8))) \times 9 \\
98379 &= 9 \times (F(F(8)) - 3 - F(7)) + 9 = 9 + (-F(7) - 3 + F(F(8))) \times 9.
\end{aligned}$$

$$\begin{aligned}
98460 &= 9 \times (F(F(8)) + F(F(4)) - F(6)) + 0 = 0 + (-F(6) + F(F(4)) + F(F(8))) \times 9 \\
98461 &= 9 \times (F(F(8)) + F(F(4)) - F(6)) + 1 = 1 + (-F(6) + F(F(4)) + F(F(8))) \times 9 \\
98462 &= 9 \times (F(F(8)) + F(F(4)) - F(6)) + 2 = 2 + (-F(6) + F(F(4)) + F(F(8))) \times 9 \\
98463 &= 9 \times (F(F(8)) + F(F(4)) - F(6)) + 3 = 3 + (-F(6) + F(F(4)) + F(F(8))) \times 9 \\
98464 &= 9 \times (F(F(8)) + F(F(4)) - F(6)) + 4 = 4 + (-F(6) + F(F(4)) + F(F(8))) \times 9 \\
98465 &= 9 \times (F(F(8)) + F(F(4)) - F(6)) + 5 = 5 + (-F(6) + F(F(4)) + F(F(8))) \times 9 \\
98466 &= 9 \times (F(F(8)) + F(F(4)) - F(6)) + 6 = 6 + (-F(6) + F(F(4)) + F(F(8))) \times 9 \\
98467 &= 9 \times (F(F(8)) + F(F(4)) - F(6)) + 7 = 7 + (-F(6) + F(F(4)) + F(F(8))) \times 9 \\
98468 &= 9 \times (F(F(8)) + F(F(4)) - F(6)) + 8 = 8 + (-F(6) + F(F(4)) + F(F(8))) \times 9 \\
98469 &= 9 \times (F(F(8)) + F(F(4)) - F(6)) + 9 = 9 + (-F(6) + F(F(4)) + F(F(8))) \times 9.
\end{aligned}$$

$$\begin{aligned}
98510 &= 9 \times F(F(8)) - 5 + 1 + 0 = 0 + 1 - 5 + F(F(8)) \times 9 \\
98511 &= 9 \times F(F(8)) - 5 + 1 + 1 = 1 + 1 - 5 + F(F(8)) \times 9 \\
98512 &= 9 \times F(F(8)) - 5 + 1 + 2 = 2 + 1 - 5 + F(F(8)) \times 9 \\
98513 &= 9 \times F(F(8)) - 5 + 1 + 3 = 3 + 1 - 5 + F(F(8)) \times 9 \\
98514 &= 9 \times F(F(8)) - 5 + 1 + 4 = 4 + 1 - 5 + F(F(8)) \times 9 \\
98515 &= 9 \times F(F(8)) - 5 + 1 + 5 = 5 + 1 - 5 + F(F(8)) \times 9 \\
98516 &= 9 \times F(F(8)) - 5 + 1 + 6 = 6 + 1 - 5 + F(F(8)) \times 9 \\
98517 &= 9 \times F(F(8)) - 5 + 1 + 7 = 7 + 1 - 5 + F(F(8)) \times 9 \\
98518 &= 9 \times F(F(8)) - 5 + 1 + 8 = 8 + 1 - 5 + F(F(8)) \times 9 \\
98519 &= 9 \times F(F(8)) - 5 + 1 + 9 = 9 + 1 - 5 + F(F(8)) \times 9.
\end{aligned}$$

$$\begin{aligned}
98580 &= 9 \times (F(F(8)) + 5) + F(8) + 0 = 0 + F(8) + (5 + F(F(8))) \times 9 \\
98581 &= 9 \times (F(F(8)) + 5) + F(8) + 1 = 1 + F(8) + (5 + F(F(8))) \times 9 \\
98582 &= 9 \times (F(F(8)) + 5) + F(8) + 2 = 2 + F(8) + (5 + F(F(8))) \times 9 \\
98583 &= 9 \times (F(F(8)) + 5) + F(8) + 3 = 3 + F(8) + (5 + F(F(8))) \times 9 \\
98584 &= 9 \times (F(F(8)) + 5) + F(8) + 4 = 4 + F(8) + (5 + F(F(8))) \times 9 \\
98585 &= 9 \times (F(F(8)) + 5) + F(8) + 5 = 5 + F(8) + (5 + F(F(8))) \times 9 \\
98586 &= 9 \times (F(F(8)) + 5) + F(8) + 6 = 6 + F(8) + (5 + F(F(8))) \times 9 \\
98587 &= 9 \times (F(F(8)) + 5) + F(8) + 7 = 7 + F(8) + (5 + F(F(8))) \times 9 \\
98588 &= 9 \times (F(F(8)) + 5) + F(8) + 8 = 8 + F(8) + (5 + F(F(8))) \times 9 \\
98589 &= 9 \times (F(F(8)) + 5) + F(8) + 9 = 9 + F(8) + (5 + F(F(8))) \times 9.
\end{aligned}$$

$$\begin{aligned}
98820 &= (F(9) + F(F(8))) \times (8 + F(2)) + 0 = 0 + (F(F(2) + 8) + F(F(8))) \times 9 \\
98821 &= (F(9) + F(F(8))) \times (8 + F(2)) + 1 = 1 + (F(F(2) + 8) + F(F(8))) \times 9 \\
98822 &= (F(9) + F(F(8))) \times (8 + F(2)) + 2 = 2 + (F(F(2) + 8) + F(F(8))) \times 9 \\
98823 &= (F(9) + F(F(8))) \times (8 + F(2)) + 3 = 3 + (F(F(2) + 8) + F(F(8))) \times 9 \\
98824 &= (F(9) + F(F(8))) \times (8 + F(2)) + 4 = 4 + (F(F(2) + 8) + F(F(8))) \times 9 \\
98825 &= (F(9) + F(F(8))) \times (8 + F(2)) + 5 = 5 + (F(F(2) + 8) + F(F(8))) \times 9 \\
98826 &= (F(9) + F(F(8))) \times (8 + F(2)) + 6 = 6 + (F(F(2) + 8) + F(F(8))) \times 9 \\
98827 &= (F(9) + F(F(8))) \times (8 + F(2)) + 7 = 7 + (F(F(2) + 8) + F(F(8))) \times 9 \\
98828 &= (F(9) + F(F(8))) \times (8 + F(2)) + 8 = 8 + (F(F(2) + 8) + F(F(8))) \times 9 \\
98829 &= (F(9) + F(F(8))) \times (8 + F(2)) + 9 = 9 + (F(F(2) + 8) + F(F(8))) \times 9.
\end{aligned}$$

3.2 Symmetric Representations in Digit's Order

Below are examples of numbers written in digit's order:

$$\begin{aligned}
16420 &= 1 + F(F(F(6))) \times F(4)/2 + 0 & 26470 &= F(2 + F(F(6))) - F(4)^7 + 0 \\
16421 &= 1 + F(F(F(6))) \times F(4)/2 + 1 & 26471 &= F(2 + F(F(6))) - F(4)^7 + 1 \\
16422 &= 1 + F(F(F(6))) \times F(4)/2 + 2 & 26472 &= F(2 + F(F(6))) - F(4)^7 + 2 \\
16423 &= 1 + F(F(F(6))) \times F(4)/2 + 3 & 26473 &= F(2 + F(F(6))) - F(4)^7 + 3 \\
16424 &= 1 + F(F(F(6))) \times F(4)/2 + 4 & 26474 &= F(2 + F(F(6))) - F(4)^7 + 4 \\
16425 &= 1 + F(F(F(6))) \times F(4)/2 + 5 & 26475 &= F(2 + F(F(6))) - F(4)^7 + 5 \\
16426 &= 1 + F(F(F(6))) \times F(4)/2 + 6 & 26476 &= F(2 + F(F(6))) - F(4)^7 + 6 \\
16427 &= 1 + F(F(F(6))) \times F(4)/2 + 7 & 26477 &= F(2 + F(F(6))) - F(4)^7 + 7 \\
16428 &= 1 + F(F(F(6))) \times F(4)/2 + 8 & 26478 &= F(2 + F(F(6))) - F(4)^7 + 8 \\
16429 &= 1 + F(F(F(6))) \times F(4)/2 + 9 & 26479 &= F(2 + F(F(6))) - F(4)^7 + 9.
\end{aligned}$$

$$\begin{aligned}
27450 &= F(2 + F(7)) \times 45 + 0 \\
27451 &= F(2 + F(7)) \times 45 + 1 \\
27452 &= F(2 + F(7)) \times 45 + 2 \\
27453 &= F(2 + F(7)) \times 45 + 3 \\
27454 &= F(2 + F(7)) \times 45 + 4 \\
27455 &= F(2 + F(7)) \times 45 + 5 \\
27456 &= F(2 + F(7)) \times 45 + 6 \\
27457 &= F(2 + F(7)) \times 45 + 7 \\
27458 &= F(2 + F(7)) \times 45 + 8 \\
27459 &= F(2 + F(7)) \times 45 + 9.
\end{aligned}$$

$$\begin{aligned}
45750 &= F(F(4) \times 5) \times 75 + 0 \\
45751 &= F(F(4) \times 5) \times 75 + 1 \\
45752 &= F(F(4) \times 5) \times 75 + 2 \\
45753 &= F(F(4) \times 5) \times 75 + 3 \\
45754 &= F(F(4) \times 5) \times 75 + 4 \\
45755 &= F(F(4) \times 5) \times 75 + 5 \\
45756 &= F(F(4) \times 5) \times 75 + 6 \\
45757 &= F(F(4) \times 5) \times 75 + 7 \\
45758 &= F(F(4) \times 5) \times 75 + 8 \\
45759 &= F(F(4) \times 5) \times 75 + 9.
\end{aligned}$$

$$\begin{aligned}
28730 &= F(2 + F(8)) + 73 + 0 \\
28731 &= F(2 + F(8)) + 73 + 1 \\
28732 &= F(2 + F(8)) + 73 + 2 \\
28733 &= F(2 + F(8)) + 73 + 3 \\
28734 &= F(2 + F(8)) + 73 + 4 \\
28735 &= F(2 + F(8)) + 73 + 5 \\
28736 &= F(2 + F(8)) + 73 + 6 \\
28737 &= F(2 + F(8)) + 73 + 7 \\
28738 &= F(2 + F(8)) + 73 + 8 \\
28739 &= F(2 + F(8)) + 73 + 9.
\end{aligned}$$

$$\begin{aligned}
54900 &= F(5 \times F(4)) \times 90 + 0 \\
54901 &= F(5 \times F(4)) \times 90 + 1 \\
54902 &= F(5 \times F(4)) \times 90 + 2 \\
54903 &= F(5 \times F(4)) \times 90 + 3 \\
54904 &= F(5 \times F(4)) \times 90 + 4 \\
54905 &= F(5 \times F(4)) \times 90 + 5 \\
54906 &= F(5 \times F(4)) \times 90 + 6 \\
54907 &= F(5 \times F(4)) \times 90 + 7 \\
54908 &= F(5 \times F(4)) \times 90 + 8 \\
54909 &= F(5 \times F(4)) \times 90 + 9.
\end{aligned}$$

$$\begin{aligned}
43460 &= 4 \times (-3^4 + F(F(F(6)))) + 0 \\
43461 &= 4 \times (-3^4 + F(F(F(6)))) + 1 \\
43462 &= 4 \times (-3^4 + F(F(F(6)))) + 2 \\
43463 &= 4 \times (-3^4 + F(F(F(6)))) + 3 \\
43464 &= 4 \times (-3^4 + F(F(F(6)))) + 4 \\
43465 &= 4 \times (-3^4 + F(F(F(6)))) + 5 \\
43466 &= 4 \times (-3^4 + F(F(F(6)))) + 6 \\
43467 &= 4 \times (-3^4 + F(F(F(6)))) + 7 \\
43468 &= 4 \times (-3^4 + F(F(F(6)))) + 8 \\
43469 &= 4 \times (-3^4 + F(F(F(6)))) + 9.
\end{aligned}$$

$$\begin{aligned}
86920 &= 8 \times (F(F(F(6))) - 9^2) + 0 \\
86921 &= 8 \times (F(F(F(6))) - 9^2) + 1 \\
86922 &= 8 \times (F(F(F(6))) - 9^2) + 2 \\
86923 &= 8 \times (F(F(F(6))) - 9^2) + 3 \\
86924 &= 8 \times (F(F(F(6))) - 9^2) + 4 \\
86925 &= 8 \times (F(F(F(6))) - 9^2) + 5 \\
86926 &= 8 \times (F(F(F(6))) - 9^2) + 6 \\
86927 &= 8 \times (F(F(F(6))) - 9^2) + 7 \\
86928 &= 8 \times (F(F(F(6))) - 9^2) + 8 \\
86929 &= 8 \times (F(F(F(6))) - 9^2) + 9.
\end{aligned}$$

3.3 Symmetric Representations in Reverse Order of Digits

Below are examples of numbers written in reverse order of digits:

$$\begin{aligned}
17640 &= 0 + F(F(F(F(4))) + F(F(6))) - 71 & 20970 &= 0 + F(F(7)) \times 90 \times F(2) \\
17641 &= 1 + F(F(F(F(4))) + F(F(6))) - 71 & 20971 &= 1 + F(F(7)) \times 90 \times F(2) \\
17642 &= 2 + F(F(F(F(4))) + F(F(6))) - 71 & 20972 &= 2 + F(F(7)) \times 90 \times F(2) \\
17643 &= 3 + F(F(F(F(4))) + F(F(6))) - 71 & 20973 &= 3 + F(F(7)) \times 90 \times F(2) \\
17644 &= 4 + F(F(F(F(4))) + F(F(6))) - 71 & 20974 &= 4 + F(F(7)) \times 90 \times F(2) \\
17645 &= 5 + F(F(F(F(4))) + F(F(6))) - 71 & 20975 &= 5 + F(F(7)) \times 90 \times F(2) \\
17646 &= 6 + F(F(F(F(4))) + F(F(6))) - 71 & 20976 &= 6 + F(F(7)) \times 90 \times F(2) \\
17647 &= 7 + F(F(F(F(4))) + F(F(6))) - 71 & 20977 &= 7 + F(F(7)) \times 90 \times F(2) \\
17648 &= 8 + F(F(F(F(4))) + F(F(6))) - 71 & 20978 &= 8 + F(F(7)) \times 90 \times F(2) \\
17649 &= 9 + F(F(F(F(4))) + F(F(6))) - 71. & 20979 &= 9 + F(F(7)) \times 90 \times F(2).
\end{aligned}$$

$$\begin{aligned}
22180 &= 0 + (F(F(8)) + F(12)) \times 2 \\
22181 &= 1 + (F(F(8)) + F(12)) \times 2 \\
22182 &= 2 + (F(F(8)) + F(12)) \times 2 \\
22183 &= 3 + (F(F(8)) + F(12)) \times 2 \\
22184 &= 4 + (F(F(8)) + F(12)) \times 2 \\
22185 &= 5 + (F(F(8)) + F(12)) \times 2 \\
22186 &= 6 + (F(F(8)) + F(12)) \times 2 \\
22187 &= 7 + (F(F(8)) + F(12)) \times 2 \\
22188 &= 8 + (F(F(8)) + F(12)) \times 2 \\
22189 &= 9 + (F(F(8)) + F(12)) \times 2.
\end{aligned}$$

$$\begin{aligned}
39770 &= 0 + F(F(7)) + F(F(7)) + F(9)^3 \\
39771 &= 1 + F(F(7)) + F(F(7)) + F(9)^3 \\
39772 &= 2 + F(F(7)) + F(F(7)) + F(9)^3 \\
39773 &= 3 + F(F(7)) + F(F(7)) + F(9)^3 \\
39774 &= 4 + F(F(7)) + F(F(7)) + F(9)^3 \\
39775 &= 5 + F(F(7)) + F(F(7)) + F(9)^3 \\
39776 &= 6 + F(F(7)) + F(F(7)) + F(9)^3 \\
39777 &= 7 + F(F(7)) + F(F(7)) + F(9)^3 \\
39778 &= 8 + F(F(7)) + F(F(7)) + F(9)^3 \\
39779 &= 9 + F(F(7)) + F(F(7)) + F(9)^3.
\end{aligned}$$

4 Symmetric Representations in terms of F(2), F(3) and F(4)

In the previous section, we gave symmetric numbers as blocks of 10. Since, $F(2)=1$, $F(3)=2$ and $F(4)=3$, still we can have symmetric numbers as blocks of 3. Similar to previous section, here also we have symmetric numbers in order of digits and its reverse. There are numbers those can be written in both the ways. The work is limited up to 5 digits. These are given in subsections below.

4.1 Symmetric Representations in Both Ways

Below are symmetric numbers in $F(2)$, $F(3)$ and $F(4)$ in both ways, i.e., in digit's order and its reverse.

$$\begin{aligned}
4182 &= F(-F(4) + 1 + F(8)) + F(2) = F(2) + F(F(8)) + 1 - F(4) \\
4183 &= F(-F(4) + 1 + F(8)) + F(3) = F(3) + F(F(8)) + 1 - F(4) \\
4184 &= F(-F(4) + 1 + F(8)) + F(4) = F(4) + F(F(8)) + 1 - F(4).
\end{aligned}$$

$$\begin{aligned}
10952 &= F(F(10) - F(9)) + 5 + F(2) = F(2) + 5 + F(F(9 - 01)) \\
10953 &= F(F(10) - F(9)) + 5 + F(3) = F(3) + 5 + F(F(9 - 01)) \\
10954 &= F(F(10) - F(9)) + 5 + F(4) = F(4) + 5 + F(F(9 - 01)).
\end{aligned}$$

$$\begin{aligned}
10982 &= 1 + F(09) + F(F(8)) + F(2) = F(2) + F(F(8)) + F(9) + 01 \\
10983 &= 1 + F(09) + F(F(8)) + F(3) = F(3) + F(F(8)) + F(9) + 01 \\
10984 &= 1 + F(09) + F(F(8)) + F(4) = F(4) + F(F(8)) + F(9) + 01.
\end{aligned}$$

$$\begin{aligned}
28762 &= F(2 + F(8)) + F(7) \times F(6) + F(2) = F(2) + F(6) \times F(7) + F(F(8) + 2) \\
28763 &= F(2 + F(8)) + F(7) \times F(6) + F(3) = F(3) + F(6) \times F(7) + F(F(8) + 2) \\
28764 &= F(2 + F(8)) + F(7) \times F(6) + F(4) = F(4) + F(6) \times F(7) + F(F(8) + 2).
\end{aligned}$$

$$\begin{aligned}
32872 &= 3 \times (-2 + F(F(8)) + F(7)) + F(2) = F(2) + (F(7) + F(F(8)) - 2) \times 3 \\
32873 &= 3 \times (-2 + F(F(8)) + F(7)) + F(3) = F(3) + (F(7) + F(F(8)) - 2) \times 3 \\
32874 &= 3 \times (-2 + F(F(8)) + F(7)) + F(4) = F(4) + (F(7) + F(F(8)) - 2) \times 3.
\end{aligned}$$

$$\begin{aligned}
65592 &= F(F(6)) \times 5^5 - F(9) + F(2) = F(2) - F(9) + 5^5 \times F(F(6)) \\
65593 &= F(F(6)) \times 5^5 - F(9) + F(3) = F(3) - F(9) + 5^5 \times F(F(6)) \\
65594 &= F(F(6)) \times 5^5 - F(9) + F(4) = F(4) - F(9) + 5^5 \times F(F(6)).
\end{aligned}$$

$$\begin{aligned}
65652 &= F(F(F(6))) + 5 \times (F(F(F(6))) - 5) + F(2) = F(2) + (-5 + F(F(F(6)))) \times 5 + F(F(F(6))) \\
65653 &= F(F(F(6))) + 5 \times (F(F(F(6))) - 5) + F(3) = F(3) + (-5 + F(F(F(6)))) \times 5 + F(F(F(6))) \\
65654 &= F(F(F(6))) + 5 \times (F(F(F(6))) - 5) + F(4) = F(4) + (-5 + F(F(F(6)))) \times 5 + F(F(F(6))).
\end{aligned}$$

$$\begin{aligned}
65672 &= -F(F(F(6))) - 5 + F(F(F(6))) \times 7 + F(2) = F(2) + 7 \times F(F(F(6))) - 5 - F(F(F(6))) \\
65673 &= -F(F(F(6))) - 5 + F(F(F(6))) \times 7 + F(3) = F(3) + 7 \times F(F(F(6))) - 5 - F(F(F(6))) \\
65674 &= -F(F(F(6))) - 5 + F(F(F(6))) \times 7 + F(4) = F(4) + 7 \times F(F(F(6))) - 5 - F(F(F(6))).
\end{aligned}$$

$$\begin{aligned}
74992 &= F(F(7) + F(4) + 9) - F(9) + F(2) = F(2) - F(9) + F(9 + F(4) + F(7)) \\
74993 &= F(F(7) + F(4) + 9) - F(9) + F(3) = F(3) - F(9) + F(9 + F(4) + F(7)) \\
74994 &= F(F(7) + F(4) + 9) - F(9) + F(4) = F(4) - F(9) + F(9 + F(4) + F(7)).
\end{aligned}$$

$$\begin{aligned}
75272 &= F(7) + F(5^2) + F(F(7)) + F(2) = F(2) + F(F(7)) + F(25) + F(7) \\
75273 &= F(7) + F(5^2) + F(F(7)) + F(3) = F(3) + F(F(7)) + F(25) + F(7) \\
75274 &= F(7) + F(5^2) + F(F(7)) + F(4) = F(4) + F(F(7)) + F(25) + F(7).
\end{aligned}$$

$$\begin{aligned}
76392 &= 7 \times (F(F(F(6))) + F(F(3)) - F(9)) + F(2) = F(2) + (-F(9) + F(F(3)) + F(F(F(6)))) \times 7 \\
76393 &= 7 \times (F(F(F(6))) + F(F(3)) - F(9)) + F(3) = F(3) + (-F(9) + F(F(3)) + F(F(F(6)))) \times 7 \\
76394 &= 7 \times (F(F(F(6))) + F(F(3)) - F(9)) + F(4) = F(4) + (-F(9) + F(F(3)) + F(F(F(6)))) \times 7.
\end{aligned}$$

$$\begin{aligned}
76462 &= 7 \times (-F(F(6)) - F(F(4)) + F(F(F(6)))) + F(2) = F(2) + (F(F(F(6))) - F(F(4)) - F(F(6))) \times 7 \\
76463 &= 7 \times (-F(F(6)) - F(F(4)) + F(F(F(6)))) + F(3) = F(3) + (F(F(F(6))) - F(F(4)) - F(F(6))) \times 7 \\
76464 &= 7 \times (-F(F(6)) - F(F(4)) + F(F(F(6)))) + F(4) = F(4) + (F(F(F(6))) - F(F(4)) - F(F(6))) \times 7.
\end{aligned}$$

$$\begin{aligned}
76532 &= 7 \times (F(F(F(6))) - F(5 + F(3))) + F(2) = F(2) + (-F(F(3) + 5) + F(F(F(6)))) \times 7 \\
76533 &= 7 \times (F(F(F(6))) - F(5 + F(3))) + F(3) = F(3) + (-F(F(3) + 5) + F(F(F(6)))) \times 7 \\
76534 &= 7 \times (F(F(F(6))) - F(5 + F(3))) + F(4) = F(4) + (-F(F(3) + 5) + F(F(F(6)))) \times 7.
\end{aligned}$$

$$\begin{aligned}
76672 &= (7 + F(F(F(6)))) \times (-6 + F(7)) + F(2) = F(2) + (7 + F(F(F(6)))) \times (-6 + F(7)) \\
76673 &= (7 + F(F(F(6)))) \times (-6 + F(7)) + F(3) = F(3) + (7 + F(F(F(6)))) \times (-6 + F(7)) \\
76674 &= (7 + F(F(F(6)))) \times (-6 + F(7)) + F(4) = F(4) + (7 + F(F(F(6)))) \times (-6 + F(7)).
\end{aligned}$$

$$\begin{aligned}
76742 &= 7 \times (F(F(F(6))) + F(7) + 4) + F(2) = F(2) + (4 + F(7) + F(F(F(6)))) \times 7 \\
76743 &= 7 \times (F(F(F(6))) + F(7) + 4) + F(3) = F(3) + (4 + F(7) + F(F(F(6)))) \times 7 \\
76744 &= 7 \times (F(F(F(6))) + F(7) + 4) + F(4) = F(4) + (4 + F(7) + F(F(F(6)))) \times 7.
\end{aligned}$$

$$\begin{aligned}
86582 &= F(F(8)) \times F(6) - F(-5 + F(8)) + F(2) = F(2) - F(F(8) - 5) + F(6) \times F(F(8)) \\
86583 &= F(F(8)) \times F(6) - F(-5 + F(8)) + F(3) = F(3) - F(F(8) - 5) + F(6) \times F(F(8)) \\
86584 &= F(F(8)) \times F(6) - F(-5 + F(8)) + F(4) = F(4) - F(F(8) - 5) + F(6) \times F(F(8)).
\end{aligned}$$

$$\begin{aligned}
98282 &= 9 \times F(F(8)) - F(F(-F(2) + 8)) + F(2) = F(2) - F(F(8 - F(2))) + F(F(8)) \times 9 \\
98283 &= 9 \times F(F(8)) - F(F(-F(2) + 8)) + F(3) = F(3) - F(F(8 - F(2))) + F(F(8)) \times 9 \\
98284 &= 9 \times F(F(8)) - F(F(-F(2) + 8)) + F(4) = F(4) - F(F(8 - F(2))) + F(F(8)) \times 9.
\end{aligned}$$

$$\begin{aligned}
98452 &= 9 \times (F(F(8)) - F(F(4)) - 5) + F(2) = F(2) + (-5 - F(F(4)) + F(F(8))) \times 9 \\
98453 &= 9 \times (F(F(8)) - F(F(4)) - 5) + F(3) = F(3) + (-5 - F(F(4)) + F(F(8))) \times 9 \\
98454 &= 9 \times (F(F(8)) - F(F(4)) - 5) + F(4) = F(4) + (-5 - F(F(4)) + F(F(8))) \times 9.
\end{aligned}$$

$$\begin{aligned}
98542 &= 9 \times (F(F(8)) + 5 - F(F(4))) + F(2) = F(2) + (-F(F(4)) + 5 + F(F(8))) \times 9 \\
98543 &= 9 \times (F(F(8)) + 5 - F(F(4))) + F(3) = F(3) + (-F(F(4)) + 5 + F(F(8))) \times 9 \\
98544 &= 9 \times (F(F(8)) + 5 - F(F(4))) + F(4) = F(4) + (-F(F(4)) + 5 + F(F(8))) \times 9.
\end{aligned}$$

$$\begin{aligned}
98632 &= 9 \times (F(F(8)) + F(F(6) - F(F(3)))) + F(2) = F(2) + (F(F(F(3)) + 6) + F(F(8))) \times 9 \\
98633 &= 9 \times (F(F(8)) + F(F(6) - F(F(3)))) + F(3) = F(3) + (F(F(F(3)) + 6) + F(F(8))) \times 9 \\
98634 &= 9 \times (F(F(8)) + F(F(6) - F(F(3)))) + F(4) = F(4) + (F(F(F(3)) + 6) + F(F(8))) \times 9.
\end{aligned}$$

4.2 Symmetric Representations in Digit's Order

Below are symmetric numbers in $F(2)$, $F(3)$ and $F(4)$ in digit's order.

$$52442 = (F(F(5+2)) - 4)^{F(F(4))} + F(2)$$

$$52443 = (F(F(5+2)) - 4)^{F(F(4))} + F(3)$$

$$52444 = (F(F(5+2)) - 4)^{F(F(4))} + F(4).$$

$$76692 = 7 \times F(F(F(6))) + 69 + F(2)$$

$$76693 = 7 \times F(F(F(6))) + 69 + F(3)$$

$$76694 = 7 \times F(F(F(6))) + 69 + F(4).$$

$$98572 = 9 \times F(F(8)) + 57 + F(2)$$

$$98573 = 9 \times F(F(8)) + 57 + F(3)$$

$$98574 = 9 \times F(F(8)) + 57 + F(4).$$

4.3 Symmetric Representations in Reverse Order of Digits

Below are symmetric numbers in $F(2)$, $F(3)$ and $F(4)$ in reverse order of digits.

$$39072 = F(2) - F(F(7)) + F(09)^3$$

$$39073 = F(3) - F(F(7)) + F(09)^3$$

$$39074 = F(4) - F(F(7)) + F(09)^3.$$

$$58912 = F(2) + F(19) + F(F(8)) \times 5$$

$$58913 = F(3) + F(19) + F(F(8)) \times 5$$

$$58914 = F(4) + F(19) + F(F(8)) \times 5.$$

$$65642 = F(2) + 4^{F(6)} + 5 \times F(F(6))$$

$$65643 = F(3) + 4^{F(6)} + 5 \times F(F(6))$$

$$65644 = F(4) + 4^{F(6)} + 5 \times F(F(6)).$$

$$67362 = F(2) - F(F(6))^3 + 7 \times F(F(F(6)))$$

$$67363 = F(3) - F(F(6))^3 + 7 \times F(F(F(6)))$$

$$67364 = F(4) - F(F(6))^3 + 7 \times F(F(F(6))).$$

5 Symmetric Representations in $F(F(3))$ and $F(F(4))$

In the previous section, we gave symmetric numbers in terms of $F(2)$, $F(3)$ and $F(4)$. Since $F(F(3))=1$ and $F(F(4))=2$, here also we have symmetric numbers in order of digits and its reverse. There are numbers those can be written in both the ways. The work is limited up to 5 digits. These are given in subsections below.

5.1 Symmetric Representations in Both Ways

Below are symmetric numbers in $F(F(3))$ and $F(F(4))$ in both ways, i.e., in digit's order and its reverse.

$$7923 = F(F(7)) \times F(9) \times F(2) + F(F(3)) = F(F(3)) + F(2) \times F(9) \times F(F(7))$$

$$7924 = F(F(7)) \times F(9) \times F(2) + F(F(4)) = F(F(4)) + F(2) \times F(9) \times F(F(7)).$$

$$8363 = F(F(8)) - F(3 \times 6) + F(F(3)) = F(F(3)) - F(6 \times 3) + F(F(8))$$

$$8364 = F(F(8)) - F(3 \times 6) + F(F(4)) = F(F(4)) - F(6 \times 3) + F(F(8))$$

$$10943 = F(F(-1 + 09)) - 4 + F(F(3)) = F(F(3)) - 4 + F(F(9 - 01))$$

$$10944 = F(F(-1 + 09)) - 4 + F(F(4)) = F(F(4)) - 4 + F(F(9 - 01)).$$

$$21963 = 2 \times (1 + F(9) + F(F(F(6)))) + F(F(3)) = F(F(3)) + (F(F(F(6))) + F(9) + 1) \times 2$$

$$21964 = 2 \times (1 + F(9) + F(F(F(6)))) + F(F(4)) = F(F(4)) + (F(F(F(6))) + F(9) + 1) \times 2.$$

$$32863 = 3 \times F(2) \times (F(F(8)) + F(6)) + F(F(3)) = F(F(3)) + (F(6) + F(F(8))) \times F(2) \times 3$$

$$32864 = 3 \times F(2) \times (F(F(8)) + F(6)) + F(F(4)) = F(F(4)) + (F(6) + F(F(8))) \times F(2) \times 3.$$

$$35423 = F(3) \times F(5 \times 4 + 2) + F(F(3)) = F(F(3)) + F(2 + 4 \times 5) \times F(3)$$

$$35424 = F(3) \times F(5 \times 4 + 2) + F(F(4)) = F(F(4)) + F(2 + 4 \times 5) \times F(3).$$

$$43793 = 4 \times (F(3) + F(-F(7) + F(9))) + F(F(3)) = F(F(3)) + (F(F(9) - F(7)) + F(3)) \times 4$$

$$43794 = 4 \times (F(3) + F(-F(7) + F(9))) + F(F(4)) = F(F(4)) + (F(F(9) - F(7)) + F(3)) \times 4.$$

$$66493 = 6 \times (F(F(F(6)))) + 4 \times F(9) + F(F(3)) = F(F(3)) + (F(9) \times 4 + F(F(F(6)))) \times 6$$

$$66494 = 6 \times (F(F(F(6)))) + 4 \times F(9) + F(F(4)) = F(F(4)) + (F(9) \times 4 + F(F(F(6)))) \times 6.$$

$$68473 = 6 \times (F(F(8)) + F(F(4)) \times F(F(7))) + F(F(3)) = F(F(3)) + (F(F(7)) \times F(F(4)) + F(F(8))) \times 6$$

$$68474 = 6 \times (F(F(8)) + F(F(4)) \times F(F(7))) + F(F(4)) = F(F(4)) + (F(F(7)) \times F(F(4)) + F(F(8))) \times 6.$$

$$74793 = -F(F(7)) + F(4 - F(7) + F(9)) + F(F(3)) = F(F(3)) + F(F(9) - F(7) + 4) - F(F(7))$$

$$74794 = -F(F(7)) + F(4 - F(7) + F(9)) + F(F(4)) = F(F(4)) + F(F(9) - F(7) + 4) - F(F(7)).$$

$$75293 = F(F(7)) + F(5^2) + F(9) + F(F(3)) = F(F(3)) + F(9) + F(25) + F(F(7))$$

$$75294 = F(F(7)) + F(5^2) + F(9) + F(F(4)) = F(F(4)) + F(9) + F(25) + F(F(7)).$$

$$76553 = 7 \times (F(F(F(6))) - 5 - 5) + F(F(3)) = F(F(3)) + (-5 - 5 + F(F(F(6)))) \times 7$$

$$76554 = 7 \times (F(F(F(6))) - 5 - 5) + F(F(4)) = F(F(4)) + (-5 - 5 + F(F(F(6)))) \times 7.$$

$$76623 = F(F(7) + F(6)) \times (6 + F(2)) + F(F(3)) = F(F(3)) + (F(2) + 6) \times F(F(6) + F(7))$$

$$76624 = F(F(7) + F(6)) \times (6 + F(2)) + F(F(4)) = F(F(3)) + (F(2) + 6) \times F(F(6) + F(7)).$$

$$76653 = 7 \times F(F(F(6))) + 6 \times 5 + F(F(3)) = F(F(3)) + 5 \times 6 + F(F(F(6))) \times 7$$

$$76654 = 7 \times F(F(F(6))) + 6 \times 5 + F(F(4)) = F(F(4)) + 5 \times 6 + F(F(F(6))) \times 7.$$

$$87513 = (F(F(8)) - 7) \times F(5 + 1) + F(F(3)) = F(F(3)) + F(1 + 5) \times (-7 + F(F(8)))$$

$$87514 = (F(F(8)) - 7) \times F(5 + 1) + F(F(4)) = F(F(4)) + F(1 + 5) \times (-7 + F(F(8))).$$

$$87673 = 8 \times (F(7) + F(F(6) + F(7))) + F(F(3)) = F(F(3)) + (F(7) + F(F(6) + F(7))) \times 8$$

$$87674 = 8 \times (F(7) + F(F(6) + F(7))) + F(F(4)) = F(F(4)) + (F(7) + F(F(6) + F(7))) \times 8.$$

$$98623 = 9 \times (F(F(8)) + 6 \times 2) + F(F(3)) = F(F(3)) + (2 \times 6 + F(F(8))) \times 9$$

$$98624 = 9 \times (F(F(8)) + 6 \times 2) + F(F(4)) = F(F(4)) + (2 \times 6 + F(F(8))) \times 9.$$

$$98683 = 9 \times (F(F(8)) + F(F(6))) - F(8) + F(F(3)) = F(F(3)) - F(8) + (F(F(6)) + F(F(8))) \times 9$$

$$98684 = 9 \times (F(F(8)) + F(F(6))) - F(8) + F(F(4)) = F(F(4)) - F(8) + (F(F(6)) + F(F(8))) \times 9.$$

$$98753 = 9 \times F(F(8)) + F(F(7)) + 5 + F(F(3)) = F(F(3)) + 5 + F(F(7)) + F(F(8)) \times 9$$

$$98754 = 9 \times F(F(8)) + F(F(7)) + 5 + F(F(4)) = F(F(4)) + 5 + F(F(7)) + F(F(8)) \times 9.$$

$$98893 = 9 \times (F(F(8)) + 8 + F(9)) + F(F(3)) = F(F(3)) + (F(9) + 8 + F(F(8))) \times 9$$

$$98894 = 9 \times (F(F(8)) + 8 + F(9)) + F(F(4)) = F(F(4)) + (F(9) + 8 + F(F(8))) \times 9.$$

5.2 Symmetric Representations Reverse order of Digits

Below are symmetric numbers in $F(F(3))$ and $F(F(4))$ in reverse order of digits:

$$\begin{aligned} 20973 &= F(F(3)) + F(F(7)) \times 90 + 2 \\ 20974 &= F(F(4)) + F(F(7)) \times 90 + 2. \end{aligned}$$

$$\begin{aligned} 74393 &= F(F(3)) + F(9) \times (F(F(3)) + F(4)^7) \\ 74394 &= F(F(4)) + F(9) \times (F(F(3)) + F(4)^7). \end{aligned}$$

$$\begin{aligned} 28673 &= F(F(3)) + 7 \times F(6)^{8/2}. \\ 28674 &= F(F(4)) + 7 \times F(6)^{8/2}. \end{aligned}$$

$$\begin{aligned} 74763 &= F(F(3)) + (F(F(6)) \times F(7))^{F(F(4))} + F(F(7)) \\ 74764 &= F(F(4)) + (F(F(6)) \times F(7))^{F(F(4))} + F(F(7)). \end{aligned}$$

$$\begin{aligned} 39253 &= F(F(3)) - 52 + F(9)^3 \\ 39254 &= F(F(4)) - 52 + F(9)^3. \end{aligned}$$

$$\begin{aligned} 75033 &= F(F(3)) + F(30 - 5) + 7 \\ 75034 &= F(F(4)) + F(30 - 5) + 7. \end{aligned}$$

$$\begin{aligned} 39383 &= F(F(3)) + (8 + 3^9) \times F(3) \\ 39384 &= F(F(4)) + (8 + 3^9) \times F(3). \end{aligned}$$

$$\begin{aligned} 86793 &= F(F(3)) + (-97 + F(F(F(6)))) \times 8 \\ 86794 &= F(F(4)) + (-97 + F(F(F(6)))) \times 8. \end{aligned}$$

$$\begin{aligned} 59283 &= F(F(3)) + F(F(8 - F(2))) + 9^5 \\ 59284 &= F(F(4)) + F(F(8 - F(2))) + 9^5. \end{aligned}$$

$$\begin{aligned} 97363 &= F(F(3)) + (F(F(F(6))) - F(3)^7) \times 9 \\ 97364 &= F(F(4)) + (F(F(F(6))) - F(3)^7) \times 9. \end{aligned}$$

$$\begin{aligned} 69633 &= F(F(3)) + F(3)^{F(6)} \times F(9) \times F(6) \\ 69634 &= F(F(4)) + F(3)^{F(6)} \times F(9) \times F(6). \end{aligned}$$

$$\begin{aligned} 98263 &= F(F(3)) + (F(F(F(6))) - 28) \times 9 \\ 98264 &= F(F(4)) + (F(F(F(6))) - 28) \times 9. \end{aligned}$$

6 Number Patterns with Fibonacci Sequence Values

There are numbers that can be extended just multiplying by 10 without loss of properties of numbers. This type we call as *number patterns*. This section deals with numbers patterns in *selfie numbers* having Fibonacci sequence values. This kind of numbers are only in terms of digit's order.

$$\begin{aligned} 63 &= F(F(6)) \times 3 \\ 630 &= F(F(6)) \times 30 \\ 6300 &= F(F(6)) \times 300. \end{aligned}$$

$$\begin{aligned} 1365 &= 13 \times F(F(6)) \times 5 \\ 13650 &= 13 \times F(F(6)) \times 50 \\ 136500 &= 13 \times F(F(6)) \times 500. \end{aligned}$$

$$\begin{aligned} 168 &= 1 \times F(F(6)) \times 8 \\ 1680 &= 1 \times F(F(6)) \times 80 \\ 16800 &= 1 \times F(F(6)) \times 800. \end{aligned}$$

$$\begin{aligned} 1687 &= (F(F(1 + 6)) + 8) \times 7 \\ 16870 &= (F(F(1 + 6)) + 8) \times 70 \\ 168700 &= (F(F(1 + 6)) + 8) \times 700. \end{aligned}$$

$$\begin{aligned} 472 &= (F(4) + F(F(7))) \times 2 \\ 4720 &= (F(4) + F(F(7))) \times 20 \\ 47200 &= (F(4) + F(F(7))) \times 200. \end{aligned}$$

$$\begin{aligned} 1848 &= (F(F(-1 + 8)) - F(F(4))) \times 8 \\ 18480 &= (F(F(-1 + 8)) - F(F(4))) \times 80 \\ 184800 &= (F(F(-1 + 8)) - F(F(4))) \times 800. \end{aligned}$$

$$\begin{aligned} 1165 &= F(F(1 \times 1 + 6)) \times 5 \\ 11650 &= F(F(1 \times 1 + 6)) \times 50 \\ 116500 &= F(F(1 \times 1 + 6)) \times 500. \end{aligned}$$

$$\begin{aligned} 1885 &= F(1 + F(8) - 8) \times 5 \\ 18850 &= F(1 + F(8) - 8) \times 50 \\ 188500 &= F(1 + F(8) - 8) \times 500. \end{aligned}$$

$$\begin{aligned} 1175 &= (1 + 1 + F(F(7))) \times 5 \\ 11750 &= (1 + 1 + F(F(7))) \times 50 \\ 117500 &= (1 + 1 + F(F(7))) \times 500. \end{aligned}$$

$$\begin{aligned} 2079 &= (-2 + F(F(07))) \times 9 \\ 20790 &= (-2 + F(F(07))) \times 90 \\ 207900 &= (-2 + F(F(07))) \times 900. \end{aligned}$$

$$\begin{aligned}
2645 &= (2 + F(F(6)))^{F(F(4))} \times 5 \\
26450 &= (2 + F(F(6)))^{F(F(4))} \times 50 \\
264500 &= (2 + F(F(6)))^{F(F(4))} \times 500. \\
2646 &= F(2 + 6)^{F(F(4))} \times 6 \\
26460 &= F(2 + 6)^{F(F(4))} \times 60 \\
264600 &= F(2 + 6)^{F(F(4))} \times 600. \\
3666 &= (F(F(3)) + F(-6 + F(F(6)))) \times 6 \\
36660 &= (F(F(3)) + F(-6 + F(F(6)))) \times 60 \\
366600 &= (F(F(3)) + F(-6 + F(F(6)))) \times 600. \\
3864 &= (F(F(3) \times 8) - F(F(6))) \times 4 \\
38640 &= (F(F(3) \times 8) - F(F(6))) \times 40 \\
386400 &= (F(F(3) \times 8) - F(F(6))) \times 400. \\
4277 &= (F(F(F(4))) + F(2 + F(7))) \times 7 \\
42770 &= (F(F(F(4))) + F(2 + F(7))) \times 70 \\
427700 &= (F(F(F(4))) + F(2 + F(7))) \times 700. \\
4765 &= (4 \times F(F(7)) + F(F(6))) \times 5 \\
47650 &= (4 \times F(F(7)) + F(F(6))) \times 50 \\
476500 &= (4 \times F(F(7)) + F(F(6))) \times 500. \\
5785 &= (5 \times F(F(7)) - 8) \times 5 \\
57850 &= (5 \times F(F(7)) - 8) \times 50 \\
578500 &= (5 \times F(F(7)) - 8) \times 500. \\
6728 &= (F(F(F(6)))/F(7) - F(2)) \times 8 \\
67280 &= (F(F(F(6)))/F(7) - F(2)) \times 80 \\
672800 &= (F(F(F(6)))/F(7) - F(2)) \times 800. \\
7448 &= (F(F(7)) \times 4 - F(F(F(4)))) \times 8 \\
74480 &= (F(F(7)) \times 4 - F(F(F(4)))) \times 80 \\
744800 &= (F(F(7)) \times 4 - F(F(F(4)))) \times 800. \\
7645 &= (F(F(7)) + 6^4) \times 5 \\
76450 &= (F(F(7)) + 6^4) \times 50 \\
764500 &= (F(F(7)) + 6^4) \times 500. \\
7985 &= F(-F(7) + 9 + F(8)) \times 5 \\
79850 &= F(-F(7) + 9 + F(8)) \times 50 \\
798500 &= F(-F(7) + 9 + F(8)) \times 500. \\
8352 &= (F(F(8) - F(3)) - 5) \times 2 \\
83520 &= (F(F(8) - F(3)) - 5) \times 20 \\
835200 &= (F(F(8) - F(3)) - 5) \times 200. \\
10443 &= (F(10) + 4)^{F(F(4))} \times 3 \\
104430 &= (F(10) + 4)^{F(F(4))} \times 30 \\
1044300 &= (F(10) + 4)^{F(F(4))} \times 300. \\
11466 &= (F(11) + F(F(4))) \times F(F(6)) \times 6 \\
114660 &= (F(11) + F(F(4))) \times F(F(6)) \times 60 \\
1146600 &= (F(11) + F(F(4))) \times F(F(6)) \times 600. \\
12264 &= (F(12) + 2) \times F(F(6)) \times 4 \\
122640 &= (F(12) + 2) \times F(F(6)) \times 40 \\
1226400 &= (F(12) + 2) \times F(F(6)) \times 400. \\
12768 &= (-1 + F(2 + 7 + F(6))) \times 8 \\
127680 &= (-1 + F(2 + 7 + F(6))) \times 80 \\
1276800 &= (-1 + F(2 + 7 + F(6))) \times 800. \\
13765 &= (-1 - F(3)^{F(7)} + F(F(F(6)))) \times 5 \\
137650 &= (-1 - F(3)^{F(7)} + F(F(F(6)))) \times 50 \\
1376500 &= (-1 - F(3)^{F(7)} + F(F(F(6)))) \times 500. \\
13975 &= (-1 + (3 + 9) \times F(F(7))) \times 5 \\
139750 &= (-1 + (3 + 9) \times F(F(7))) \times 50 \\
1397500 &= (-1 + (3 + 9) \times F(F(7))) \times 500. \\
14637 &= (1 + F(-F(F(4)) + F(F(6))))/F(3) \times 7 \\
146370 &= (1 + F(-F(F(4)) + F(F(6))))/F(3) \times 70 \\
1463700 &= (1 + F(-F(F(4)) + F(F(6))))/F(3) \times 700. \\
16372 &= (-1 \times 6 + F(3)^{F(7)}) \times 2 \\
163720 &= (-1 \times 6 + F(3)^{F(7)}) \times 20 \\
1637200 &= (-1 \times 6 + F(3)^{F(7)}) \times 200. \\
16413 &= (-1 + F(F(F(6)))/F(F(4)) - 1) \times 3 \\
164130 &= (-1 + F(F(F(6)))/F(F(4)) - 1) \times 30 \\
1641300 &= (-1 + F(F(F(6)))/F(F(4)) - 1) \times 300. \\
16464 &= (-1 + F(F(6)) + 4^6) \times 4 \\
164640 &= (-1 + F(F(6)) + 4^6) \times 40 \\
1646400 &= (-1 + F(F(6)) + 4^6) \times 400. \\
16479 &= (-1 - F(6) \times (4 - F(F(7)))) \times 9 \\
164790 &= (-1 - F(6) \times (4 - F(F(7)))) \times 90 \\
1647900 &= (-1 - F(6) \times (4 - F(F(7)))) \times 900. \\
16644 &= (1 - F(F(6)) + F(F(F(6)) - F(F(4)))) \times 4 \\
166440 &= (1 - F(F(6)) + F(F(F(6)) - F(F(4)))) \times 40 \\
1664400 &= (1 - F(F(6)) + F(F(F(6)) - F(F(4)))) \times 400. \\
16722 &= (-1 + F(6 + F(7))) \times 2 \times 2 \\
167220 &= (-1 + F(6 + F(7))) \times 2 \times 20 \\
1672200 &= (-1 + F(6 + F(7))) \times 2 \times 200. \\
16728 &= (1 + F(6 + F(7)))/2 \times 8 \\
167280 &= (1 + F(6 + F(7)))/2 \times 80 \\
1672800 &= (1 + F(6 + F(7)))/2 \times 800.
\end{aligned}$$

$$\begin{aligned}
16744 &= (1 + F(6 + F(7)) + 4) \times 4 \\
167440 &= (1 + F(6 + F(7)) + 4) \times 40 \\
1674400 &= (1 + F(6 + F(7)) + 4) \times 400. \\
16749 &= (F(1 \times 6) \times F(F(7)) - F(4)) \times 9 \\
167490 &= (F(1 \times 6) \times F(F(7)) - F(4)) \times 90 \\
1674900 &= (F(1 \times 6) \times F(F(7)) - F(4)) \times 900. \\
16935 &= (F(-1 + F(F(6))) + 9)/F(3) \times 5 \\
169350 &= (F(-1 + F(F(6))) + 9)/F(3) \times 50 \\
1693500 &= (F(-1 + F(F(6))) + 9)/F(3) \times 500. \\
17568 &= (-1 + F(7))^{-5+F(6)} \times 8 \\
175680 &= (-1 + F(7))^{-5+F(6)} \times 80 \\
1756800 &= (-1 + F(7))^{-5+F(6)} \times 800. \\
18235 &= (-1 + (F(F(8)) - 2)/3) \times 5 \\
182350 &= (-1 + (F(F(8)) - 2)/3) \times 50 \\
1823500 &= (-1 + (F(F(8)) - 2)/3) \times 500. \\
18245 &= (1 + F(F(8)))/(-F(2) + 4) \times 5 \\
182450 &= (1 + F(F(8)))/(-F(2) + 4) \times 50 \\
1824500 &= (1 + F(F(8)))/(-F(2) + 4) \times 500. \\
18756 &= (1 + (-8 + F(7))^5) \times 6 \\
187560 &= (1 + (-8 + F(7))^5) \times 60 \\
1875600 &= (1 + (-8 + F(7))^5) \times 600. \\
19735 &= (F(19) - F(F(7)) - F(F(3))) \times 5 \\
197350 &= (F(19) - F(F(7)) - F(F(3))) \times 50 \\
1973500 &= (F(19) - F(F(7)) - F(F(3))) \times 500. \\
19775 &= (F(19) + 7 - F(F(7))) \times 5 \\
197750 &= (F(19) + 7 - F(F(7))) \times 50 \\
1977500 &= (F(19) + 7 - F(F(7))) \times 500. \\
20865 &= (F(-2 + F(08)) - F(6)) \times 5 \\
208650 &= (F(-2 + F(08)) - F(6)) \times 50 \\
2086500 &= (F(-2 + F(08)) - F(6)) \times 500. \\
21782 &= (-F(2 + 1 + 7) + F(F(8))) \times 2 \\
217820 &= (-F(2 + 1 + 7) + F(F(8))) \times 20 \\
2178200 &= (-F(2 + 1 + 7) + F(F(8))) \times 200. \\
21842 &= (F(21) - F(8) - 4) \times 2 \\
218420 &= (F(21) - F(8) - 4) \times 20 \\
2184200 &= (F(21) - F(8) - 4) \times 200. \\
21872 &= (-2 - 1 + F(F(8)) - 7) \times 2 \\
218720 &= (-2 - 1 + F(F(8)) - 7) \times 20 \\
2187200 &= (-2 - 1 + F(F(8)) - 7) \times 200. \\
23676 &= (-2 + F(-F(3) + F(F(6))) - F(F(7))) \times 6 \\
236760 &= (-2 + F(-F(3) + F(F(6))) - F(F(7))) \times 60 \\
2367600 &= (-2 + F(-F(3) + F(F(6))) - F(F(7))) \times 600. \\
23945 &= (-2 + 3 \times F(F(9)/F(F(4)))) \times 5 \\
239450 &= (-2 + 3 \times F(F(9)/F(F(4)))) \times 50 \\
2394500 &= (-2 + 3 \times F(F(9)/F(F(4)))) \times 500. \\
23965 &= (2 + 3 \times F(9 + F(6))) \times 5 \\
239650 &= (2 + 3 \times F(9 + F(6))) \times 50 \\
2396500 &= (2 + 3 \times F(9 + F(6))) \times 500. \\
24465 &= F(2^4 - F(4)) \times F(F(6)) \times 5 \\
244650 &= F(2^4 - F(4)) \times F(F(6)) \times 50 \\
2446500 &= F(2^4 - F(4)) \times F(F(6)) \times 500. \\
24475 &= (2 + F(4 + 4) \times F(F(7))) \times 5 \\
244750 &= (2 + F(4 + 4) \times F(F(7))) \times 50 \\
2447500 &= (2 + F(4 + 4) \times F(F(7))) \times 500. \\
24785 &= (F(2) + (F(4) + F(F(7))) \times F(8)) \times 5 \\
247850 &= (F(2) + (F(4) + F(F(7))) \times F(8)) \times 50 \\
2478500 &= (F(2) + (F(4) + F(F(7))) \times F(8)) \times 500. \\
24843 &= (2 + F(F(4) + 8))^{F(F(4))} \times 3 \\
248430 &= (2 + F(F(4) + 8))^{F(F(4))} \times 30 \\
2484300 &= (2 + F(F(4) + 8))^{F(F(4))} \times 300. \\
25775 &= (2 \times F(5 + F(7)) - F(7)) \times 5 \\
257750 &= (2 \times F(5 + F(7)) - F(7)) \times 50 \\
2577500 &= (2 \times F(5 + F(7)) - F(7)) \times 500. \\
25795 &= (2 \times F(5 + F(7)) - 9) \times 5 \\
257950 &= (2 \times F(5 + F(7)) - 9) \times 50 \\
2579500 &= (2 \times F(5 + F(7)) - 9) \times 500. \\
26047 &= (F(2) + 60)^{F(F(4))} \times 7 \\
260470 &= (F(2) + 60)^{F(F(4))} \times 70 \\
2604700 &= (F(2) + 60)^{F(F(4))} \times 700. \\
26464 &= (F(2 + F(6)) + F(4))^{F(6)} \times 4 \\
264640 &= (F(2 + F(6)) + F(4))^{F(6)} \times 40 \\
2646400 &= (F(2 + F(6)) + F(4))^{F(6)} \times 400. \\
26484 &= (F(-F(2) + F(F(6))) - F(4 + 8)) \times 4 \\
264840 &= (F(-F(2) + F(F(6))) - F(4 + 8)) \times 40 \\
2648400 &= (F(-F(2) + F(F(6))) - F(4 + 8)) \times 400. \\
26645 &= (-F(2 \times 6) + F(F(F(6)))/F(F(4))) \times 5 \\
266450 &= (-F(2 \times 6) + F(F(F(6)))/F(F(4))) \times 50 \\
2664500 &= (-F(2 \times 6) + F(F(F(6)))/F(F(4))) \times 500.
\end{aligned}$$

$$\begin{aligned} 26675 &= (F(2) + F(F(6)) \times (F(F(6)) + F(F(7)))) \times 5 \\ 266750 &= (F(2) + F(F(6)) \times (F(F(6)) + F(F(7)))) \times 50 \\ 2667500 &= (F(2) + F(F(6)) \times (F(F(6)) + F(F(7)))) \times 500. \end{aligned}$$

$$\begin{aligned} 26765 &= ((2 + F(F(6))) \times F(F(7)) - 6) \times 5 \\ 267650 &= ((2 + F(F(6))) \times F(F(7)) - 6) \times 50 \\ 2676500 &= ((2 + F(F(6))) \times F(F(7)) - 6) \times 500. \end{aligned}$$

$$\begin{aligned} 27164 &= (2 \times F(7) + F(-1 + F(F(6)))) \times 4 \\ 271640 &= (2 \times F(7) + F(-1 + F(F(6)))) \times 40 \\ 2716400 &= (2 \times F(7) + F(-1 + F(F(6)))) \times 400. \end{aligned}$$

$$\begin{aligned} 27279 &= (2 + F(F(7)) \times F(2) \times F(7)) \times 9 \\ 272790 &= (2 + F(F(7)) \times F(2) \times F(7)) \times 90 \\ 2727900 &= (2 + F(F(7)) \times F(2) \times F(7)) \times 900. \end{aligned}$$

$$\begin{aligned} 27345 &= (F(F(F(2) + 7))/F(3) - 4) \times 5 \\ 273450 &= (F(F(F(2) + 7))/F(3) - 4) \times 50 \\ 2734500 &= (F(F(F(2) + 7))/F(3) - 4) \times 500. \end{aligned}$$

$$\begin{aligned} 27365 &= F(F(F(2) + 7))/F(-3 + 6) \times 5 \\ 273650 &= F(F(F(2) + 7))/F(-3 + 6) \times 50 \\ 2736500 &= F(F(F(2) + 7))/F(-3 + 6) \times 500. \end{aligned}$$

$$\begin{aligned} 27963 &= (F(2) + F(F(7)) \times (F(9) + 6)) \times 3 \\ 279630 &= (F(2) + F(F(7)) \times (F(9) + 6)) \times 30 \\ 2796300 &= (F(2) + F(F(7)) \times (F(9) + 6)) \times 300. \end{aligned}$$

$$\begin{aligned} 27964 &= (F(2) + F(F(7)) \times (9 + F(F(6)))) \times 4 \\ 279640 &= (F(2) + F(F(7)) \times (9 + F(F(6)))) \times 40 \\ 2796400 &= (F(2) + F(F(7)) \times (9 + F(F(6)))) \times 400. \end{aligned}$$

$$\begin{aligned} 27968 &= (F(2) + F(F(7)) \times (9 + 6)) \times 8 \\ 279680 &= (F(2) + F(F(7)) \times (9 + 6)) \times 80 \\ 2796800 &= (F(2) + F(F(7)) \times (9 + 6)) \times 800. \end{aligned}$$

$$\begin{aligned} 28824 &= (F(-F(2) + F(8)) + F(8)^2) \times 4 \\ 288240 &= (F(-F(2) + F(8)) + F(8)^2) \times 40 \\ 2882400 &= (F(-F(2) + F(8)) + F(8)^2) \times 400. \end{aligned}$$

$$\begin{aligned} 29466 &= (-2 + F(9)^{F(4)}/F(6)) \times 6 \\ 294660 &= (-2 + F(9)^{F(4)}/F(6)) \times 60 \\ 2946600 &= (-2 + F(9)^{F(4)}/F(6)) \times 600. \end{aligned}$$

$$\begin{aligned} 29766 &= (2 \times F(9) + F(F(7)) \times F(F(6))) \times 6 \\ 297660 &= (2 \times F(9) + F(F(7)) \times F(F(6))) \times 60 \\ 2976600 &= (2 \times F(9) + F(F(7)) \times F(F(6))) \times 600. \end{aligned}$$

$$\begin{aligned} 32463 &= (-(3 + 2)^{F(4)} + F(F(F(6)))) \times 3 \\ 324630 &= (-(3 + 2)^{F(4)} + F(F(F(6)))) \times 30 \\ 3246300 &= (-(3 + 2)^{F(4)} + F(F(F(6)))) \times 300. \end{aligned}$$

$$\begin{aligned} 32675 &= (3 + F(-F(2) + F(F(6))) - F(F(7))) \times 5 \\ 326750 &= (3 + F(-F(2) + F(F(6))) - F(F(7))) \times 50 \\ 3267500 &= (3 + F(-F(2) + F(F(6))) - F(F(7))) \times 500. \end{aligned}$$

$$\begin{aligned} 32684 &= (F(3)^{F(F(2)+6)} - F(8)) \times 4 \\ 326840 &= (F(3)^{F(F(2)+6)} - F(8)) \times 40 \\ 3268400 &= (F(3)^{F(F(2)+6)} - F(8)) \times 400. \end{aligned}$$

$$\begin{aligned} 32883 &= (-3 \times 2 + F(8) + F(F(8))) \times 3 \\ 328830 &= (-3 \times 2 + F(8) + F(F(8))) \times 30 \\ 3288300 &= (-3 \times 2 + F(8) + F(F(8))) \times 300. \end{aligned}$$

$$\begin{aligned} 32943 &= (F(F(F(3 \times 2))) + F(9) + F(F(F(4)))) \times 3 \\ 329430 &= (F(F(F(3 \times 2))) + F(9) + F(F(F(4)))) \times 30 \\ 3294300 &= (F(F(F(3 \times 2))) + F(9) + F(F(F(4)))) \times 300. \end{aligned}$$

$$\begin{aligned} 33488 &= (3 + F(3) + F(-F(F(4)) + F(8))) \times 8 \\ 334880 &= (3 + F(3) + F(-F(F(4)) + F(8))) \times 80 \\ 3348800 &= (3 + F(3) + F(-F(F(4)) + F(8))) \times 800. \end{aligned}$$

$$\begin{aligned} 33815 &= (F(F(3)) - 3 + F(F(8) - 1)) \times 5 \\ 338150 &= (F(F(3)) - 3 + F(F(8) - 1)) \times 50 \\ 3381500 &= (F(F(3)) - 3 + F(F(8) - 1)) \times 500. \end{aligned}$$

$$\begin{aligned} 33835 &= (F(3) + F((F(3) + 8) \times F(3))) \times 5 \\ 338350 &= (F(3) + F((F(3) + 8) \times F(3))) \times 50 \\ 3383500 &= (F(3) + F((F(3) + 8) \times F(3))) \times 500. \end{aligned}$$

$$\begin{aligned} 33845 &= (F(-3/3 + F(8)) + 4) \times 5 \\ 338450 &= (F(-3/3 + F(8)) + 4) \times 50 \\ 3384500 &= (F(-3/3 + F(8)) + 4) \times 500. \end{aligned}$$

$$\begin{aligned} 33855 &= (F(F(3)) + F(-F(F(3)) + F(8)) + 5) \times 5 \\ 338550 &= (F(F(3)) + F(-F(F(3)) + F(8)) + 5) \times 50 \\ 3385500 &= (F(F(3)) + F(-F(F(3)) + F(8)) + 5) \times 500. \end{aligned}$$

$$\begin{aligned} 33865 &= (F(-3/3 + F(8)) + F(6)) \times 5 \\ 338650 &= (F(-3/3 + F(8)) + F(6)) \times 50 \\ 3386500 &= (F(-3/3 + F(8)) + F(6)) \times 500. \end{aligned}$$

$$\begin{aligned} 33875 &= (-3 + F(-F(F(3)) + F(8)) + F(7)) \times 5 \\ 338750 &= (-3 + F(-F(F(3)) + F(8)) + F(7)) \times 50 \\ 3387500 &= (-3 + F(-F(F(3)) + F(8)) + F(7)) \times 500. \end{aligned}$$

$$\begin{aligned} 33995 &= (F(F(3) + F(3) \times 9) + F(9)) \times 5 \\ 339950 &= (F(F(3) + F(3) \times 9) + F(9)) \times 50 \\ 3399500 &= (F(F(3) + F(3) \times 9) + F(9)) \times 500. \end{aligned}$$

$$\begin{aligned} 34445 &= (F(3) + F(4)^4)^{F(F(4))} \times 5 \\ 344450 &= (F(3) + F(4)^4)^{F(F(4))} \times 50 \\ 3444500 &= (F(3) + F(4)^4)^{F(F(4))} \times 500. \end{aligned}$$

$$\begin{aligned}
34848 &= (3 + F(4) \times F(8))^{F(F(4))} \times 8 \\
348480 &= (3 + F(4) \times F(8))^{F(F(4))} \times 80 \\
3484800 &= (3 + F(4) \times F(8))^{F(F(4))} \times 800. \\
36485 &= (-F(F(3)) + F(F(F(6))))/F(4) + F(F(8))) \times 5 \\
364850 &= (-F(F(3)) + F(F(F(6))))/F(4) + F(F(8))) \times 50 \\
3648500 &= (-F(F(3)) + F(F(F(6))))/F(4) + F(F(8))) \times 500. \\
36875 &= (F(-F(F(3)) + F(F(6))) + F(8 + 7)) \times 5 \\
368750 &= (F(-F(F(3)) + F(F(6))) + F(8 + 7)) \times 50 \\
3687500 &= (F(-F(F(3)) + F(F(6))) + F(8 + 7)) \times 500. \\
37288 &= (F(F(3)) + F(F(7)) \times (-F(2) + F(8))) \times 8 \\
372880 &= (F(F(3)) + F(F(7)) \times (-F(2) + F(8))) \times 80 \\
3728800 &= (F(F(3)) + F(F(7)) \times (-F(2) + F(8))) \times 800. \\
37295 &= (-3 + F(F(7)) \times (-2 + F(9))) \times 5 \\
372950 &= (-3 + F(F(7)) \times (-2 + F(9))) \times 50 \\
3729500 &= (-3 + F(F(7)) \times (-2 + F(9))) \times 500. \\
37392 &= (-F(3 + F(7)) + 3^9) \times 2 \\
373920 &= (-F(3 + F(7)) + 3^9) \times 20 \\
3739200 &= (-F(3 + F(7)) + 3^9) \times 200. \\
37623 &= (3 \times F(F(7) + 6) - 2) \times 3 \\
376230 &= (3 \times F(F(7) + 6) - 2) \times 30 \\
3762300 &= (3 \times F(F(7) + 6) - 2) \times 300. \\
37648 &= (F(F(3) + F(7)) + F(6)^4) \times 8 \\
376480 &= (F(F(3) + F(7)) + F(6)^4) \times 80 \\
3764800 &= (F(F(3) + F(7)) + F(6)^4) \times 800. \\
38272 &= (-F(3) + F(F(8)) + 2^{F(7)}) \times 2 \\
382720 &= (-F(3) + F(F(8)) + 2^{F(7)}) \times 20 \\
3827200 &= (-F(3) + F(F(8)) + 2^{F(7)}) \times 200. \\
38367 &= (F(F(3)) \times F(F(8))/F(3) + F(6)) \times 7 \\
383670 &= (F(F(3)) \times F(F(8))/F(3) + F(6)) \times 70 \\
3836700 &= (F(F(3)) \times F(F(8))/F(3) + F(6)) \times 700. \\
38635 &= (F(3 \times 8)/6 - F(F(3))) \times 5 \\
386350 &= (F(3 \times 8)/6 - F(F(3))) \times 50 \\
3863500 &= (F(3 \times 8)/6 - F(F(3))) \times 500. \\
38645 &= (F(3 \times 8)/6 + F(F(F(4)))) \times 5 \\
386450 &= (F(3 \times 8)/6 + F(F(F(4)))) \times 50 \\
3864500 &= (F(3 \times 8)/6 + F(F(F(4)))) \times 500. \\
39168 &= F(3 + 9) \times F(1 + F(6)) \times 8 \\
391680 &= F(3 + 9) \times F(1 + F(6)) \times 80 \\
3916800 &= F(3 + 9) \times F(1 + F(6)) \times 800. \\
39275 &= (F(F(3)) + F(9) \times (-2 + F(F(7)))) \times 5 \\
392750 &= (F(F(3)) + F(9) \times (-2 + F(F(7)))) \times 50 \\
3927500 &= (F(F(3)) + F(9) \times (-2 + F(F(7)))) \times 500. \\
39486 &= (-F(F(3)) + 9^4 + F(8)) \times 6 \\
394860 &= (-F(F(3)) + 9^4 + F(8)) \times 60 \\
3948600 &= (-F(F(3)) + 9^4 + F(8)) \times 600. \\
39615 &= (F(F(3)) + F(9) \times F(F(6 + 1))) \times 5 \\
396150 &= (F(F(3)) + F(9) \times F(F(6 + 1))) \times 50 \\
3961500 &= (F(F(3)) + F(9) \times F(F(6 + 1))) \times 500. \\
39625 &= (3 + F(9) \times F(F(F(6) - F(2)))) \times 5 \\
396250 &= (3 + F(9) \times F(F(F(6) - F(2)))) \times 50 \\
3962500 &= (3 + F(9) \times F(F(F(6) - F(2)))) \times 500. \\
39795 &= (3 + F(9) \times F(F(7)) + F(9)) \times 5 \\
397950 &= (3 + F(9) \times F(F(7)) + F(9)) \times 50 \\
3979500 &= (3 + F(9) \times F(F(7)) + F(9)) \times 500. \\
39832 &= (3^9 + F(F(F(8)/3))) \times 2 \\
398320 &= (3^9 + F(F(F(8)/3))) \times 20 \\
3983200 &= (3^9 + F(F(F(8)/3))) \times 200. \\
42849 &= (F(4) \times (2 + F(8)))^{F(F(4))} \times 9 \\
428490 &= (F(4) \times (2 + F(8)))^{F(F(4))} \times 90 \\
4284900 &= (F(4) \times (2 + F(8)))^{F(F(4))} \times 900. \\
42864 &= (F(4) - F(F(-F(2) + 8)) + F(F(F(6)))) \times 4 \\
428640 &= (F(4) - F(F(-F(2) + 8)) + F(F(F(6)))) \times 40 \\
4286400 &= (F(4) - F(F(-F(2) + 8)) + F(F(F(6)))) \times 400. \\
42872 &= 4 \times (2 + F(8)) \times F(F(7)) \times 2 \\
428720 &= 4 \times (2 + F(8)) \times F(F(7)) \times 20 \\
4287200 &= 4 \times (2 + F(8)) \times F(F(7)) \times 200. \\
43464 &= (F(F(F(4))) - 3^4 + F(F(F(6)))) \times 4 \\
434640 &= (F(F(F(4))) - 3^4 + F(F(F(6)))) \times 40 \\
4346400 &= (F(F(F(4))) - 3^4 + F(F(F(6)))) \times 400. \\
43664 &= (-F(4) \times 3 + F(F(F(6))) - F(F(6))) \times 4 \\
436640 &= (-F(4) \times 3 + F(F(F(6))) - F(F(6))) \times 40 \\
4366400 &= (-F(4) \times 3 + F(F(F(6))) - F(F(6))) \times 400. \\
43684 &= (-4 - F(F(3) + 6) + F(F(8))) \times 4 \\
436840 &= (-4 - F(F(3) + 6) + F(F(8))) \times 40 \\
4368400 &= (-4 - F(F(3) + 6) + F(F(8))) \times 400. \\
43685 &= (F(4)^{3+6} - F(F(8))) \times 5 \\
436850 &= (F(4)^{3+6} - F(F(8))) \times 50 \\
4368500 &= (F(4)^{3+6} - F(F(8))) \times 500.
\end{aligned}$$

$$\begin{aligned}
43735 &= (4 \times 3^7 - F(F(3))) \times 5 \\
437350 &= (4 \times 3^7 - F(F(3))) \times 50 \\
4373500 &= (4 \times 3^7 - F(F(3))) \times 500. \\
43745 &= (F(F(F(4))) + 3^7 \times 4) \times 5 \\
437450 &= (F(F(F(4))) + 3^7 \times 4) \times 50 \\
4374500 &= (F(F(F(4))) + 3^7 \times 4) \times 500. \\
43824 &= (4 \times F(3) + F(F(8)) + 2) \times 4 \\
438240 &= (4 \times F(3) + F(F(8)) + 2) \times 40 \\
4382400 &= (4 \times F(3) + F(F(8)) + 2) \times 400. \\
43844 &= (4 \times 3 + F(F(8)) + F(4)) \times 4 \\
438440 &= (4 \times 3 + F(F(8)) + F(4)) \times 40 \\
4384400 &= (4 \times 3 + F(F(8)) + F(4)) \times 400. \\
43864 &= (-4 + 3 + F(F(8)) + F(F(6))) \times 4 \\
438640 &= (-4 + 3 + F(F(8)) + F(F(6))) \times 40 \\
4386400 &= (-4 + 3 + F(F(8)) + F(F(6))) \times 400. \\
43884 &= (F(F(4)) + F(3) + F(8) + F(F(8))) \times 4 \\
438840 &= (F(F(4)) + F(3) + F(8) + F(F(8))) \times 40 \\
4388400 &= (F(F(4)) + F(3) + F(8) + F(F(8))) \times 400. \\
43964 &= ((F(4) + F(3)) \times 9 + F(F(F(6)))) \times 4 \\
439640 &= ((F(4) + F(3)) \times 9 + F(F(F(6)))) \times 40 \\
4396400 &= ((F(4) + F(3)) \times 9 + F(F(F(6)))) \times 400. \\
43984 &= (4^{F(3)} + F(9) + F(F(8))) \times 4 \\
439840 &= (4^{F(3)} + F(9) + F(F(8))) \times 40 \\
4398400 &= (4^{F(3)} + F(9) + F(F(8))) \times 400. \\
44364 &= (F(F(4) \times 4) + F(F(3)) + F(F(F(6)))) \times 4 \\
443640 &= (F(F(4) \times 4) + F(F(3)) + F(F(F(6)))) \times 40 \\
4436400 &= (F(F(4) \times 4) + F(F(3)) + F(F(F(6)))) \times 400. \\
44395 &= (-4 + F(4^{F(3)}) \times 9) \times 5 \\
443950 &= (-4 + F(4^{F(3)}) \times 9) \times 50 \\
4439500 &= (-4 + F(4^{F(3)}) \times 9) \times 500. \\
44664 &= (4 \times F(4 + 6) + F(F(F(6)))) \times 4 \\
446640 &= (4 \times F(4 + 6) + F(F(F(6)))) \times 40 \\
4466400 &= (4 \times F(4 + 6) + F(F(F(6)))) \times 400. \\
44684 &= (F(F(F(4) + 4)) - F(6) + F(F(8))) \times 4 \\
446840 &= (F(F(F(4) + 4)) - F(6) + F(F(8))) \times 40 \\
4468400 &= (F(F(F(4) + 4)) - F(6) + F(F(8))) \times 400. \\
44724 &= (F(F(4 + 4)) + F(F(7)) + 2) \times 4 \\
447240 &= (F(F(4 + 4)) + F(F(7)) + 2) \times 40 \\
4472400 &= (F(F(4 + 4)) + F(F(7)) + 2) \times 400. \\
44733 &= (4^{F(4)} \times F(F(7)) - F(F(3))) \times 3 \\
447330 &= (4^{F(4)} \times F(F(7)) - F(F(3))) \times 30 \\
4473300 &= (4^{F(4)} \times F(F(7)) - F(F(3))) \times 300. \\
44737 &= (4 \times F(4 + F(7)) + 3) \times 7 \\
447370 &= (4 \times F(4 + F(7)) + 3) \times 70 \\
4473700 &= (4 \times F(4 + F(7)) + 3) \times 700. \\
44764 &= (F(4) \times 4 + F(F(7)) + F(F(F(6)))) \times 4 \\
447640 &= (F(4) \times 4 + F(F(7)) + F(F(F(6)))) \times 40 \\
4476400 &= (F(4) \times 4 + F(F(7)) + F(F(F(6)))) \times 400. \\
44768 &= (4 + 4 \times F(F(7)) \times 6) \times 8 \\
447680 &= (4 + 4 \times F(F(7)) \times 6) \times 80 \\
4476800 &= (4 + 4 \times F(F(7)) \times 6) \times 800. \\
45384 &= ((4 \times 5)^{F(3)} + F(F(8))) \times 4 \\
453840 &= ((4 \times 5)^{F(3)} + F(F(8))) \times 40 \\
4538400 &= ((4 \times 5)^{F(3)} + F(F(8))) \times 400. \\
45717 &= (F(4 \times 5) - F(F(7)) - 1) \times 7 \\
457170 &= (F(4 \times 5) - F(F(7)) - 1) \times 70 \\
4571700 &= (F(4 \times 5) - F(F(7)) - 1) \times 700. \\
45832 &= (4^5 + F(F(8)) \times F(3)) \times 2 \\
458320 &= (4^5 + F(F(8)) \times F(3)) \times 20 \\
4583200 &= (4^5 + F(F(8)) \times F(3)) \times 200. \\
46488 &= ((F(4) \times 6)^{F(4)} - F(8)) \times 8 \\
464880 &= ((F(4) \times 6)^{F(4)} - F(8)) \times 80 \\
4648800 &= ((F(4) \times 6)^{F(4)} - F(8)) \times 800. \\
46495 &= (4 + F(F(6))^{F(4)} + F(9)) \times 5 \\
464950 &= (4 + F(F(6))^{F(4)} + F(9)) \times 50 \\
4649500 &= (4 + F(F(6))^{F(4)} + F(9)) \times 500. \\
46768 &= ((4 + F(F(6))) \times F(F(7)) + F(F(6))) \times 8 \\
467680 &= ((4 + F(F(6))) \times F(F(7)) + F(F(6))) \times 80 \\
4676800 &= ((4 + F(F(6))) \times F(F(7)) + F(F(6))) \times 800. \\
47368 &= (-F(F(F(4))) + F(F(7) + 3) \times 6) \times 8 \\
473680 &= (-F(F(F(4))) + F(F(7) + 3) \times 6) \times 80 \\
4736800 &= (-F(F(F(4))) + F(F(7) + 3) \times 6) \times 800. \\
47464 &= ((-F(4) + F(F(7))) \times 4 + F(F(F(6)))) \times 4 \\
474640 &= ((-F(4) + F(F(7))) \times 4 + F(F(F(6)))) \times 40 \\
4746400 &= ((-F(4) + F(F(7))) \times 4 + F(F(F(6)))) \times 400. \\
47467 &= (F(4) + F(7) + F(-F(F(F(4)))) + F(F(6))) \times 7 \\
474670 &= (F(4) + F(7) + F(-F(F(F(4)))) + F(F(6))) \times 70 \\
4746700 &= (F(4) + F(7) + F(-F(F(F(4)))) + F(F(6))) \times 700.
\end{aligned}$$

$$\begin{aligned}
47736 &= (F(F(4))^{F(7)} - F(F(7)) - 3) \times 6 & 52743 &= (5 + (2 \times F(7))^{F(4)}) \times 3 \\
477360 &= (F(F(4))^{F(7)} - F(F(7)) - 3) \times 60 & 527430 &= (5 + (2 \times F(7))^{F(4)}) \times 30 \\
4773600 &= (F(F(4))^{F(7)} - F(F(7)) - 3) \times 600. & 5274300 &= (5 + (2 \times F(7))^{F(4)}) \times 300. \\
\\
47784 &= (F(F(4) + F(7)) + F(7) + F(F(8))) \times 4 & 53163 &= (5 \times F(3) + F(1 + F(F(6)))) \times 3 \\
477840 &= (F(F(4) + F(7)) + F(7) + F(F(8))) \times 40 & 531630 &= (5 \times F(3) + F(1 + F(F(6)))) \times 30 \\
4778400 &= (F(F(4) + F(7)) + F(7) + F(F(8))) \times 400. & 5316300 &= (5 \times F(3) + F(1 + F(F(6)))) \times 300. \\
\\
47845 &= (F(F(4))^{F(7)} + F(F(8)))/F(F(4)) \times 5 & 53565 &= (F(F(5 + 3)) - F(5 + F(6))) \times 5 \\
478450 &= (F(F(4))^{F(7)} + F(F(8)))/F(F(4)) \times 50 & 535650 &= (F(F(5 + 3)) - F(5 + F(6))) \times 50 \\
4784500 &= (F(F(4))^{F(7)} + F(F(8)))/F(F(4)) \times 500. & 5356500 &= (F(F(5 + 3)) - F(5 + F(6))) \times 500. \\
\\
47946 &= ((F(F(4)) + F(F(7))) \times F(9) + F(F(F(4)))) \times 6 & 53985 &= (-5 - F(3 + 9) + F(F(8))) \times 5 \\
479460 &= ((F(F(4)) + F(F(7))) \times F(9) + F(F(F(4)))) \times 60 & 539850 &= (-5 - F(3 + 9) + F(F(8))) \times 50 \\
4794600 &= ((F(F(4)) + F(F(7))) \times F(9) + F(F(F(4)))) \times 600. & 5398500 &= (-5 - F(3 + 9) + F(F(8))) \times 500. \\
\\
48377 &= (F(F(4)) + F(8 \times F(3)) \times 7) \times 7 & 54281 &= (F(F(5 + F(F(4))))^2 - 8) \times 1 \\
483770 &= (F(F(4)) + F(8 \times F(3)) \times 7) \times 70 & 542810 &= (F(F(5 + F(F(4))))^2 - 8) \times 10 \\
4837700 &= (F(F(4)) + F(8 \times F(3)) \times 7) \times 700. & 5428100 &= (F(F(5 + F(F(4))))^2 - 8) \times 100. \\
\\
48664 &= (F(F(4)) \times F(F(8) - 6) + F(F(F(6)))) \times 4 & 54385 &= (-5 - 4^3 + F(F(8))) \times 5 \\
486640 &= (F(F(4)) \times F(F(8) - 6) + F(F(F(6)))) \times 40 & 543850 &= (-5 - 4^3 + F(F(8))) \times 50 \\
4866400 &= (F(F(4)) \times F(F(8) - 6) + F(F(F(6)))) \times 400. & 5438500 &= (-5 - 4^3 + F(F(8))) \times 500. \\
\\
48935 &= (-F(4) + F(F(8)) - F(9)^{F(3)}) \times 5 & 54465 &= (-54 + F(F(F(4))) + F(F(F(6)))) \times 5 \\
489350 &= (-F(4) + F(F(8)) - F(9)^{F(3)}) \times 50 & 544650 &= (-54 + F(F(F(4))) + F(F(F(6)))) \times 50 \\
4893500 &= (-F(4) + F(F(8)) - F(9)^{F(3)}) \times 500. & 5446500 &= (-54 + F(F(F(4))) + F(F(F(6)))) \times 500. \\
\\
48945 &= (-F(F(F(4))) + F(F(8)) - F(9)^{F(F(4))}) \times 5 & 54485 &= (-5 - 44 + F(F(8))) \times 5 \\
489450 &= (-F(F(F(4))) + F(F(8)) - F(9)^{F(F(4))}) \times 50 & 544850 &= (-5 - 44 + F(F(8))) \times 50 \\
4894500 &= (-F(F(F(4))) + F(F(8)) - F(9)^{F(F(4))}) \times 500. & 5448500 &= (-5 - 44 + F(F(8))) \times 500. \\
\\
49239 &= (-4 + F(F(9 - F(2))))/F(3) \times 9 & 54585 &= (5 - F(4 + 5) + F(F(8))) \times 5 \\
492390 &= (-4 + F(F(9 - F(2))))/F(3) \times 90 & 545850 &= (5 - F(4 + 5) + F(F(8))) \times 50 \\
4923900 &= (-4 + F(F(9 - F(2))))/F(3) \times 900. & 5458500 &= (5 - F(4 + 5) + F(F(8))) \times 500. \\
\\
49285 &= (-F(F(F(4))) - F(9))^2 + F(F(8)) \times 5 & 54625 &= (-F(5 + F(4)) + F(F(6 + 2))) \times 5 \\
492850 &= (-F(F(F(4))) - F(9))^2 + F(F(8)) \times 50 & 546250 &= (-F(5 + F(4)) + F(F(6 + 2))) \times 50 \\
4928500 &= (-F(F(F(4))) - F(9))^2 + F(F(8)) \times 500. & 5462500 &= (-F(5 + F(4)) + F(F(6 + 2))) \times 500. \\
\\
49785 &= (-F(F(4)) - F(9 + 7) + F(F(8))) \times 5 & 54645 &= (F(F(5 + F(4))) - F(F(6)) + 4) \times 5 \\
497850 &= (-F(F(4)) - F(9 + 7) + F(F(8))) \times 50 & 546450 &= (F(F(5 + F(4))) - F(F(6)) + 4) \times 50 \\
4978500 &= (-F(F(4)) - F(9 + 7) + F(F(8))) \times 500. & 5464500 &= (F(F(5 + F(4))) - F(F(6)) + 4) \times 500. \\
\\
49795 &= (F(F(F(-F(4) + 9))) - F(7 + 9)) \times 5 & 54655 &= (-5 \times 4 + F(F(F(6))) + 5) \times 5 \\
497950 &= (F(F(F(-F(4) + 9))) - F(7 + 9)) \times 50 & 546550 &= (-5 \times 4 + F(F(F(6))) + 5) \times 50 \\
4979500 &= (F(F(F(-F(4) + 9))) - F(7 + 9)) \times 500. & 5465500 &= (-5 \times 4 + F(F(F(6))) + 5) \times 500. \\
\\
49928 &= (-F(F(4)) + 9 \times 9)^2 \times 8 & 54685 &= (-54/6 + F(F(8))) \times 5 \\
499280 &= (-F(F(4)) + 9 \times 9)^2 \times 80 & 546850 &= (-54/6 + F(F(8))) \times 50 \\
4992800 &= (-F(F(4)) + 9 \times 9)^2 \times 800. & 5468500 &= (-54/6 + F(F(8))) \times 500.
\end{aligned}$$

$$\begin{aligned} 54695 &= (5 - F(4) + F(F(F(6))) - 9) \times 5 \\ 546950 &= (5 - F(4) + F(F(F(6))) - 9) \times 50 \\ 5469500 &= (5 - F(4) + F(F(F(6))) - 9) \times 500. \end{aligned}$$

$$\begin{aligned} 54765 &= (5 + F(F(4)) + F(F(7) + F(6))) \times 5 \\ 547650 &= (5 + F(F(4)) + F(F(7) + F(6))) \times 50 \\ 5476500 &= (5 + F(F(4)) + F(F(7) + F(6))) \times 500. \end{aligned}$$

$$\begin{aligned} 54785 &= (-5 + F(4) + F(7) + F(F(8))) \times 5 \\ 547850 &= (-5 + F(4) + F(7) + F(F(8))) \times 50 \\ 5478500 &= (-5 + F(4) + F(7) + F(F(8))) \times 500. \end{aligned}$$

$$\begin{aligned} 54825 &= (5 \times 4 + F(F(8)) - F(2)) \times 5 \\ 548250 &= (5 \times 4 + F(F(8)) - F(2)) \times 50 \\ 5482500 &= (5 \times 4 + F(F(8)) - F(2)) \times 500. \end{aligned}$$

$$\begin{aligned} 54835 &= (5 \times 4 + F(F(8)) + F(F(3))) \times 5 \\ 548350 &= (5 \times 4 + F(F(8)) + F(F(3))) \times 50 \\ 5483500 &= (5 \times 4 + F(F(8)) + F(F(3))) \times 500. \end{aligned}$$

$$\begin{aligned} 54845 &= (5^{F(F(4))} + F(F(8)) - F(F(4))) \times 5 \\ 548450 &= (5^{F(F(4))} + F(F(8)) - F(F(4))) \times 50 \\ 5484500 &= (5^{F(F(4))} + F(F(8)) - F(F(4))) \times 500. \end{aligned}$$

$$\begin{aligned} 54855 &= (5 \times 4 + F(F(8)) + 5) \times 5 \\ 548550 &= (5 \times 4 + F(F(8)) + 5) \times 50 \\ 5485500 &= (5 \times 4 + F(F(8)) + 5) \times 500. \end{aligned}$$

$$\begin{aligned} 54865 &= (F(5 + F(4)) + F(F(8)) + 6) \times 5 \\ 548650 &= (F(5 + F(4)) + F(F(8)) + 6) \times 50 \\ 5486500 &= (F(5 + F(4)) + F(F(8)) + 6) \times 500. \end{aligned}$$

$$\begin{aligned} 54885 &= (5 \times F(F(4)) + (F(8)) + F(F(8))) \times 5 \\ 548850 &= (5 \times F(F(4)) + (F(8)) + F(F(8))) \times 50 \\ 5488500 &= (5 \times F(F(4)) + (F(8)) + F(F(8))) \times 500. \end{aligned}$$

$$\begin{aligned} 54895 &= (-5 + 4 + F(F(8)) + F(9)) \times 5 \\ 548950 &= (-5 + 4 + F(F(8)) + F(9)) \times 50 \\ 5489500 &= (-5 + 4 + F(F(8)) + F(9)) \times 500. \end{aligned}$$

$$\begin{aligned} 54955 &= (F(F(5 + F(4))) + 9 \times 5) \times 5 \\ 549550 &= (F(F(5 + F(4))) + 9 \times 5) \times 50 \\ 5495500 &= (F(F(5 + F(4))) + 9 \times 5) \times 500. \end{aligned}$$

$$\begin{aligned} 54965 &= (F(5 + F(F(4))) + F(9) + F(F(F(6)))) \times 5 \\ 549650 &= (F(5 + F(F(4))) + F(9) + F(F(F(6)))) \times 50 \\ 5496500 &= (F(5 + F(F(4))) + F(9) + F(F(F(6)))) \times 500. \end{aligned}$$

$$\begin{aligned} 55125 &= (5 \times F(F(5 + 1)))^2 \times 5 \\ 551250 &= (5 \times F(F(5 + 1)))^2 \times 50 \\ 5512500 &= (5 \times F(F(5 + 1)))^2 \times 500. \end{aligned}$$

$$\begin{aligned} 55447 &= F(5 + 5 + F(F(F(4))))^{F(F(4))} \times 7 \\ 554470 &= F(5 + 5 + F(F(F(4))))^{F(F(4))} \times 70 \\ 5544700 &= F(5 + 5 + F(F(F(4))))^{F(F(4))} \times 700. \end{aligned}$$

$$\begin{aligned} 56284 &= (5^{6-F(2)} + F(F(8))) \times 4 \\ 562840 &= (5^{6-F(2)} + F(F(8))) \times 40 \\ 5628400 &= (5^{6-F(2)} + F(F(8))) \times 400. \end{aligned}$$

$$\begin{aligned} 57121 &= (5 + F(F(7)) + 1)^2 \times 1 \\ 571210 &= (5 + F(F(7)) + 1)^2 \times 10 \\ 5712100 &= (5 + F(F(7)) + 1)^2 \times 100. \end{aligned}$$

$$\begin{aligned} 57312 &= (F(F(-5 + F(7)) + F(3)) - 1) \times 2 \\ 573120 &= (F(F(-5 + F(7)) + F(3)) - 1) \times 20 \\ 5731200 &= (F(F(-5 + F(7)) + F(3)) - 1) \times 200. \end{aligned}$$

$$\begin{aligned} 58686 &= (-5 \times F(F(8)) - F(6)) + F(F(8)) \times 6 \\ 586860 &= (-5 \times F(F(8)) - F(6)) + F(F(8)) \times 60 \\ 5868600 &= (-5 \times F(F(8)) - F(6)) + F(F(8)) \times 600. \end{aligned}$$

$$\begin{aligned} 58746 &= (5 + F(8) \times F(F(7)) \times F(F(4))) \times 6 \\ 587460 &= (5 + F(8) \times F(F(7)) \times F(F(4))) \times 60 \\ 5874600 &= (5 + F(8) \times F(F(7)) \times F(F(4))) \times 600. \end{aligned}$$

$$\begin{aligned} 59665 &= (F(F(F(-5 + 9)) \times F(6)) + F(F(F(6)))) \times 5 \\ 596650 &= (F(F(F(-5 + 9)) \times F(6)) + F(F(F(6)))) \times 50 \\ 5966500 &= (F(F(F(-5 + 9)) \times F(6)) + F(F(F(6)))) \times 500. \end{aligned}$$

$$\begin{aligned} 61476 &= (F(F(F(6))) - 1 - F(4) \times F(F(7))) \times 6 \\ 614760 &= (F(F(F(6))) - 1 - F(4) \times F(F(7))) \times 60 \\ 6147600 &= (F(F(F(6))) - 1 - F(4) \times F(F(7))) \times 600. \end{aligned}$$

$$\begin{aligned} 62482 &= (F(F(F(6)) - F(2)) \times F(4) + F(F(8))) \times 2 \\ 624820 &= (F(F(F(6)) - F(2)) \times F(4) + F(F(8))) \times 20 \\ 6248200 &= (F(F(F(6)) - F(2)) \times F(4) + F(F(8))) \times 200. \end{aligned}$$

$$\begin{aligned} 62568 &= ((-6 + F(2))^5 + F(F(F(6)))) \times 8 \\ 625680 &= ((-6 + F(2))^5 + F(F(F(6)))) \times 80 \\ 6256800 &= ((-6 + F(2))^5 + F(F(F(6)))) \times 800. \end{aligned}$$

$$\begin{aligned} 63368 &= F(F(6) + 3)^{F(-3+6)} \times 8 \\ 633680 &= F(F(6) + 3)^{F(-3+6)} \times 80 \\ 6336800 &= F(F(6) + 3)^{F(-3+6)} \times 800. \end{aligned}$$

$$\begin{aligned} 63786 &= (-F(F(6)) \times (F(3) + F(7)) + F(F(8))) \times 6 \\ 637860 &= (-F(F(6)) \times (F(3) + F(7)) + F(F(8))) \times 60 \\ 6378600 &= (-F(F(6)) \times (F(3) + F(7)) + F(F(8))) \times 600. \end{aligned}$$

$$\begin{aligned} 64075 &= F(6 + 4) \times F(F(07)) \times 5 \\ 640750 &= F(6 + 4) \times F(F(07)) \times 50 \\ 6407500 &= F(6 + 4) \times F(F(07)) \times 500. \end{aligned}$$

$$\begin{aligned}
64266 &= (F(F(F(6))) - F(F(4)) - F(F(F(2) + 6))) \times 6 & 65542 &= (F(6)^5 + 5 - F(F(4))) \times 2 \\
642660 &= (F(F(F(6))) - F(F(4)) - F(F(F(2) + 6))) \times 60 & 655420 &= (F(6)^5 + 5 - F(F(4))) \times 20 \\
6426600 &= (F(F(F(6))) - F(F(4)) - F(F(F(2) + 6))) \times 600. & 6554200 &= (F(6)^5 + 5 - F(F(4))) \times 200. \\
\\
64296 &= (F(F(F(6))) + F(4) - F(F(-2 + 9))) \times 6 & 65556 &= (F(F(F(6))) - 5 \times 5 + 5) \times 6 \\
642960 &= (F(F(F(6))) + F(4) - F(F(-2 + 9))) \times 60 & 655560 &= (F(F(F(6))) - 5 \times 5 + 5) \times 60 \\
6429600 &= (F(F(F(6))) + F(4) - F(F(-2 + 9))) \times 600. & 6555600 &= (F(F(F(6))) - 5 \times 5 + 5) \times 600. \\
\\
64356 &= (F(F(F(6))) - 4 \times F(F(3) \times 5)) \times 6 & 65586 &= ((-F(6) + 5) \times 5 + F(F(8))) \times 6 \\
643560 &= (F(F(F(6))) - 4 \times F(F(3) \times 5)) \times 60 & 655860 &= ((-F(6) + 5) \times 5 + F(F(8))) \times 60 \\
6435600 &= (F(F(F(6))) - 4 \times F(F(3) \times 5)) \times 600. & 6558600 &= ((-F(6) + 5) \times 5 + F(F(8))) \times 600. \\
\\
64488 &= (6^4 + F(-F(F(F(4))) + F(8))) \times 8 & 65616 &= (F(F(F(6))) - 5 - 6 + 1) \times 6 \\
644880 &= (6^4 + F(-F(F(F(4))) + F(8))) \times 80 & 656160 &= (F(F(F(6))) - 5 - 6 + 1) \times 60 \\
6448800 &= (6^4 + F(-F(F(F(4))) + F(8))) \times 800. & 6561600 &= (F(F(F(6))) - 5 - 6 + 1) \times 600. \\
\\
64596 &= (F(F(F(6))) - 4 \times 5 \times 9) \times 6 & 65651 &= ((F(F(F(6))) - 5) \times 6 + 5) \times 1 \\
645960 &= (F(F(F(6))) - 4 \times 5 \times 9) \times 60 & 656510 &= ((F(F(F(6))) - 5) \times 6 + 5) \times 10 \\
6459600 &= (F(F(F(6))) - 4 \times 5 \times 9) \times 600. & 6565100 &= ((F(F(F(6))) - 5) \times 6 + 5) \times 100. \\
\\
64656 &= (F(F(F(6))) - F(F(4) + 6) \times 5) \times 6 & 65736 &= (F(F(F(6))) - 5 + F(7) + F(3)) \times 6 \\
646560 &= (F(F(F(6))) - F(F(4) + 6) \times 5) \times 60 & 657360 &= (F(F(F(6))) - 5 + F(7) + F(3)) \times 60 \\
6465600 &= (F(F(F(6))) - F(F(4) + 6) \times 5) \times 600. & 6573600 &= (F(F(F(6))) - 5 + F(7) + F(3)) \times 600. \\
\\
64686 &= (-F(F(6)) - F(4 + F(6)) + F(F(8))) \times 6 & 65766 &= (F(F(F(6))) + F(-5 + F(7)) - 6) \times 6 \\
646860 &= (-F(F(6)) - F(4 + F(6)) + F(F(8))) \times 60 & 657660 &= (F(F(F(6))) + F(-5 + F(7)) - 6) \times 60 \\
6468600 &= (-F(F(6)) - F(4 + F(6)) + F(F(8))) \times 600. & 6576600 &= (F(F(F(6))) + F(-5 + F(7)) - 6) \times 600. \\
\\
64986 &= (F(F(6)) - 4 \times F(9) + F(F(8))) \times 6 & 65796 &= (F(F(F(6))) + 5 \times (F(7) - 9)) \times 6 \\
649860 &= (F(F(6)) - 4 \times F(9) + F(F(8))) \times 60 & 657960 &= (F(F(F(6))) + 5 \times (F(7) - 9)) \times 60 \\
6498600 &= (F(F(6)) - 4 \times F(9) + F(F(8))) \times 600. & 6579600 &= (F(F(F(6))) + 5 \times (F(7) - 9)) \times 600. \\
\\
65376 &= (F(F(F(6))) - 5 \times (3 + 7)) \times 6 & 65826 &= (F(F(6)) + 5 + F(F(8)) - F(2)) \times 6 \\
653760 &= (F(F(F(6))) - 5 \times (3 + 7)) \times 60 & 658260 &= (F(F(6)) + 5 + F(F(8)) - F(2)) \times 60 \\
6537600 &= (F(F(F(6))) - 5 \times (3 + 7)) \times 600. & 6582600 &= (F(F(6)) + 5 + F(F(8)) - F(2)) \times 600. \\
\\
65406 &= (F(F(F(6))) - 5 - 40) \times 6 & 65832 &= (F(F(6)) + 5 + F(F(8))) \times 3 \times 2 \\
654060 &= (F(F(F(6))) - 5 - 40) \times 60 & 658320 &= (F(F(6)) + 5 + F(F(8))) \times 3 \times 20 \\
6540600 &= (F(F(F(6))) - 5 - 40) \times 600. & 6583200 &= (F(F(6)) + 5 + F(F(8))) \times 3 \times 200. \\
\\
65436 &= (-F(6) \times 5 + F(F(4 \times F(3)))) \times 6 & 65916 &= (F(6) \times 5 + F(F(9 - 1))) \times 6 \\
654360 &= (-F(6) \times 5 + F(F(4 \times F(3)))) \times 60 & 659160 &= (F(6) \times 5 + F(F(9 - 1))) \times 60 \\
6543600 &= (-F(6) \times 5 + F(F(4 \times F(3)))) \times 600. & 6591600 &= (F(6) \times 5 + F(F(9 - 1))) \times 600. \\
\\
65463 &= (F(6)^5 - F(F(F(4))) - F(F(F(6)))) \times 3 & 66336 &= (F(F(F(6))) + (F(F(6) + F(3)) \times F(3))) \times 6 \\
654630 &= (F(6)^5 - F(F(F(4))) - F(F(F(6)))) \times 30 & 663360 &= (F(F(F(6))) + (F(F(6) + F(3)) \times F(3))) \times 60 \\
6546300 &= (F(6)^5 - F(F(F(4))) - F(F(F(6)))) \times 300. & 6633600 &= (F(F(F(6))) + (F(F(6) + F(3)) \times F(3))) \times 600. \\
\\
65541 &= F(F(6)) \times (5^5 - 4) \times 1 & 66576 &= (F(F(F(6))) + 6 + F(5 + 7)) \times 6 \\
655410 &= F(F(6)) \times (5^5 - 4) \times 10 & 665760 &= (F(F(F(6))) + 6 + F(5 + 7)) \times 60 \\
6554100 &= F(F(6)) \times (5^5 - 4) \times 100. & 6657600 &= (F(F(F(6))) + 6 + F(5 + 7)) \times 600.
\end{aligned}$$

$$\begin{aligned}
 66636 &= (F(F(F(6))) + F(6) \times (F(F(6)) - F(F(3)))) \times 6 & 69336 &= (F(F(F(6))) + F(9 + 3 + 3)) \times 6 \\
 666360 &= (F(F(F(6))) + F(6) \times (F(F(6)) - F(F(3)))) \times 60 & 693360 &= (F(F(F(6))) + F(9 + 3 + 3)) \times 60 \\
 6663600 &= (F(F(F(6))) + F(6) \times (F(F(6)) - F(F(3)))) \times 600. & 6933600 &= (F(F(F(6))) + F(9 + 3 + 3)) \times 600. \\
 \\
 66666 &= (F(F(F(6))) + F(6 + 6) + F(F(6))) \times 6 & 69579 &= (-F(F(6)) + F(9) \times (-5 + F(F(7)))) \times 9 \\
 666660 &= (F(F(F(6))) + F(6 + 6) + F(F(6))) \times 60 & 695790 &= (-F(F(6)) + F(9) \times (-5 + F(F(7)))) \times 90 \\
 6666600 &= (F(F(F(6))) + F(6 + 6) + F(F(6))) \times 600. & 6957900 &= (-F(F(6)) + F(9) \times (-5 + F(F(7)))) \times 900. \\
 \\
 66726 &= (F(F(F(6))) + 6 + F(7)^2) \times 6 & 69727 &= (F(F(F(6))) - F(9 + 7) + 2) \times 7 \\
 667260 &= (F(F(F(6))) + 6 + F(7)^2) \times 60 & 697270 &= (F(F(F(6))) - F(9 + 7) + 2) \times 70 \\
 6672600 &= (F(F(F(6))) + 6 + F(7)^2) \times 600. & 6972700 &= (F(F(F(6))) - F(9 + 7) + 2) \times 700. \\
 \\
 66786 &= (-F(6) \times 6 + F(F(7)) + F(F(8))) \times 6 & 69875 &= (F(F(F(6))) + (F(9) - F(8)) \times F(F(7))) \times 5 \\
 667860 &= (-F(6) \times 6 + F(F(7)) + F(F(8))) \times 60 & 698750 &= (F(F(F(6))) + (F(9) - F(8)) \times F(F(7))) \times 50 \\
 6678600 &= (-F(6) \times 6 + F(F(7)) + F(F(8))) \times 600. & 6987500 &= (F(F(F(6))) + (F(9) - F(8)) \times F(F(7))) \times 500. \\
 \\
 66936 &= (F(F(F(6))) + 6 \times (F(9) + F(F(3)))) \times 6 & 70844 &= (F(F(7 \times 0 + 8) + F(F(F(4)))) \times 4 \\
 669360 &= (F(F(F(6))) + 6 \times (F(9) + F(F(3)))) \times 60 & 708440 &= (F(F(7 \times 0 + 8) + F(F(F(4)))) \times 40 \\
 6693600 &= (F(F(F(6))) + 6 \times (F(9) + F(F(3)))) \times 600. & 7084400 &= (F(F(7 \times 0 + 8) + F(F(F(4)))) \times 400. \\
 \\
 67144 &= (-F(F(6)) + 7^{1+4}) \times 4 & 72666 &= (F(F(7)) \times (-F(2) + 6) + F(F(F(6)))) \times 6 \\
 671440 &= (-F(F(6)) + 7^{1+4}) \times 40 & 726660 &= (F(F(7)) \times (-F(2) + 6) + F(F(F(6)))) \times 60 \\
 6714400 &= (-F(F(6)) + 7^{1+4}) \times 400. & 7266600 &= (F(F(7)) \times (-F(2) + 6) + F(F(F(6)))) \times 600. \\
 \\
 67176 &= (F(F(F(6))) + F(F(7)) + 17) \times 6 & 73284 &= (F(F(7) + F(3)) + F(F(2) + F(8))) \times 4 \\
 671760 &= (F(F(F(6))) + F(F(7)) + 17) \times 60 & 732840 &= (F(F(7) + F(3)) + F(F(2) + F(8))) \times 40 \\
 6717600 &= (F(F(F(6))) + F(F(7)) + 17) \times 600. & 7328400 &= (F(F(7) + F(3)) + F(F(2) + F(8))) \times 400. \\
 \\
 67986 &= (F(F(F(6))) + 7 \times (F(9) + F(8))) \times 6 & 73367 &= (-F(F(7)) \times F(3) + F(F(3)) + F(F(F(6)))) \times 7 \\
 679860 &= (F(F(F(6))) + 7 \times (F(9) + F(8))) \times 60 & 733670 &= (-F(F(7)) \times F(3) + F(F(3)) + F(F(F(6)))) \times 70 \\
 6798600 &= (F(F(F(6))) + 7 \times (F(9) + F(8))) \times 600. & 7336700 &= (-F(F(7)) \times F(3) + F(F(3)) + F(F(F(6)))) \times 700. \\
 \\
 68286 &= (-6 + F(8)^2 + F(F(8))) \times 6 & 73395 &= (F(F(7)) \times 3 \times F(F(-3 + 9))) \times 5 \\
 682860 &= (-6 + F(8)^2 + F(F(8))) \times 60 & 733950 &= (F(F(7)) \times 3 \times F(F(-3 + 9))) \times 50 \\
 6828600 &= (-6 + F(8)^2 + F(F(8))) \times 600. & 7339500 &= (F(F(7)) \times 3 \times F(F(-3 + 9))) \times 500. \\
 \\
 68316 &= (F(F(F(6))) + F(8)^{F(3)} - 1) \times 6 & 73648 &= (-F(7 + 3) + F(F(6))^{F(4)}) \times 8 \\
 683160 &= (F(F(F(6))) + F(8)^{F(3)} - 1) \times 60 & 736480 &= (-F(7 + 3) + F(F(6))^{F(4)}) \times 80 \\
 6831600 &= (F(F(F(6))) + F(8)^{F(3)} - 1) \times 600. & 7364800 &= (-F(7 + 3) + F(F(6))^{F(4)}) \times 800. \\
 \\
 68346 &= (F(F(F(6))) + F(8)^{F(3)} + 4) \times 6 & 73719 &= (F(F(7 - 3))^{F(7)} - 1) \times 9 \\
 683460 &= (F(F(F(6))) + F(8)^{F(3)} + 4) \times 60 & 737190 &= (F(F(7 - 3))^{F(7)} - 1) \times 90 \\
 6834600 &= (F(F(F(6))) + F(8)^{F(3)} + 4) \times 600. & 7371900 &= (F(F(7 - 3))^{F(7)} - 1) \times 900. \\
 \\
 68467 &= (F(F(6)) \times F(8 \times F(F(4))) - F(F(F(6)))) \times 7 & 74487 &= (-F(F(7) + F(F(4)))/F(F(4)) + F(F(8))) \times 7 \\
 684670 &= (F(F(6)) \times F(8 \times F(F(4))) - F(F(F(6)))) \times 70 & 744870 &= (-F(F(7) + F(F(4)))/F(F(4)) + F(F(8))) \times 70 \\
 6846700 &= (F(F(6)) \times F(8 \times F(F(4))) - F(F(F(6)))) \times 700. & 7448700 &= (-F(F(7) + F(F(4)))/F(F(4)) + F(F(8))) \times 700. \\
 \\
 68537 &= (F(F(F(6))) - F(8) \times F(5 \times F(3))) \times 7 & 74529 &= (F(7) \times (F(F(4)) + 5))^2 \times 9 \\
 685370 &= (F(F(F(6))) - F(8) \times F(5 \times F(3))) \times 70 & 745290 &= (F(7) \times (F(F(4)) + 5))^2 \times 90 \\
 6853700 &= (F(F(F(6))) - F(8) \times F(5 \times F(3))) \times 700. & 7452900 &= (F(7) \times (F(F(4)) + 5))^2 \times 900.
 \end{aligned}$$

$$\begin{aligned}
74665 &= (F(F(7)) \times F(F(4))^6 + F(F(6))) \times 5 \\
746650 &= (F(F(7)) \times F(F(4))^6 + F(F(6))) \times 50 \\
7466500 &= (F(F(7)) \times F(F(4))^6 + F(F(6))) \times 500. \\
\\
74688 &= (-F(7) - F(-4 + F(F(6))) + F(F(8))) \times 8 \\
746880 &= (-F(7) - F(-4 + F(F(6))) + F(F(8))) \times 80 \\
7468800 &= (-F(7) - F(-4 + F(F(6))) + F(F(8))) \times 800. \\
\\
74977 &= (-F(F(7)) - F(F(4)) + F(F(9) - F(7))) \times 7 \\
749770 &= (-F(F(7)) - F(F(4)) + F(F(9) - F(7))) \times 70 \\
7497700 &= (-F(F(7)) - F(F(4)) + F(F(9) - F(7))) \times 700. \\
\\
75635 &= (F(F(F(7) - 5)) + F(F(F(6)) - F(3))) \times 5 \\
756350 &= (F(F(F(7) - 5)) + F(F(F(6)) - F(3))) \times 50 \\
7563500 &= (F(F(F(7) - 5)) + F(F(F(6)) - F(3))) \times 500. \\
\\
75645 &= (F(7 + 5) - F(F(6)))^{F(F(4))} \times 5 \\
756450 &= (F(7 + 5) - F(F(6)))^{F(F(4))} \times 50 \\
7564500 &= (F(7 + 5) - F(F(6)))^{F(F(4))} \times 500. \\
\\
75735 &= (F(F(7)) \times 5 \times F(7) + F(3)) \times 5 \\
757350 &= (F(F(7)) \times 5 \times F(7) + F(3)) \times 50 \\
7573500 &= (F(F(7)) \times 5 \times F(7) + F(3)) \times 500. \\
\\
75745 &= (F(F(7)) \times 5 \times F(7) + 4) \times 5 \\
757450 &= (F(F(7)) \times 5 \times F(7) + 4) \times 50 \\
7574500 &= (F(F(7)) \times 5 \times F(7) + 4) \times 500. \\
\\
75765 &= (F(F(7)) \times 5 \times F(7) + F(6)) \times 5 \\
757650 &= (F(F(7)) \times 5 \times F(7) + F(6)) \times 50 \\
7576500 &= (F(F(7)) \times 5 \times F(7) + F(6)) \times 500. \\
\\
75957 &= (F(F(F(7) - 5)) - 95) \times 7 \\
759570 &= (F(F(F(7) - 5)) - 95) \times 70 \\
7595700 &= (F(F(F(7) - 5)) - 95) \times 700. \\
\\
76167 &= (-F(7) \times (6 - 1) + F(F(F(6)))) \times 7 \\
761670 &= (-F(7) \times (6 - 1) + F(F(F(6)))) \times 70 \\
7616700 &= (-F(7) \times (6 - 1) + F(F(F(6)))) \times 700. \\
\\
76631 &= (7 \times F(F(F(6))) + 6 + 3) \times 1 \\
766310 &= (7 \times F(F(F(6))) + 6 + 3) \times 10 \\
7663100 &= (7 \times F(F(F(6))) + 6 + 3) \times 100. \\
\\
76657 &= (F(F(7 + 6/6)) + 5) \times 7 \\
766570 &= (F(F(7 + 6/6)) + 5) \times 70 \\
7665700 &= (F(F(7 + 6/6)) + 5) \times 700. \\
\\
76691 &= (7 \times F(F(F(6))) + 69) \times 1 \\
766910 &= (7 \times F(F(F(6))) + 69) \times 10 \\
7669100 &= (7 \times F(F(F(6))) + 69) \times 100. \\
\\
76867 &= (-7 + F(F(6)) + F(F(8)) + F(F(6))) \times 7 \\
768670 &= (-7 + F(F(6)) + F(F(8)) + F(F(6))) \times 70 \\
7686700 &= (-7 + F(F(6)) + F(F(8)) + F(F(6))) \times 700. \\
\\
76937 &= (F(7) + F(F(F(6))) + F(9) - F(3)) \times 7 \\
769370 &= (F(7) + F(F(F(6))) + F(9) - F(3)) \times 70 \\
7693700 &= (F(7) + F(F(F(6))) + F(9) - F(3)) \times 700. \\
\\
78142 &= (-F(F(7)) + F(8 + 1)^{F(4)}) \times 2 \\
781420 &= (-F(F(7)) + F(8 + 1)^{F(4)}) \times 20 \\
7814200 &= (-F(F(7)) + F(8 + 1)^{F(4)}) \times 200. \\
\\
78197 &= (F(F(7)) + F(F(8)) + 1 - 9) \times 7 \\
781970 &= (F(F(7)) + F(F(8)) + 1 - 9) \times 70 \\
7819700 &= (F(F(7)) + F(F(8)) + 1 - 9) \times 700. \\
\\
78445 &= (F(F(7)) + F(8 \times F(4))/F(4)) \times 5 \\
784450 &= (F(F(7)) + F(8 \times F(4))/F(4)) \times 50 \\
7844500 &= (F(F(7)) + F(8 \times F(4))/F(4)) \times 500. \\
\\
78568 &= ((-F(F(7)) + 8) \times 5 + F(F(F(6)))) \times 8 \\
785680 &= ((-F(F(7)) + 8) \times 5 + F(F(F(6)))) \times 80 \\
7856800 &= ((-F(F(7)) + 8) \times 5 + F(F(F(6)))) \times 800. \\
\\
78827 &= (F(F(7)) + F(F(8)) + 82) \times 7 \\
788270 &= (F(F(7)) + F(F(8)) + 82) \times 70 \\
7882700 &= (F(F(7)) + F(F(8)) + 82) \times 700. \\
\\
79215 &= (F(F(7)) \times F(9) \times 2 - 1) \times 5 \\
792150 &= (F(F(7)) \times F(9) \times 2 - 1) \times 50 \\
7921500 &= (F(F(7)) \times F(9) \times 2 - 1) \times 500. \\
\\
79225 &= (F(F(7)) \times F(9) \times 2 + F(2)) \times 5 \\
792250 &= (F(F(7)) \times F(9) \times 2 + F(2)) \times 50 \\
7922500 &= (F(F(7)) \times F(9) \times 2 + F(2)) \times 500. \\
\\
79235 &= (F(F(7)) \times F(9) \times 2 + 3) \times 5 \\
792350 &= (F(F(7)) \times F(9) \times 2 + 3) \times 50 \\
7923500 &= (F(F(7)) \times F(9) \times 2 + 3) \times 500. \\
\\
79648 &= (-F(7 + 9) + F(F(F(6))) - F(4)) \times 8 \\
796480 &= (-F(7 + 9) + F(F(F(6))) - F(4)) \times 80 \\
7964800 &= (-F(7 + 9) + F(F(F(6))) - F(4)) \times 800. \\
\\
81088 &= (-810 + F(F(8))) \times 8 \\
810880 &= (-810 + F(F(8))) \times 80 \\
8108800 &= (-810 + F(F(8))) \times 800. \\
\\
81186 &= (F(F(8)) + 1 + F(18)) \times 6 \\
811860 &= (F(F(8)) + 1 + F(18)) \times 60 \\
8118600 &= (F(F(8)) + 1 + F(18)) \times 600. \\
\\
82688 &= (F(F(8)) \times F(2) - F(-6 + F(8))) \times 8 \\
826880 &= (F(F(8)) \times F(2) - F(-6 + F(8))) \times 80 \\
8268800 &= (F(F(8)) \times F(2) - F(-6 + F(8))) \times 800.
\end{aligned}$$

$$\begin{aligned}
83169 &= (F(8)^3 + 1 - F(F(6))) \times 9 \\
831690 &= (F(8)^3 + 1 - F(F(6))) \times 90 \\
8316900 &= (F(8)^3 + 1 - F(F(6))) \times 900. \\
83343 &= (F(8)^3 \times 3 - F(F(4))) \times 3 \\
833430 &= (F(8)^3 \times 3 - F(F(4))) \times 30 \\
8334300 &= (F(8)^3 \times 3 - F(F(4))) \times 300. \\
83488 &= (-8^3 + F(F(4)) + F(F(8))) \times 8 \\
834880 &= (-8^3 + F(F(4)) + F(F(8))) \times 80 \\
8348800 &= (-8^3 + F(F(4)) + F(F(8))) \times 800. \\
83826 &= (F(F(8)) + F(F(3) + 8)^2) \times 6 \\
838260 &= (F(F(8)) + F(F(3) + 8)^2) \times 60 \\
8382600 &= (F(F(8)) + F(F(3) + 8)^2) \times 600. \\
83968 &= (-F(8)^{F(3)} - 9 + F(F(F(6)))) \times 8 \\
839680 &= (-F(8)^{F(3)} - 9 + F(F(F(6)))) \times 80 \\
8396800 &= (-F(8)^{F(3)} - 9 + F(F(F(6)))) \times 800. \\
84208 &= (F(F(8)) - 420) \times 8 \\
842080 &= (F(F(8)) - 420) \times 80 \\
8420800 &= (F(F(8)) - 420) \times 800. \\
84368 &= (-F(8) - F(F(F(4))))^{F(3)} + F(F(F(6))) \times 8 \\
843680 &= (-F(8) - F(F(F(4))))^{F(3)} + F(F(F(6))) \times 80 \\
8436800 &= (-F(8) - F(F(F(4))))^{F(3)} + F(F(F(6))) \times 800. \\
84777 &= (F(F(8)) + 4 \times F(F(7)) + F(F(7))) \times 7 \\
847770 &= (F(F(8)) + 4 \times F(F(7)) + F(F(7))) \times 70 \\
8477700 &= (F(F(8)) + 4 \times F(F(7)) + F(F(7))) \times 700. \\
84985 &= (F(F(8) + F(F(F(4)))) - F(9) \times F(8)) \times 5 \\
849850 &= (F(F(8) + F(F(F(4)))) - F(9) \times F(8)) \times 50 \\
8498500 &= (F(F(8) + F(F(F(4)))) - F(9) \times F(8)) \times 500. \\
85728 &= (F(F(8)) + 5 - F(F(7)) - 2) \times 8 \\
857280 &= (F(F(8)) + 5 - F(F(7)) - 2) \times 80 \\
8572800 &= (F(F(8)) + 5 - F(F(7)) - 2) \times 800. \\
85888 &= (F(F(8)) - 5 \times (F(8) + F(8))) \times 8 \\
858880 &= (F(F(8)) - 5 \times (F(8) + F(8))) \times 80 \\
8588800 &= (F(F(8)) - 5 \times (F(8) + F(8))) \times 800. \\
85968 &= (F(F(8)) - 5 \times (F(9) + 6)) \times 8 \\
859680 &= (F(F(8)) - 5 \times (F(9) + 6)) \times 80 \\
8596800 &= (F(F(8)) - 5 \times (F(9) + 6)) \times 800. \\
86288 &= (F(F(8)) + F(6) \times (F(2) - F(8))) \times 8 \\
862880 &= (F(F(8)) + F(6) \times (F(2) - F(8))) \times 80 \\
8628800 &= (F(F(8)) + F(6) \times (F(2) - F(8))) \times 800. \\
86368 &= (F(F(8)) - 6 - F(F(3) \times 6)) \times 8 \\
863680 &= (F(F(8)) - 6 - F(F(3) \times 6)) \times 80 \\
8636800 &= (F(F(8)) - 6 - F(F(3) \times 6)) \times 800. \\
86448 &= (F(F(8)) - F(F(6) + 4) + 4) \times 8 \\
864480 &= (F(F(8)) - F(F(6) + 4) + 4) \times 80 \\
8644800 &= (F(F(8)) - F(F(6) + 4) + 4) \times 800. \\
86728 &= (F(F(8)) - F(6) \times F(7) - F(2)) \times 8 \\
867280 &= (F(F(8)) - F(6) \times F(7) - F(2)) \times 80 \\
8672800 &= (F(F(8)) - F(6) \times F(7) - F(2)) \times 800. \\
86848 &= (F(F(8)) - 6 - 84) \times 8 \\
868480 &= (F(F(8)) - 6 - 84) \times 80 \\
8684800 &= (F(F(8)) - 6 - 84) \times 800. \\
86888 &= (F(F(8)) - F(6) \times 8 - F(8)) \times 8 \\
868880 &= (F(F(8)) - F(6) \times 8 - F(8)) \times 80 \\
8688800 &= (F(F(8)) - F(6) \times 8 - F(8)) \times 800. \\
86928 &= (F(F(8)) - (6 + F(9)) \times 2) \times 8 \\
869280 &= (F(F(8)) - (6 + F(9)) \times 2) \times 80 \\
8692800 &= (F(F(8)) - (6 + F(9)) \times 2) \times 800. \\
86968 &= (F(F(8)) - 69 - 6) \times 8 \\
869680 &= (F(F(8)) - 69 - 6) \times 80 \\
8696800 &= (F(F(8)) - 69 - 6) \times 800. \\
87128 &= (F(F(8)) - F(7 + 1 + 2)) \times 8 \\
871280 &= (F(F(8)) - F(7 + 1 + 2)) \times 80 \\
8712800 &= (F(F(8)) - F(7 + 1 + 2)) \times 800. \\
87168 &= (F(F(8)) - 71 + F(F(6))) \times 8 \\
871680 &= (F(F(8)) - 71 + F(F(6))) \times 80 \\
8716800 &= (F(F(8)) - 71 + F(F(6))) \times 800. \\
87285 &= (-F(8) - F(F(7)) + F(F(2) + F(8))) \times 5 \\
872850 &= (-F(8) - F(F(7)) + F(F(2) + F(8))) \times 50 \\
8728500 &= (-F(8) - F(F(7)) + F(F(2) + F(8))) \times 500. \\
87288 &= (F(F(8)) - 7 - 28) \times 8 \\
872880 &= (F(F(8)) - 7 - 28) \times 80 \\
8728800 &= (F(F(8)) - 7 - 28) \times 800. \\
87328 &= (F(F(8)) - (F(7) + F(3)) \times 2) \times 8 \\
873280 &= (F(F(8)) - (F(7) + F(3)) \times 2) \times 80 \\
8732800 &= (F(F(8)) - (F(7) + F(3)) \times 2) \times 800. \\
87375 &= (-8 + F(F(7)))/3 \times F(F(7)) \times 5 \\
873750 &= (-8 + F(F(7)))/3 \times F(F(7)) \times 50 \\
8737500 &= (-8 + F(F(7)))/3 \times F(F(7)) \times 500.
\end{aligned}$$

$$\begin{aligned}87448 &= (F(F(8)) - 7 - 4 - 4) \times 8 \\874480 &= (F(F(8)) - 7 - 4 - 4) \times 80 \\8744800 &= (F(F(8)) - 7 - 4 - 4) \times 800.\end{aligned}$$

$$\begin{aligned}87512 &= (F(F(8)) - 7) \times (5 - 1) \times 2 \\875120 &= (F(F(8)) - 7) \times (5 - 1) \times 20 \\8751200 &= (F(F(8)) - 7) \times (5 - 1) \times 200.\end{aligned}$$

$$\begin{aligned}87764 &= (F(F(8)) + 7 \times 7 + F(F(F(6)))) \times 4 \\877640 &= (F(F(8)) + 7 \times 7 + F(F(F(6)))) \times 40 \\8776400 &= (F(F(8)) + 7 \times 7 + F(F(F(6)))) \times 400.\end{aligned}$$

$$\begin{aligned}87888 &= (F(F(8)) + (F(7) - 8) \times 8) \times 8 \\878880 &= (F(F(8)) + (F(7) - 8) \times 8) \times 80 \\8788800 &= (F(F(8)) + (F(7) - 8) \times 8) \times 800.\end{aligned}$$

$$\begin{aligned}87928 &= (F(F(8)) + F(7) + F(9) - 2) \times 8 \\879280 &= (F(F(8)) + F(7) + F(9) - 2) \times 80 \\8792800 &= (F(F(8)) + F(7) + F(9) - 2) \times 800.\end{aligned}$$

$$\begin{aligned}88168 &= (F(F(8)) + 81 - 6) \times 8 \\881680 &= (F(F(8)) + 81 - 6) \times 80 \\8816800 &= (F(F(8)) + 81 - 6) \times 800.\end{aligned}$$

$$\begin{aligned}88248 &= (F(F(8)) + 82 + F(4)) \times 8 \\882480 &= (F(F(8)) + 82 + F(4)) \times 80 \\8824800 &= (F(F(8)) + 82 + F(4)) \times 800.\end{aligned}$$

$$\begin{aligned}88288 &= (F(F(8)) + 82 + 8) \times 8 \\882880 &= (F(F(8)) + 82 + 8) \times 80 \\8828800 &= (F(F(8)) + 82 + 8) \times 800.\end{aligned}$$

$$\begin{aligned}88435 &= (-F(8) + F(F(8)) + F(F(F(4)))) - 3) \times 5 \\884350 &= (-F(8) + F(F(8)) + F(F(F(4)))) - 3) \times 50 \\8843500 &= (-F(8) + F(F(8)) + F(F(F(4)))) - 3) \times 500.\end{aligned}$$

$$\begin{aligned}88495 &= (-F(8) + F(F(8)) + F(F(F(4)))) + 9) \times 5 \\884950 &= (-F(8) + F(F(8)) + F(F(F(4)))) + 9) \times 50 \\8849500 &= (-F(8) + F(F(8)) + F(F(F(4)))) + 9) \times 500.\end{aligned}$$

$$\begin{aligned}88515 &= (-8 + F(F(8)) + F(F(F(5 - 1)))) \times 5 \\885150 &= (-8 + F(F(8)) + F(F(F(5 - 1)))) \times 50 \\8851500 &= (-8 + F(F(8)) + F(F(F(5 - 1)))) \times 500.\end{aligned}$$

$$\begin{aligned}88545 &= (F(F(8)) + F(F(8 - 5))) - F(F(4)) \times 5 \\885450 &= (F(F(8)) + F(F(8 - 5))) - F(F(4)) \times 50 \\8854500 &= (F(F(8)) + F(F(8 - 5))) - F(F(4)) \times 500.\end{aligned}$$

$$\begin{aligned}88555 &= (F(F(8)) + F(F(8) - 5/5)) \times 5 \\885550 &= (F(F(8)) + F(F(8) - 5/5)) \times 50 \\8855500 &= (F(F(8)) + F(F(8) - 5/5)) \times 500.\end{aligned}$$

$$\begin{aligned}88595 &= (8 + F(8 + 5 + 9)) \times 5 \\885950 &= (8 + F(8 + 5 + 9)) \times 50 \\8859500 &= (8 + F(8 + 5 + 9)) \times 500.\end{aligned}$$

$$\begin{aligned}88635 &= (8 + 8 + F(F(F(6)) + F(F(3)))) \times 5 \\886350 &= (8 + 8 + F(F(F(6)) + F(F(3)))) \times 50 \\8863500 &= (8 + 8 + F(F(F(6)) + F(F(3)))) \times 500.\end{aligned}$$

$$\begin{aligned}88728 &= (F(F(8)) + F(8) \times 7 - 2) \times 8 \\887280 &= (F(F(8)) + F(8) \times 7 - 2) \times 80 \\8872800 &= (F(F(8)) + F(8) \times 7 - 2) \times 800.\end{aligned}$$

$$\begin{aligned}89448 &= (F(F(8)) + F(9 + 4) + F(F(4))) \times 8 \\894480 &= (F(F(8)) + F(9 + 4) + F(F(4))) \times 80 \\8944800 &= (F(F(8)) + F(9 + 4) + F(F(4))) \times 800.\end{aligned}$$

$$\begin{aligned}89472 &= (F(8) \times 9 + F(4)) \times F(F(7)) \times 2 \\894720 &= (F(8) \times 9 + F(4)) \times F(F(7)) \times 20 \\8947200 &= (F(8) \times 9 + F(4)) \times F(F(7)) \times 200.\end{aligned}$$

$$\begin{aligned}89488 &= (F(F(8)) + (F(9) - 4) \times 8) \times 8 \\894880 &= (F(F(8)) + (F(9) - 4) \times 8) \times 80 \\8948800 &= (F(F(8)) + (F(9) - 4) \times 8) \times 800.\end{aligned}$$

$$\begin{aligned}89768 &= (F(F(8)) + F(9) + F(F(7)) + F(6)) \times 8 \\897680 &= (F(F(8)) + F(9) + F(F(7)) + F(6)) \times 80 \\8976800 &= (F(F(8)) + F(9) + F(F(7)) + F(6)) \times 800.\end{aligned}$$

$$\begin{aligned}89968 &= (F(F(8)) + F(9) \times 9 - 6) \times 8 \\899680 &= (F(F(8)) + F(9) \times 9 - 6) \times 80 \\8996800 &= (F(F(8)) + F(9) \times 9 - 6) \times 800.\end{aligned}$$

$$\begin{aligned}92732 &= (F(9 + 2 + F(7)) - F(3)) \times 2 \\927320 &= (F(9 + 2 + F(7)) - F(3)) \times 20 \\9273200 &= (F(9 + 2 + F(7)) - F(3)) \times 200.\end{aligned}$$

$$\begin{aligned}92742 &= (F(9 + 2 + F(7)) + F(4)) \times 2 \\927420 &= (F(9 + 2 + F(7)) + F(4)) \times 20 \\9274200 &= (F(9 + 2 + F(7)) + F(4)) \times 200.\end{aligned}$$

$$\begin{aligned}94365 &= (9^{F(F(4))} \times F(F(F(3) + 6))) \times 5 \\943650 &= (9^{F(F(4))} \times F(F(F(3) + 6))) \times 50 \\9436500 &= (9^{F(F(4))} \times F(F(F(3) + 6))) \times 500.\end{aligned}$$

$$\begin{aligned}94647 &= (-9 + F(F(4)) \times F(F(F(6)) - F(F(F(4)))) \times 7 \\946470 &= (-9 + F(F(4)) \times F(F(F(6)) - F(F(F(4)))) \times 70 \\9464700 &= (-9 + F(F(4)) \times F(F(F(6)) - F(F(F(4)))) \times 700.\end{aligned}$$

$$\begin{aligned}96489 &= (-9 - 6^{F(4)} + F(F(8))) \times 9 \\964890 &= (-9 - 6^{F(4)} + F(F(8))) \times 90 \\9648900 &= (-9 - 6^{F(4)} + F(F(8))) \times 900.\end{aligned}$$

$$\begin{aligned}96849 &= (-9 \times F(F(6)) + F(F(8)) + 4) \times 9 \\968490 &= (-9 \times F(F(6)) + F(F(8)) + 4) \times 90 \\9684900 &= (-9 \times F(F(6)) + F(F(8)) + 4) \times 900.\end{aligned}$$

$$\begin{aligned}
97569 &= (F(F(9) - F(7)) - 5 \times F(F(6))) \times 9 & 98471 &= (9 \times (F(F(8)) - 4) - 7) \times 1 \\
975690 &= (F(F(9) - F(7)) - 5 \times F(F(6))) \times 90 & 984710 &= (9 \times (F(F(8)) - 4) - 7) \times 10 \\
9756900 &= (F(F(9) - F(7)) - 5 \times F(F(6))) \times 900. & 9847100 &= (9 \times (F(F(8)) - 4) - 7) \times 100. \\
97875 &= (F(9 + F(7)) + 8 \times F(F(7))) \times 5 & & \\
978750 &= (F(9 + F(7)) + 8 \times F(F(7))) \times 50 & & \\
9787500 &= (F(9 + F(7)) + 8 \times F(F(7))) \times 500. & & \\
98289 &= (-F(9) + F(F(8)) + F(2) + 8) \times 9 & 98521 &= (9 \times F(F(8)) + 5 + 2) \times 1 \\
982890 &= (-F(9) + F(F(8)) + F(2) + 8) \times 90 & 985210 &= (9 \times F(F(8)) + 5 + 2) \times 10 \\
9828900 &= (-F(9) + F(F(8)) + F(2) + 8) \times 900. & 9852100 &= (9 \times F(F(8)) + 5 + 2) \times 100. \\
98373 &= (-F(9) + F(F(8)) \times 3 - F(7)) \times 3 & & \\
983730 &= (-F(9) + F(F(8)) \times 3 - F(7)) \times 30 & & \\
9837300 &= (-F(9) + F(F(8)) \times 3 - F(7)) \times 300. & & \\
98571 &= (9 \times F(F(8)) + 57) \times 1 & & \\
985710 &= (9 \times F(F(8)) + 57) \times 10 & & \\
9857100 &= (9 \times F(F(8)) + 57) \times 100. & &
\end{aligned}$$

$$\begin{aligned}
88445 &= (-F(8) + F(F(8) + F(F(F(4)))) - F(F(F(4)))) \times 5 \\
884450 &= (-F(8) + F(F(8) + F(F(F(4)))) - F(F(F(4)))) \times 50 \\
8844500 &= (-F(8) + F(F(8) + F(F(F(4)))) - F(F(F(4)))) \times 500.
\end{aligned}$$

Acknowledgement

The author is thankful to T.J. Eckman, Georgia, USA (email: 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] FREIDMAN, E., Problems of the Month (April 2012), <http://www2.stetson.edu/~efriedma/mathmagic/0412.html>.
- [3] HEINZ, H., "Number Patterns. <http://www.magic-squares.net> and <http://www.magic-squares.net/square-update.htm>.
- [4] MADACHY, J.S., Mathematics on Vacations, Charlers Scriber's Son, New York, 1966.
- [5] KNOTT, R., The Mathematical Magic of the Fibonacci Numbers, <http://www.maths.surrey.ac.uk/hosted-sites/R.Knott/Fibonacci/fibmaths.html>
- [6] KNOTT, R., Fibonacci and Lucas Number Calculator, <http://www.maths.surrey.ac.uk/hosted-sites/R.Knott/Fibonacci/fibCalcX.html>
- [7] NEBUS, J., Counting From 52 to 11,108, nebusresearch, <http://nebusresearch.wordpress.com/2013/06/10/counting-from-52-to-11108/>.
- [8] 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.
- [9] ROSE, C., "Pretty Wild Narcissistic numbers", <http://www.tri.org.au/numQ/pwn/>.
- [10] I.J. TANEJA, Crazy Sequential Representation: Numbers from 0 to 11111 in terms of Increasing and Decreasing Orders of 1 to 9, Jan. 2014, pp.1-161, <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] I.J. TANEJA, Single Digit Representations of Natural Numbers, Feb. 1015, pp.1-55. <http://arxiv.org/abs/1502.03501>. Also in RGMIA Research Report Collection, 18(2015), Article 15, pp.1-55. <http://rgmia.org/papers/v18/v18a15.pdf>.
- [13] I.J. TANEJA, 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>.
- [14] I.J. TANEJA, 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>.
- [15] I.J. TANEJA, 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>.
- [16] I.J. TANEJA, 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] I.J. TANEJA, Representations of Palindromic, Prime and Number Patterns, RGMIA Research Report Collection, 18(2015), Article 77, pp.1-21. <http://rgmia.org/papers/v18/v18a77.pdf>.
- [20] I.J. TANEJA, Unified Selfie Numbers, RGMIA Research Report Collection, 18(2015), Article 153, pp. 1-14. <http://rgmia.org/papers/v18/v18a153.pdf>.
- [21] I.J. TANEJA, Patterns in Selfie Numbers, RGMIA Research Report Collection, 18(2015), Article 154, pp. 1-41. <http://rgmia.org/papers/v18/v18a154.pdf>.
- [22] I.J. TANEJA, 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] I.J. TANEJA, 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>.
- [24] I.J. TANEJA, Selfie Numbers - III: With Factorial and Without Square-Root - Up To Five Digits, RGMIA Research Report Collection, 19(2016), Article 16, pp.1-52, <http://rgmia.org/papers/v19/v19a16.pdf>.
- [25] I.J. TANEJA, Selfie Power Representations, RGMIA Research Report Collection, 19(2016), Article 17, pp. 1-20, <http://rgmia.org/papers/v19/v19a17.pdf>.
- [26] I.J. TANEJA, Crazy Power Representations of Natural Numbers, RGMIA Research Report Collection, 19(2016), Article 31, pp.1-71, <http://rgmia.org/papers/v19/v19a31.pdf>.
- [27] I.J. TANEJA, Flexible Power Narcissistic Numbers with Division, RGMIA Research Report Collection, 19(2016), Article 32, pp.1-67, <http://rgmia.org/papers/v19/v19a32.pdf>.
- [28] I.J. TANEJA, Floor Function and Narcissistic Numbers with Division, RGMIA Research Report Collection, 19(2016), Article 33, pp.1-8, <http://rgmia.org/papers/v19/v19a33.pdf>.

- [29] I.J. TANEJA, Double Sequential Representations of Natural Numbers - I, RGMIA Research Report Collection, 19(2016), Art 48, pp.1-65, <http://rgmia.org/papers/v19/v19a48.pdf>.
- [30] I.J. TANEJA, Flexible Power Selfie Numbers - I, RGMIA Research Report Collection, 19(2016), Art 49, pp.1-34, <http://rgmia.org/papers/v19/v19a49.pdf>.
- [31] I.J. TANEJA, Flexible Power Selfie Numbers - II, RGMIA Research Report Collection, 19(2016), Art 50, pp.1-69, <http://rgmia.org/papers/v19/v19a50.pdf>.
- [32] I.J. TANEJA, Flexible Power Selfie Numbers - III, RGMIA Research Report Collection, 19(2016), Art 51, pp.1-66, <http://rgmia.org/papers/v19/v19a51.pdf>.
- [33] I.J. TANEJA, Double Sequential Representations of Natural Numbers - II, RGMIA Research Report Collection, 19(2016), Art 57, pp.1-42, <http://rgmia.org/papers/v19/v19a57.pdf>.
- [34] I.J. TANEJA, Pyramidal Representations of Natural Numbers, RGMIA Research Report Collection, 19(2016), pp.1-95, Art 58, <http://rgmia.org/papers/v19/v19a58.pdf>.
- [35] I.J. TANEJA, Selfie Fractions: Addable, RGMIA Research Report Collection, 19(2016), Art 113, pp. 1-72, <http://rgmia.org/papers/v19/v19a113.pdf>.
- [36] I.J. TANEJA, Selfie Fractions: Dottable and Potentiable, RGMIA Research Report Collection, 19(2016), Art 114, pp. 1-25, <http://rgmia.org/papers/v19/v19a114.pdf>.
- [37] I.J. TANEJA, Selfie Fractions: Addable and Dottable Together, RGMIA Research Report Collection, 19(2016), Art 115, pp. 1-80, <http://rgmia.org/papers/v19/v19a115.pdf>.
- [38] I.J. TANEJA, Equivalent Selfie Fractions: Dottable, Addable and Subtractable, RGMIA Research Report Collection, 19(2016), Art 116, pp. 1-40, <http://rgmia.org/papers/v19/v19a116.pdf>.
- [39] I.J. TANEJA, Equivalent Selfie Fractions: Addable and Dottable Together, RGMIA Research Report Collection, 19(2016), Art 117, pp. 1-85, <http://rgmia.org/papers/v19/v19a117.pdf>.
- [40] I.J. TANEJA, Double Sequential Representations of Natural Numbers - III, RGMIA Research Report Collection, 19(2016), pp. 1-70, <http://rgmia.org/papers/v19/v19a128.pdf>.
- [41] I.J. TANEJA, Double Sequential Representations of Natural Numbers - IV, RGMIA Research Report Collection, 19(2016), pp. 1-70, <http://rgmia.org/papers/v19/v19a129.pdf>.
- [42] I.J. TANEJA, Pyramidal Representations of Natural Numbers - II, RGMIA Research Report Collection, 19(2016), pp. 1-75, <http://rgmia.org/papers/v19/v19a130.pdf>.
- [43] I.J. TANEJA, Flexible Power Representations of Natural Numbers, RGMIA Research Report Collection, 19(2016), pp. 1-91, <http://rgmia.org/papers/v19/v19a131.pdf>.
- [44] I.J. TANEJA, Triple Representations of Natural Numbers - I, RGMIA Research Report Collection, 19(2016), pp. 1-79, <http://rgmia.org/papers/v19/v19a134.pdf>.
- [45] I.J. TANEJA, Triple Representations of Natural Numbers - I, RGMIA Research Report Collection, 19(2016), pp. 1-59, <http://rgmia.org/v19.php>
-