# Generating Pythagorean Triples with Applications to Magic Squares and Palindromic-Type Pandigital Patterns

## Inder J. Taneja[1]

### Abstract

*This paper brings simplified and symmetric procedure to generate **Pythagorean triples**. These triples are applied to generate **perfect square sums magic squares** of consecutive odd numbers, and patterned **Palindromic-Type Pandigital Pythagorean Triples**. These results are in blocks of 9, 99, 999, 9999, 99999, etc.*

## Contents

---

[1]*Formerly, Professor of Mathematics, Universidade Federal de Santa Catarina, Florianópolis, SC, Brazil (1978-2012). Also worked at Delhi University, India (1976-1978).* **E-mail:** *ijtaneja@gmail.com;* **Web-sites:** *http://inderjtaneja.com; http://indertaneja.com;* **Twitter:** *@IJTANEJA.*

RGMIA Res. Rep. Coll. 21 (2018), Art. 85, 42 pp.      Received 23/07/18

1

# 1 Generating Pythagorean Triples: First Block

Let's write a number 100 as following 9 sums:

$$
\begin{aligned}
1. \quad & 100 = 99 + 01 \\
2. \quad & 100 = 96 + 04 \\
3. \quad & 100 = 91 + 09 \\
4. \quad & 100 = 84 + 16 \\
5. \quad & 100 = 75 + 25 \\
6. \quad & 100 = 64 + 36 \\
7. \quad & 100 = 51 + 49 \\
8. \quad & 100 = 19 + 64 \\
9. \quad & 100 = 19 + 81
\end{aligned}
\tag{1}
$$

We observe that the right hand sides of the expression (1) are formed by two sums, where the last two digits are perfect squares. Consider a difference of squares between the terms of r.h.s. with 1 in the front of perfect square term. Then this difference is again a perfect square multiple of 20 resulting in Pythagorean triples. See below:

$$
\begin{aligned}
101^2 - 99^2 &= 20^2 & \Rightarrow \quad 99^2 + 20^2 &= 101^2 \\
104^2 - 96^2 &= 40^2 & \Rightarrow \quad 96^2 + 40^2 &= 104^2 \\
109^2 - 91^2 &= 60^2 & \Rightarrow \quad 91^2 + 60^2 &= 109^2 \\
116^2 - 84^2 &= 80^2 & \Rightarrow \quad 84^2 + 80^2 &= 116^2 \\
125^2 - 75^2 &= 100^2 & \Rightarrow \quad 75^2 + 100^2 &= 125^2 \\
136^2 - 64^2 &= 120^2 & \Rightarrow \quad 64^2 + 120^2 &= 136^2 \\
149^2 - 51^2 &= 140^2 & \Rightarrow \quad 51^2 + 140^2 &= 149^2 \\
164^2 - 36^2 &= 160^2 & \Rightarrow \quad 36^2 + 160^2 &= 164^2 \\
181^2 - 19^2 &= 160^2 & \Rightarrow \quad 19^2 + 180^2 &= 181^2
\end{aligned}
\tag{2}
$$

Thus we have a 9 Pythagorean triples given in (2). Below are two subsections bring applications of the triples given in (2) in two different situations. One on generating perfect square sum **magic squares** and the second on **palindromic-type pandigital Pythagorean triples**

## 1.1 Magic Squares

Using the Procedure given in author's work [3], we have following distribution:

$$
\begin{aligned}
(99, 20, 101) &\Rightarrow \left\{9, 41, 201, 1089, 9801 = 99^2\right\} \\
(96, 40, 104) &\Rightarrow \left\{8, 81, 207, 1152, 9216 = 96^2\right\} \\
(91, 60, 109) &\Rightarrow \left\{7, 121, 217, 1183, 8281 = 91^2\right\} \\
(84, 80, 116) &\Rightarrow \left\{6, 161, 231, 1176, 7056 = 84^2\right\} \\
(75, 100, 125) &\Rightarrow \left\{5, 201, 249, 1125, 5625 = 75^2\right\}
\end{aligned}
$$

$$(64, 120, 136) \Rightarrow \left\{4, 241, 271, 1024, 4096 = 64^2\right\}$$
$$(51, 140, 149) \Rightarrow \left\{3, 281, 297, 867, 2601 = 51^2\right\}$$
$$(36, 160, 164) \Rightarrow \left\{2, 321, 327, 648, 1296 = 36^2\right\}$$
$$(19, 180, 181) \Rightarrow \left\{1, 361 = 19^2\right\}. \tag{3}$$

where the lines of given in (3) are understood as

$$(a, b, c) \Rightarrow \{\text{order of magic square, first member of sequence,}$$
$$\text{last member of sequence, magic sum, sum of all members of a magic square}\}. \tag{4}$$

The the first 7 lines of distribution (3) give 7 magic square of orders 9 to 3 (decreasing order) of consecutive odd numbers. For example the first line of (3) give a magic square of order 9 with consecutive odd numbers from 41 to 201 with magic sum, 1089, and sum of all members a perfect square, i.e., $9801 = 99^2$. See below:

$$T := 41 + 43 + 45 + \ldots + 197 + 199 + 201 = 9801 = 99^2 := 101^2 - 20^2.$$

Let's see below magic square of consecutive odd numbers of orders 8 to 3 constructed based on the details given in (3).

▶ **Magic Square of Order 3**

According to 7th line of (3) the magic square of order 3 using consecutive odd numbers $(281, 283, ..., 295, 297)$ is given by

|     |     |     | 867 |
|-----|-----|-----|-----|
| 291 | 281 | 295 | 867 |
| 293 | 289 | 285 | 867 |
| 283 | 297 | 287 | 867 |
| 867 | 867 | 867 | 867 |

The above magic square is of magic sum $S_{3\times3} = 75$, and total number of entries is a perfect square sum, i.e., $225 := 15^2 = 17^2 - 8^2$.

▶ **Magic Square of Order 4**

According to 6th line of (3) a pan diagonal magic square of order 4 using consecutive odd numbers $(241, 243, ..., 269, 271)$ is given by

|      |      | 1024 | 1024 | 1024 | 1024 |
|------|------|------|------|------|------|
|      | 253  | 263  | 241  | 267  | 1024 |
| 1024 | 243  | 265  | 255  | 261  | 1024 |
| 1024 | 271  | 245  | 259  | 249  | 1024 |
| 1024 | 257  | 251  | 269  | 247  | 1024 |
|      | 1024 | 1024 | 1024 | 1024 | 1024 |

The above magic square is of magic sum $S_{4\times4} = 1024$, and total number of entries is a perfect square sum, i.e., $4096 := 64^2 = 136^2 - 120^2$.

► **Magic Square of Order 5**

According to 5th line of (3) a pan diagonal square of order 5 using consecutive odd numbers $(201, 203, ..., 247, 249)$ is given by

|      |      | 1125 | 1125 | 1125 | 1125 | 1125 |
|------|------|------|------|------|------|------|
|      | 201  | 213  | 225  | 237  | 249  | 1125 |
| 1125 | 235  | 247  | 209  | 211  | 223  | 1125 |
| 1125 | 219  | 221  | 233  | 245  | 207  | 1125 |
| 1125 | 243  | 205  | 217  | 229  | 231  | 1125 |
| 1125 | 227  | 239  | 241  | 203  | 215  | 1125 |
|      | 1125 | 1125 | 1125 | 1125 | 1125 | 1125 |

The above magic square is of magic sum $S_{5\times5} = 1125$, and total number of entries is a perfect square sum, i.e., $5625 := 75^2 = 125^2 - 100^2$.

► **Magic Square of Order 6**

According to 4th line of (3) the magic square of order 6 using consecutive odd numbers $(161, 263, ..., 229, 231)$ is given by

|      |      |      |      |      |      | 1176 |
|------|------|------|------|------|------|------|
| 161  | 205  | 215  | 227  | 193  | 175  | 1176 |
| 217  | 173  | 229  | 187  | 201  | 169  | 1176 |
| 183  | 171  | 185  | 213  | 221  | 203  | 1176 |
| 223  | 191  | 167  | 207  | 179  | 209  | 1176 |
| 197  | 225  | 181  | 165  | 219  | 189  | 1176 |
| 195  | 211  | 199  | 177  | 163  | 231  | 1176 |
| 1176 | 1176 | 1176 | 1176 | 1176 | 1176 | 1176 |

The above magic square is of magic sum $S_{6\times6} = 1176$, and total number of entries is a perfect square sum, i.e., $7056 := 84^2 = 116^2 - 80^2$.

► **Magic Square of Order 7**

According to 3rd line of (3) a pan diagonal square of order 7 using consecutive odd numbers $(121, 123, ..., 215, 217)$ is given by

|      |      | 1183 | 1183 | 1183 | 1183 | 1183 | 1183 | 1183 |
|------|------|------|------|------|------|------|------|------|
|      | 121  | 137  | 153  | 169  | 185  | 201  | 217  | 1183 |
| 1183 | 199  | 215  | 133  | 135  | 151  | 167  | 183  | 1183 |
| 1183 | 165  | 181  | 197  | 213  | 131  | 147  | 149  | 1183 |
| 1183 | 145  | 161  | 163  | 179  | 195  | 211  | 129  | 1183 |
| 1183 | 209  | 127  | 143  | 159  | 1183 | 177  | 193  | 1183 |
| 1183 | 189  | 191  | 207  | 125  | 141  | 157  | 173  | 1183 |
| 1183 | 155  | 171  | 187  | 203  | 205  | 123  | 139  | 1183 |
|      |      | 1183 | 1183 | 1183 | 1183 | 1183 | 1183 | 1183 |

The above magic square is of magic sum $S_{7\times7} = 1183$, and total number of entries is a perfect square sum, i.e., $8281 := 91^2 = 109^2 - 60^2$.

► **Magic Square of Order 8**

According to 2nd line of (3) a pan diagonal square of order 8 using consecutive odd numbers $(81, 83, ..., 205, 207)$ is given by

|      |      | 1152 | 1152 | 1152 | 1152 | 1152 | 1152 | 1152 | 1152 |
|------|------|------|------|------|------|------|------|------|------|
|      | 81   | 201  | 135  | 159  | 97   | 185  | 119  | 175  | 1152 |
| 1152 | 143  | 151  | 89   | 193  | 127  | 167  | 105  | 177  | 1152 |
| 1152 | 153  | 129  | 207  | 87   | 169  | 113  | 191  | 103  | 1152 |
| 1152 | 199  | 95   | 145  | 137  | 183  | 111  | 161  | 121  | 1152 |
| 1152 | 83   | 203  | 133  | 157  | 99   | 187  | 117  | 173  | 1152 |
| 1152 | 141  | 149  | 91   | 195  | 125  | 165  | 107  | 179  | 1152 |
| 1152 | 155  | 131  | 205  | 85   | 171  | 115  | 189  | 101  | 1152 |
| 1152 | 197  | 93   | 147  | 139  | 181  | 109  | 163  | 123  | 1152 |
|      | 1152 | 1152 | 1152 | 1152 | 1152 | 1152 | 1152 | 1152 | 1152 |

The above magic square is of magic sum $S_{8\times8} = 1152$, and total number of entries is a perfect square sum, i.e., $9216 := 96^2 = 104^2 - 40^2$.

► **Magic Square of Order 9**

According to 1st line of (3) a pan diagonal square of order 9 using consecutive odd numbers $(41, 43, ..., 199, 201)$ is given by

|      |      | 1089 | 1089 | 1089 | 1089 | 1089 | 1089 | 1089 | 1089 | 1089 |
|------|------|------|------|------|------|------|------|------|------|------|
|      | 41   | 65   | 89   | 99   | 23   | 147  | 151  | 175  | 199  | 1089 |
| 1089 | 97   | 121  | 145  | 149  | 173  | 197  | 45   | 69   | 93   | 1089 |
| 1089 | 153  | 177  | 201  | 43   | 67   | 91   | 95   | 119  | 143  | 1089 |
| 1089 | 83   | 53   | 59   | 141  | 111  | 117  | 193  | 163  | 169  | 1089 |
| 1089 | 139  | 109  | 115  | 191  | 161  | 167  | 87   | 57   | 63   | 1089 |
| 1089 | 195  | 165  | 171  | 85   | 55   | 61   | 137  | 107  | 113  | 1089 |
| 1089 | 71   | 77   | 47   | 129  | 135  | 105  | 181  | 187  | 157  | 1089 |
| 1089 | 127  | 133  | 103  | 179  | 185  | 155  | 75   | 81   | 51   | 1089 |
| 1089 | 183  | 189  | 159  | 73   | 79   | 49   | 125  | 131  | 101  | 1089 |
|      | 1089 | 1089 | 1089 | 1089 | 1089 | 1089 | 1089 | 1089 | 1089 | 1089 |

The above magic square is of magic sum $S_{9\times9} = 1089$, and total number of entries is a perfect square sum, i.e., $9801 := 99^2 = 101^2 - 20^2$.

**Remark 1.** *The question arises, what happens to lines 8th and 9th. In case of 8th line we have four numbers,*

$$T := 321 + 323 + 325 + 327 = 1296 = 36^2 := 160^2 - 64^2.$$

*Obviously, it is not possible to make a magic square of order 2. The same happens with 9th line, i.e., just one number $361 = 19^2$.*

5

## 1.2   Palindromic-Type Pandigital Patterns

Let's consider the following well-known procedure [1] to write Pythagorean triples:

$$F(m,n) := m^2 - n^2$$
$$G(m,n) := 2mn$$
$$H(m,n) := m^2 + n^2 \tag{5}$$

Then we can easily check that

$$
\begin{aligned}
F(m,n)^2 + G(m,n)^2 &= \left(m^2 - n^2\right)^2 + (2mn)^2 \\
&= m^4 - 2m^2n^2 + n^4 + 4m^2n^2 \\
&= m^4 + 2m^2n^2 + n^4 \\
&= \left(m^2 + n^2\right)^2 = H(m,n)^2.
\end{aligned}
$$

This proves that the triple $(F, G, H)$ is a **Pythagorean triple**. Let's consider

$$m = 10,\ 110,\ 1110,\ 11110,\ 111110,\ 1111110,\ 11111110,\ 111111110,\ 1111111110$$

in (5), then for each value of $n = 1, 2, 3, ...,7, 8, 9$; there are 9 **palindromic-type pandigital Pythagorean patterns** given below:

$$
\begin{aligned}
099^2 + 20^2 &= \mathbf{1}\,01^2 \\
\mathbf{12}\,099^2 + 220^2 &= \mathbf{121}\,01^2 \\
\mathbf{1232}\,099^2 + 2220^2 &= \mathbf{12321}\,01^2 \\
\mathbf{123432}\,099^2 + 22220^2 &= \mathbf{1234321}\,01^2 \\
\mathbf{12345432}\,099^2 + 222220^2 &= \mathbf{123454321}\,01^2 \\
\mathbf{1234565432}\,099^2 + 2222220^2 &= \mathbf{12345654321}\,01^2 \\
\mathbf{123456765432}\,099^2 + 22222220^2 &= \mathbf{1234567654321}\,01^2 \\
\mathbf{12345678765432}\,099^2 + 222222220^2 &= \mathbf{123456787654321}\,01^2 \\
\mathbf{1234567898765432}\,099^2 + 2222222220^2 &= \mathbf{12345678987654321}\,01^2
\end{aligned}
\tag{6}
$$

$$
\begin{aligned}
096^2 + 40^2 &= \mathbf{1}\,04^2 \\
\mathbf{12}\,096^2 + 440^2 &= \mathbf{121}\,04^2 \\
\mathbf{1232}\,096^2 + 4440^2 &= \mathbf{12321}\,04^2 \\
\mathbf{123432}\,096^2 + 44440^2 &= \mathbf{1234321}\,04^2 \\
\mathbf{12345432}\,096^2 + 444440^2 &= \mathbf{123454321}\,04^2 \\
\mathbf{1234565432}\,096^2 + 4444440^2 &= \mathbf{12345654321}\,04^2 \\
\mathbf{123456765432}\,096^2 + 44444440^2 &= \mathbf{1234567654321}\,04^2 \\
\mathbf{12345678765432}\,096^2 + 444444440^2 &= \mathbf{123456787654321}\,04^2 \\
\mathbf{1234567898765432}\,096^2 + 4444444440^2 &= \mathbf{12345678987654321}\,04^2
\end{aligned}
\tag{7}
$$

$$091^2 + 60^2 = \mathbf{1}\,09^2$$
$$\mathbf{12}\,091^2 + 660^2 = \mathbf{121}\,09^2$$
$$\mathbf{1232}\,091^2 + 6660^2 = \mathbf{12321}\,09^2$$
$$\mathbf{123432}\,091^2 + 66660^2 = \mathbf{1234321}\,09^2$$
$$\mathbf{12345432}\,091^2 + 666660^2 = \mathbf{123454321}\,09^2$$
$$\mathbf{1234565432}\,091^2 + 6666660^2 = \mathbf{12345654321}\,09^2$$
$$\mathbf{123456765432}\,091^2 + 66666660^2 = \mathbf{1234567654321}\,09^2$$
$$\mathbf{12345678765432}\,091^2 + 666666660^2 = \mathbf{123456787654321}\,09^2$$
$$\mathbf{1234567898765432}\,091^2 + 6666666660^2 = \mathbf{12345678987654321}\,09^2 \tag{8}$$

$$084^2 + 80^2 = \mathbf{1}\,16^2$$
$$\mathbf{12}\,084^2 + 880^2 = \mathbf{121}\,16^2$$
$$\mathbf{1232}\,084^2 + 8880^2 = \mathbf{12321}\,16^2$$
$$\mathbf{123432}\,084^2 + 88880^2 = \mathbf{1234321}\,16^2$$
$$\mathbf{12345432}\,084^2 + 888880^2 = \mathbf{123454321}\,16^2$$
$$\mathbf{1234565432}\,084^2 + 8888880^2 = \mathbf{12345654321}\,16^2$$
$$\mathbf{123456765432}\,084^2 + 88888880^2 = \mathbf{1234567654321}\,16^2$$
$$\mathbf{12345678765432}\,084^2 + 888888880^2 = \mathbf{123456787654321}\,16^2$$
$$\mathbf{1234567898765432}\,084^2 + 8888888880^2 = \mathbf{12345678987654321}\,16^2 \tag{9}$$

$$075^2 + 100^2 = \mathbf{1}\,25^2$$
$$\mathbf{12}\,075^2 + 1100^2 = \mathbf{121}\,25^2$$
$$\mathbf{1232}\,075^2 + 11100^2 = \mathbf{12321}\,25^2$$
$$\mathbf{123432}\,075^2 + 111100^2 = \mathbf{1234321}\,25^2$$
$$\mathbf{12345432}\,075^2 + 1111100^2 = \mathbf{123454321}\,25^2$$
$$\mathbf{1234565432}\,075^2 + 11111100^2 = \mathbf{12345654321}\,25^2$$
$$\mathbf{123456765432}\,075^2 + 111111100^2 = \mathbf{1234567654321}\,25^2$$
$$\mathbf{12345678765432}\,075^2 + 1111111100^2 = \mathbf{123456787654321}\,25^2$$
$$\mathbf{1234567898765432}\,075^2 + 11111111100^2 = \mathbf{12345678987654321}\,25^2 \tag{10}$$

$$064^2 + 120^2 = \mathbf{1}\,36^2$$
$$\mathbf{12}\,064^2 + 1320^2 = \mathbf{121}\,36^2$$
$$\mathbf{1232}\,064^2 + 13320^2 = \mathbf{12321}\,36^2$$
$$\mathbf{123432}\,064^2 + 133320^2 = \mathbf{1234321}\,36^2$$
$$\mathbf{12345432}\,064^2 + 1333320^2 = \mathbf{123454321}\,36^2$$
$$\mathbf{1234565432}\,064^2 + 13333320^2 = \mathbf{12345654321}\,36^2$$
$$\mathbf{123456765432}\,064^2 + 133333320^2 = \mathbf{1234567654321}\,36^2$$
$$\mathbf{12345678765432}\,064^2 + 1333333320^2 = \mathbf{123456787654321}\,36^2$$
$$\mathbf{1234567898765432}\,064^2 + 13333333320^2 = \mathbf{12345678987654321}\,36^2 \tag{11}$$

$$051^2 + 140^2 = \mathbf{1}\,49^2$$
$$\mathbf{12}\,051^2 + 1540^2 = \mathbf{121}\,49^2$$
$$\mathbf{1232}\,051^2 + 15540^2 = \mathbf{12321}\,49^2$$
$$\mathbf{123432}\,051^2 + 155540^2 = \mathbf{1234321}\,49^2$$
$$\mathbf{12345432}\,051^2 + 1555540^2 = \mathbf{123454321}\,49^2$$
$$\mathbf{1234565432}\,051^2 + 15555540^2 = \mathbf{12345654321}\,49^2$$
$$\mathbf{123456765432}\,051^2 + 155555540^2 = \mathbf{1234567654321}\,49^2$$
$$\mathbf{12345678765432}\,051^2 + 1555555540^2 = \mathbf{123456787654321}\,49^2$$
$$\mathbf{1234567898765432}\,051^2 + 15555555540^2 = \mathbf{12345678987654321}\,49^2 \qquad (12)$$

$$036^2 + 160^2 = \mathbf{1}\,64^2$$
$$\mathbf{12}\,036^2 + 1760^2 = \mathbf{121}\,64^2$$
$$\mathbf{1232}\,036^2 + 17760^2 = \mathbf{12321}\,64^2$$
$$\mathbf{123432}\,036^2 + 177760^2 = \mathbf{1234321}\,64^2$$
$$\mathbf{12345432}\,036^2 + 1777760^2 = \mathbf{123454321}\,64^2$$
$$\mathbf{1234565432}\,036^2 + 17777760^2 = \mathbf{12345654321}\,64^2$$
$$\mathbf{123456765432}\,036^2 + 177777760^2 = \mathbf{1234567654321}\,64^2$$
$$\mathbf{12345678765432}\,036^2 + 1777777760^2 = \mathbf{123456787654321}\,64^2$$
$$\mathbf{1234567898765432}\,036^2 + 17777777760^2 = \mathbf{12345678987654321}\,64^2 \qquad (13)$$

$$019^2 + 180^2 = \mathbf{1}\,81^2$$
$$\mathbf{12}\,019^2 + 1980^2 = \mathbf{121}\,81^2$$
$$\mathbf{1232}\,019^2 + 19980^2 = \mathbf{12321}\,81^2$$
$$\mathbf{123432}\,019^2 + 199980^2 = \mathbf{1234321}\,81^2$$
$$\mathbf{12345432}\,019^2 + 1999980^2 = \mathbf{123454321}\,81^2$$
$$\mathbf{1234565432}\,019^2 + 19999980^2 = \mathbf{12345654321}\,81^2$$
$$\mathbf{123456765432}\,019^2 + 199999980^2 = \mathbf{1234567654321}\,81^2$$
$$\mathbf{12345678765432}\,019^2 + 1999999980^2 = \mathbf{123456787654321}\,81^2$$
$$\mathbf{1234567898765432}\,019^2 + 19999999980^2 = \mathbf{12345678987654321}\,81^2 \qquad (14)$$

Below are some remarks based on above patterns:

**Remark 2.**     *(i) The **first lines** of patterns (6) (7)…(14) are the same given in (2).*

  *(ii) The **last two digits** of patterns (6) (7)…(14) are the perfect squares, i.e.,*

$$01 = 1^2,\ 04 = 2^2,\ \ldots,81 = 9^2.$$

  *(iii) The sum of the **last two digits** of first and third members of each pattern are the same as given in (1).*

## 2   Generating Pythagorean Triples: Second Block

Let's write a number 10000 as following 99 sums:

$$
\begin{array}{rl}
1. & 10000 = 9999 + 0001 \\
2. & 10000 = 9996 + 0004 \\
3. & 10000 = 9991 + 0009 \\
4. & 10000 = 9984 + 0016 \\
5. & 10000 = 9975 + 0025 \\
\ldots & \ldots \quad \ldots \quad \ldots \\
\ldots & \ldots \quad \ldots \quad \ldots \\
96. & 10000 = 0784 + 9216 \\
97. & 10000 = 0591 + 9409 \\
98. & 10000 = 0396 + 9604 \\
99. & 10000 = 0199 + 9801
\end{array}
\tag{15}
$$

We observe that the second terms in the r.h.s. are perfect squares. Consider a difference of squares between the terms of r.h.s. with 1 in the front perfect square term. Then this difference is again a perfect square multiple of 20. See below:

$$
\begin{array}{lll}
10001^2 - 9999^2 = 200^2 & \Rightarrow & 9999^2 + 200^2 \quad = 10001^2 \\
10004^2 - 9996^2 = 400^2 & \Rightarrow & 9996^2 + 400^2 \quad = 10004^2 \\
10009^2 - 9991^2 = 600^2 & \Rightarrow & 9991^2 + 600^2 \quad = 10009^2 \\
10016^2 - 9984^2 = 800^2 & \Rightarrow & 9984^2 + 800^2 \quad = 10016^2 \\
10025^2 - 9975^2 = 1000^2 & \Rightarrow & 9975^2 + 1000^2 \; = 10025^2 \\
\ldots \quad \ldots \quad \ldots & & \ldots \quad\quad \ldots \quad \ldots \\
\ldots \quad \ldots \quad \ldots & & \ldots \quad\quad \ldots \quad \ldots \\
19216^2 - 0784^2 = 19200^2 & \Rightarrow & 0784^2 + 19200^2 = 19216^2 \\
19409^2 - 0591^2 = 19400^2 & \Rightarrow & 0591^2 + 19400^2 = 19409^2 \\
19604^2 - 0396^2 = 19600^2 & \Rightarrow & 0396^2 + 19600^2 = 19604^2 \\
19801^2 - 0199^2 = 19800^2 & \Rightarrow & 0199^2 + 19800^2 = 19801^2
\end{array}
\tag{16}
$$

Thus we have a 99 Pythagorean triples given in (16).

### 2.1   Magic Square

According to distribution given (4) below are 99 values. For calculations procedure see author's work [3]. Out of these 99 Pythagorean triples, only the first 97 generates magic square in decreasing order, i.e., starting from order 99 to order 3 of consecutive odd numbers. The last two lines are with 2 and 1, that don't give magic squares. See below:

$$
\begin{array}{ll}
(9999, 200, 10001) & \Rightarrow \{99, 401, 20001, 1009899, 99980001\} \\
(9996, 400, 10004) & \Rightarrow \{98, 801, 20007, 1019592, 99920016\} \\
(9991, 600, 10009) & \Rightarrow \{97, 1201, 20017, 1029073, 99820081\}
\end{array}
$$

$(9984, 800, 10016) \Rightarrow \{96, 1601, 20031, 1038336, 99680256\}$
$(9975, 1000, 10025) \Rightarrow \{95, 2001, 20049, 1047375, 99500625\}$
$(9964, 1200, 10036) \Rightarrow \{94, 2401, 20071, 1056184, 99281296\}$
$(9951, 1400, 10049) \Rightarrow \{93, 2801, 20097, 1064757, 99022401\}$
$(9936, 1600, 10064) \Rightarrow \{92, 3201, 20127, 1073088, 98724096\}$
$(9919, 1800, 10081) \Rightarrow \{91, 3601, 20161, 1081171, 98386561\}$
$(9900, 2000, 10100) \Rightarrow \{90, 4001, 20199, 1089000, 98010000\}$
$(9879, 2200, 10121) \Rightarrow \{89, 4401, 20241, 1096569, 97594641\}$
$(9856, 2400, 10144) \Rightarrow \{88, 4801, 20287, 1103872, 97140736\}$
$(9831, 2600, 10169) \Rightarrow \{87, 5201, 20337, 1110903, 96648561\}$
$(9804, 2800, 10196) \Rightarrow \{86, 5601, 20391, 1117656, 96118416\}$
$(9775, 3000, 10225) \Rightarrow \{85, 6001, 20449, 1124125, 95550625\}$
$(9744, 3200, 10256) \Rightarrow \{84, 6401, 20511, 1130304, 94945536\}$
$(9711, 3400, 10289) \Rightarrow \{83, 6801, 20577, 1136187, 94303521\}$
$(9676, 3600, 10324) \Rightarrow \{82, 7201, 20647, 1141768, 93624976\}$
$(9639, 3800, 10361) \Rightarrow \{81, 7601, 20721, 1147041, 92910321\}$
$(9600, 4000, 10400) \Rightarrow \{80, 8001, 20799, 1152000, 92160000\}$
$(9559, 4200, 10441) \Rightarrow \{79, 8401, 20881, 1156639, 91374481\}$
$(9516, 4400, 10484) \Rightarrow \{78, 8801, 20967, 1160952, 90554256\}$
$(9471, 4600, 10529) \Rightarrow \{77, 9201, 21057, 1164933, 89699841\}$
$(9424, 4800, 10576) \Rightarrow \{76, 9601, 21151, 1168576, 88811776\}$
$(9375, 5000, 10625) \Rightarrow \{75, 10001, 21249, 1171875, 87890625\}$
$(9324, 5200, 10676) \Rightarrow \{74, 10401, 21351, 1174824, 86936976\}$
$(9271, 5400, 10729) \Rightarrow \{73, 10801, 21457, 1177417, 85951441\}$
$(9216, 5600, 10784) \Rightarrow \{72, 11201, 21567, 1179648, 84934656\}$
$(9159, 5800, 10841) \Rightarrow \{71, 11601, 21681, 1181511, 83887281\}$
$(9100, 6000, 10900) \Rightarrow \{70, 12001, 21799, 1183000, 82810000\}$
$(9039, 6200, 10961) \Rightarrow \{69, 12401, 21921, 1184109, 81703521\}$
$(8976, 6400, 11024) \Rightarrow \{68, 12801, 22047, 1184832, 80568576\}$
$(8911, 6600, 11089) \Rightarrow \{67, 13201, 22177, 1185163, 79405921\}$
$(8844, 6800, 11156) \Rightarrow \{66, 13601, 22311, 1185096, 78216336\}$
$(8775, 7000, 11225) \Rightarrow \{65, 14001, 22449, 1184625, 77000625\}$
$(8704, 7200, 11296) \Rightarrow \{64, 14401, 22591, 1183744, 75759616\}$
$(8631, 7400, 11369) \Rightarrow \{63, 14801, 22737, 1182447, 74494161\}$
$(8556, 7600, 11444) \Rightarrow \{62, 15201, 22887, 1180728, 73205136\}$
$(8479, 7800, 11521) \Rightarrow \{61, 15601, 23041, 1178581, 71893441\}$
$(8400, 8000, 11600) \Rightarrow \{60, 16001, 23199, 1176000, 70560000\}$
$(8319, 8200, 11681) \Rightarrow \{59, 16401, 23361, 1172979, 69205761\}$
$(8236, 8400, 11764) \Rightarrow \{58, 16801, 23527, 1169512, 67831696\}$
$(8151, 8600, 11849) \Rightarrow \{57, 17201, 23697, 1165593, 66438801\}$

$$(8064, 8800, 11936) \Rightarrow \{56, 17601, 23871, 1161216, 65028096\}$$
$$(7975, 9000, 12025) \Rightarrow \{55, 18001, 24049, 1156375, 63600625\}$$
$$(7884, 9200, 12116) \Rightarrow \{54, 18401, 24231, 1151064, 62157456\}$$
$$(7791, 9400, 12209) \Rightarrow \{53, 18801, 24417, 1145277, 60699681\}$$
$$(7696, 9600, 12304) \Rightarrow \{52, 19201, 24607, 1139008, 59228416\}$$
$$(7599, 9800, 12401) \Rightarrow \{51, 19601, 24801, 1132251, 57744801\}$$
$$(7500, 10000, 12500) \Rightarrow \{50, 20001, 24999, 1125000, 56250000\}$$
$$(7399, 10200, 12601) \Rightarrow \{49, 20401, 25201, 1117249, 54745201\}$$
$$(7296, 10400, 12704) \Rightarrow \{48, 20801, 25407, 1108992, 53231616\}$$
$$(7191, 10600, 12809) \Rightarrow \{47, 21201, 25617, 1100223, 51710481\}$$
$$(7084, 10800, 12916) \Rightarrow \{46, 21601, 25831, 1090936, 50183056\}$$
$$(6975, 11000, 13025) \Rightarrow \{45, 22001, 26049, 1081125, 48650625\}$$
$$(6864, 11200, 13136) \Rightarrow \{44, 22401, 26271, 1070784, 47114496\}$$
$$(6751, 11400, 13249) \Rightarrow \{43, 22801, 26497, 1059907, 45576001\}$$
$$(6636, 11600, 13364) \Rightarrow \{42, 23201, 26727, 1048488, 44036496\}$$
$$(6519, 11800, 13481) \Rightarrow \{41, 23601, 26961, 1036521, 42497361\}$$
$$(6400, 12000, 13600) \Rightarrow \{40, 24001, 27199, 1024000, 40960000\}$$
$$(6279, 12200, 13721) \Rightarrow \{39, 24401, 27441, 1010919, 39425841\}$$
$$(6156, 12400, 13844) \Rightarrow \{38, 24801, 27687, 997272, 37896336\}$$
$$(6031, 12600, 13969) \Rightarrow \{37, 25201, 27937, 983053, 36372961\}$$
$$(5904, 12800, 14096) \Rightarrow \{36, 25601, 28191, 968256, 34857216\}$$
$$(5775, 13000, 14225) \Rightarrow \{35, 26001, 28449, 952875, 33350625\}$$
$$(5644, 13200, 14356) \Rightarrow \{34, 26401, 28711, 936904, 31854736\}$$
$$(5511, 13400, 14489) \Rightarrow \{33, 26801, 28977, 920337, 30371121\}$$
$$(5376, 13600, 14624) \Rightarrow \{32, 27201, 29247, 903168, 28901376\}$$
$$(5239, 13800, 14761) \Rightarrow \{31, 27601, 29521, 885391, 27447121\}$$
$$(5100, 14000, 14900) \Rightarrow \{30, 28001, 29799, 867000, 26010000\}$$
$$(4959, 14200, 15041) \Rightarrow \{29, 28401, 30081, 847989, 24591681\}$$
$$(4816, 14400, 15184) \Rightarrow \{28, 28801, 30367, 828352, 23193856\}$$
$$(4671, 14600, 15329) \Rightarrow \{27, 29201, 30657, 808083, 21818241\}$$
$$(4524, 14800, 15476) \Rightarrow \{26, 29601, 30951, 787176, 20466576\}$$
$$(4375, 15000, 15625) \Rightarrow \{25, 30001, 31249, 765625, 19140625\}$$
$$(4224, 15200, 15776) \Rightarrow \{24, 30401, 31551, 743424, 17842176\}$$
$$(4071, 15400, 15929) \Rightarrow \{23, 30801, 31857, 720567, 16573041\}$$
$$(3916, 15600, 16084) \Rightarrow \{22, 31201, 32167, 697048, 15335056\}$$
$$(3759, 15800, 16241) \Rightarrow \{21, 31601, 32481, 672861, 14130081\}$$
$$(3600, 16000, 16400) \Rightarrow \{20, 32001, 32799, 648000, 12960000\}$$
$$(3439, 16200, 16561) \Rightarrow \{19, 32401, 33121, 622459, 11826721\}$$
$$(3276, 16400, 16724) \Rightarrow \{18, 32801, 33447, 596232, 10732176\}$$
$$(3111, 16600, 16889) \Rightarrow \{17, 33201, 33777, 569313, 9678321\}$$

$$(2944, 16800, 17056) \Rightarrow \{16, 33601, 34111, 541696, 8667136\}$$
$$(2775, 17000, 17225) \Rightarrow \{15, 34001, 34449, 513375, 7700625\}$$
$$(2604, 17200, 17396) \Rightarrow \{14, 34401, 34791, 484344, 6780816\}$$
$$(2431, 17400, 17569) \Rightarrow \{13, 34801, 35137, 454597, 5909761\}$$
$$(2256, 17600, 17744) \Rightarrow \{12, 35201, 35487, 424128, 5089536\}$$
$$(2079, 17800, 17921) \Rightarrow \{11, 35601, 35841, 392931, 4322241\}$$
$$(1900, 18000, 18100) \Rightarrow \{10, 36001, 36199, 361000, 3610000\}$$
$$(1719, 18200, 18281) \Rightarrow \{9, 36401, 36561, 328329, 2954961\}$$
$$(1536, 18400, 18464) \Rightarrow \{8, 36801, 36927, 294912, 2359296\}$$
$$(1351, 18600, 18649) \Rightarrow \{7, 37201, 37297, 260743, 1825201\}$$
$$(1164, 18800, 18836) \Rightarrow \{6, 37601, 37671, 225816, 1354896\}$$
$$(0975, 19000, 19025) \Rightarrow \{5, 38001, 38049, 190125, 950625\}$$
$$(0784, 19200, 19216) \Rightarrow \{4, 38401, 38431, 153664, 614656\}$$
$$(0591, 19400, 19409) \Rightarrow \{3, 38801, 38817, 116427, 349281\}$$
$$(0396, 19600, 19604) \Rightarrow \{2, 39201, 39207, 78408, 156816\}$$
$$(0199, 19800, 19801) \Rightarrow \{1, 39601\}. \tag{17}$$

From above we observe that there are 97 **perfect square sum magic squares of consecutive odd orders** from 99 to 3. This construction can be done on similar lines of subsection 1.1.

## 2.2   Palindromic-Type Pandigital Patterns

Let's consider

$$m = 100, 1100, 11100, 111100, 1111100, 11111100, 111111100, 1111111100, 11111111100$$

in (5), then for $n = 1$ and $n = 99$, we have the first and the last *palindromic-type pandigital Pythagorean patterns* given below:

▶ **First Pattern - 1**

$$09999^2 + 200^2 = \mathbf{1}\,0001^2$$
$$\mathbf{12}\,09999^2 + 2200^2 = \mathbf{121}\,0001^2$$
$$\mathbf{1232}\,09999^2 + 22200^2 = \mathbf{12321}\,0001^2$$
$$\mathbf{123432}\,09999^2 + 222200^2 = \mathbf{1234321}\,0001^2$$
$$\mathbf{12345432}\,09999^2 + 2222200^2 = \mathbf{123454321}\,0001^2$$
$$\mathbf{1234565432}\,09999^2 + 22222200^2 = \mathbf{12345654321}\,0001^2$$
$$\mathbf{123456765432}\,09999^2 + 222222200^2 = \mathbf{1234567654321}\,0001^2$$
$$\mathbf{12345678765432}\,09999^2 + 2222222200^2 = \mathbf{123456787654321}\,0001^2$$
$$\mathbf{1234567898765432}\,09999^2 + 22222222200^2 = \mathbf{12345678987654321}\,0001^2 \tag{18}$$

▶ **Last Pattern - 99**

$$
\begin{aligned}
00199^2 + 19800^2 &= \mathbf{1}\,9801^2 \\
\mathbf{12}\,00199^2 + 217800^2 &= \mathbf{121}\,9801^2 \\
\mathbf{1232}\,00199^2 + 2197800^2 &= \mathbf{12321}\,9801^2 \\
\mathbf{123432}\,00199^2 + 21997800^2 &= \mathbf{1234321}\,9801^2 \\
\mathbf{12345432}\,00199^2 + 219997800^2 &= \mathbf{123454321}\,9801^2 \\
\mathbf{1234565432}\,00199^2 + 2199997800^2 &= \mathbf{12345654321}\,9801^2 \\
\mathbf{123456765432}\,00199^2 + 21999997800^2 &= \mathbf{1234567654321}\,9801^2 \\
\mathbf{12345678765432}\,00199^2 + 219999997800^2 &= \mathbf{123456787654321}\,9801^2 \\
\mathbf{1234567898765432}\,00199^2 + 2199999997800^2 &= \mathbf{12345678987654321}\,9801^2 \quad (19)
\end{aligned}
$$

In this case, we observe that the second term in the first line of pattern 19 doesn't give good pattern. It happens with many results. Below are some remarks based on above results:

**Remark 3.**   *(i) The **first lines** of each pattern are the same given in (16).*

*(ii) The **last four digits** follow the square of as of numbers, i.e.,*

$$0001 = 1^2,\ 0004 = 2^2,\ \ldots, 9801 = 99^2.$$

*(iii) The sum of the **last four digits** of first and third members are the same as given in (15).*

# 3   Generating Pythagorean Triples: Third Block

Let's write a number 1000000 as following 999 sums:

$$
\begin{aligned}
&1. &&1000000 = 999999 + 000001 \\
&2. &&1000000 = 999996 + 000004 \\
&3. &&1000000 = 999991 + 000009 \\
&4. &&1000000 = 999984 + 000016 \\
&5. &&1000000 = 999975 + 000025 \\
&\cdots &&\cdots \quad \cdots \quad \cdots \quad \cdots \\
&\cdots &&\cdots \quad \cdots \quad \cdots \quad \cdots \\
&996. &&1000000 = 007984 + 992016 \\
&997. &&1000000 = 005991 + 994009 \\
&998. &&1000000 = 003996 + 996004 \\
&999. &&1000000 = 001999 + 998001 \quad (20)
\end{aligned}
$$

We observe that the second terms in the r.h.s. are perfect squares. Consider a difference of squares between the terms of r.h.s. with 1 in the front perfect square term. Then this difference is again a perfect square multiple of 2000. See below:

$$1000001^2 - 999999^2 = 2000^2 \quad \Rightarrow \quad 999999^2 + 2000^2 \quad = 1000001^2$$
$$1000004^2 - 999996^2 = 4000^2 \quad \Rightarrow \quad 999996^2 + 4000^2 \quad = 1000004^2$$
$$1000009^2 - 999991^2 = 6000^2 \quad \Rightarrow \quad 999991^2 + 6000^2 \quad = 1000009^2$$
$$1000016^2 - 999984^2 = 8000^2 \quad \Rightarrow \quad 999984^2 + 8000^2 \quad = 1000016^2$$
$$1000025^2 - 999975^2 = 10000^2 \quad \Rightarrow \quad 999975^2 + 10000^2 \quad = 1000025^2$$
$$\cdots \quad \cdots \quad \cdots \quad \quad \cdots \quad \cdots \quad \cdots$$
$$\cdots \quad \cdots \quad \cdots \quad \quad \cdots \quad \cdots \quad \cdots$$
$$1992016^2 - 007984^2 = 1992000^2 \Rightarrow 007984^2 + 1992000^2 = 1992016^2$$
$$1994009^2 - 005991^2 = 1994000^2 \Rightarrow 005991^2 + 1994000^2 = 1994009^2$$
$$1996004^2 - 003996^2 = 1996000^2 \Rightarrow 003996^2 + 1996000^2 = 11996004^2$$
$$1998001^2 - 001999^2 = 1998000^2 \Rightarrow 001999^2 + 1998000^2 = 11998001^2 \tag{21}$$

Thus we have a 999 Pythagorean triples given in (21).

## 3.1  Magic Square

According to distribution given in (4) below are 999 values. For calculation procedure see author's work [3]. Out of these 999 Pythagorean triples, only the first 997 generates magic square in decreasing order, i.e., starting from order 999 to order 3 of consecutive odd numbers. The last two lines are with 2 and 1, that don't give magic squares. See below:

$$(999999, 2000, 1000001) \quad \Rightarrow \{999, 4001, 2000001, 1000998999, 999998000001\}$$
$$(999996, 4000, 1000004) \quad \Rightarrow \{998, 8001, 2000007, 1001995992, 999992000016\}$$
$$(999991, 6000, 1000009) \quad \Rightarrow \{997, 12001, 2000017, 1002990973, 999982000081\}$$
$$(999984, 8000, 1000016) \quad \Rightarrow \{996, 16001, 2000031, 1003983936, 999968000256\}$$
$$(999975, 10000, 1000025) \Rightarrow \{995, 20001, 2000049, 1004974875, 999950000625\}$$
$$(999964, 12000, 1000036) \Rightarrow \{994, 24001, 2000071, 1005963784, 999928001296\}$$
$$(999951, 14000, 1000049) \Rightarrow \{993, 28001, 2000097, 1006950657, 999902002401\}$$
$$(999936, 16000, 1000064) \Rightarrow \{992, 32001, 2000127, 1007935488, 999872004096\}$$
$$(999919, 18000, 1000081) \Rightarrow \{991, 36001, 2000161, 1008918271, 999838006561\}$$
$$(999900, 20000, 1000100) \Rightarrow \{990, 40001, 2000199, 1009899000, 999800010000\}$$
$$(999879, 22000, 1000121) \Rightarrow \{989, 44001, 2000241, 1010877669, 999758014641\}$$
$$(999856, 24000, 1000144) \Rightarrow \{988, 48001, 2000287, 1011854272, 999712020736\}$$
$$(999831, 26000, 1000169) \Rightarrow \{987, 52001, 2000337, 1012828803, 999662028561\}$$
$$(999804, 28000, 1000196) \Rightarrow \{986, 56001, 2000391, 1013801256, 999608038416\}$$
$$(999775, 30000, 1000225) \Rightarrow \{985, 60001, 2000449, 1014771625, 999550050625\}$$
$$(999744, 32000, 1000256) \Rightarrow \{984, 64001, 2000511, 1015739904, 999488065536\}$$
$$(999711, 34000, 1000289) \Rightarrow \{983, 68001, 2000577, 1016706087, 999422083521\}$$
$$(999676, 36000, 1000324) \Rightarrow \{982, 72001, 2000647, 1017670168, 999352104976\}$$
$$(999639, 38000, 1000361) \Rightarrow \{981, 76001, 2000721, 1018632141, 999278130321\}$$
$$(999600, 40000, 1000400) \Rightarrow \{980, 80001, 2000799, 1019592000, 999200160000\}$$
$$(999559, 42000, 1000441) \Rightarrow \{979, 84001, 2000881, 1020549739, 999118194481\}$$

$(999516, 44000, 1000484) \Rightarrow \{978, 88001, 2000967, 1021505352, 999032234256\}$

$(999471, 46000, 1000529) \Rightarrow \{977, 92001, 2001057, 1022458833, 998942279841\}$

$(999424, 48000, 1000576) \Rightarrow \{976, 96001, 2001151, 1023410176, 998848331776\}$

$(999375, 50000, 1000625) \Rightarrow \{975, 100001, 2001249, 1024359375, 998750390625\}$

$(999324, 52000, 1000676) \Rightarrow \{974, 104001, 2001351, 1025306424, 998648456976\}$

$(999271, 54000, 1000729) \Rightarrow \{973, 108001, 2001457, 1026251317, 998542531441\}$

$(999216, 56000, 1000784) \Rightarrow \{972, 112001, 2001567, 1027194048, 998432614656\}$

$(999159, 58000, 1000841) \Rightarrow \{971, 116001, 2001681, 1028134611, 998318707281\}$

$(999100, 60000, 1000900) \Rightarrow \{970, 120001, 2001799, 1029073000, 998200810000\}$

$(999039, 62000, 1000961) \Rightarrow \{969, 124001, 2001921, 1030009209, 998078923521\}$

$(998976, 64000, 1001024) \Rightarrow \{968, 128001, 2002047, 1030943232, 997953048576\}$

$(998911, 66000, 1001089) \Rightarrow \{967, 132001, 2002177, 1031875063, 997823185921\}$

$(998844, 68000, 1001156) \Rightarrow \{966, 136001, 2002311, 1032804696, 997689336336\}$

$(998775, 70000, 1001225) \Rightarrow \{965, 140001, 2002449, 1033732125, 997551500625\}$

$(998704, 72000, 1001296) \Rightarrow \{964, 144001, 2002591, 1034657344, 997409679616\}$

$(998631, 74000, 1001369) \Rightarrow \{963, 148001, 2002737, 1035580347, 997263874161\}$

$(998556, 76000, 1001444) \Rightarrow \{962, 152001, 2002887, 1036501128, 997114085136\}$

$(998479, 78000, 1001521) \Rightarrow \{961, 156001, 2003041, 1037419681, 996960313441\}$

$(998400, 80000, 1001600) \Rightarrow \{960, 160001, 2003199, 1038336000, 996802560000\}$

$(998319, 82000, 1001681) \Rightarrow \{959, 164001, 2003361, 1039250079, 996640825761\}$

$(998236, 84000, 1001764) \Rightarrow \{958, 168001, 2003527, 1040161912, 996475111696\}$

$(998151, 86000, 1001849) \Rightarrow \{957, 172001, 2003697, 1041071493, 996305418801\}$

$(998064, 88000, 1001936) \Rightarrow \{956, 176001, 2003871, 1041978816, 996131748096\}$

$(997975, 90000, 1002025) \Rightarrow \{955, 180001, 2004049, 1042883875, 995954100625\}$

$(997884, 92000, 1002116) \Rightarrow \{954, 184001, 2004231, 1043786664, 995772477456\}$

$(997791, 94000, 1002209) \Rightarrow \{953, 188001, 2004417, 1044687177, 995586879681\}$

$(997696, 96000, 1002304) \Rightarrow \{952, 192001, 2004607, 1045585408, 995397308416\}$

$(997599, 98000, 1002401) \Rightarrow \{951, 196001, 2004801, 1046481351, 995203764801\}$

$(997500, 100000, 1002500) \Rightarrow \{950, 200001, 2004999, 1047375000, 995006250000\}$

$(997399, 102000, 1002601) \Rightarrow \{949, 204001, 2005201, 1048266349, 994804765201\}$

$(997296, 104000, 1002704) \Rightarrow \{948, 208001, 2005407, 1049155392, 994599311616\}$

$(997191, 106000, 1002809) \Rightarrow \{947, 212001, 2005617, 1050042123, 994389890481\}$

$(997084, 108000, 1002916) \Rightarrow \{946, 216001, 2005831, 1050926536, 994176503056\}$

$(996975, 110000, 1003025) \Rightarrow \{945, 220001, 2006049, 1051808625, 993959150625\}$

$(996864, 112000, 1003136) \Rightarrow \{944, 224001, 2006271, 1052688384, 993737834496\}$

$(996751, 114000, 1003249) \Rightarrow \{943, 228001, 2006497, 1053565807, 993512556001\}$

$(996636, 116000, 1003364) \Rightarrow \{942, 232001, 2006727, 1054440888, 993283316496\}$

$(996519, 118000, 1003481) \Rightarrow \{941, 236001, 2006961, 1055313621, 993050117361\}$

$(996400, 120000, 1003600) \Rightarrow \{940, 240001, 2007199, 1056184000, 992812960000\}$

$(996279, 122000, 1003721) \Rightarrow \{939, 244001, 2007441, 1057052019, 992571845841\}$

$(996156, 124000, 1003844) \Rightarrow \{938, 248001, 2007687, 1057917672, 992326776336\}$

$(996031, 126000, 1003969) \Rightarrow \{937, 252001, 2007937, 1058780953, 992077752961\}$

$(995904, 128000, 1004096) \Rightarrow \{936, 256001, 2008191, 1059641856, 991824777216\}$

$(995775, 130000, 1004225) \Rightarrow \{935, 260001, 2008449, 1060500375, 991567850625\}$

$(995644, 132000, 1004356) \Rightarrow \{934, 264001, 2008711, 1061356504, 991306974736\}$

$(995511, 134000, 1004489) \Rightarrow \{933, 268001, 2008977, 1062210237, 991042151121\}$

$(995376, 136000, 1004624) \Rightarrow \{932, 272001, 2009247, 1063061568, 990773381376\}$

$(995239, 138000, 1004761) \Rightarrow \{931, 276001, 2009521, 1063910491, 990500667121\}$

$(995100, 140000, 1004900) \Rightarrow \{930, 280001, 2009799, 1064757000, 990224010000\}$

$(994959, 142000, 1005041) \Rightarrow \{929, 284001, 2010081, 1065601089, 989943411681\}$

$(994816, 144000, 1005184) \Rightarrow \{928, 288001, 2010367, 1066442752, 989658873856\}$

$(994671, 146000, 1005329) \Rightarrow \{927, 292001, 2010657, 1067281983, 989370398241\}$

$(994524, 148000, 1005476) \Rightarrow \{926, 296001, 2010951, 1068118776, 989077986576\}$

$(994375, 150000, 1005625) \Rightarrow \{925, 300001, 2011249, 1068953125, 988781640625\}$

$(994224, 152000, 1005776) \Rightarrow \{924, 304001, 2011551, 1069785024, 988481362176\}$

$(994071, 154000, 1005929) \Rightarrow \{923, 308001, 2011857, 1070614467, 988177153041\}$

$(993916, 156000, 1006084) \Rightarrow \{922, 312001, 2012167, 1071441448, 987869015056\}$

$(993759, 158000, 1006241) \Rightarrow \{921, 316001, 2012481, 1072265961, 987556950081\}$

$(993600, 160000, 1006400) \Rightarrow \{920, 320001, 2012799, 1073088000, 987240960000\}$

$(993439, 162000, 1006561) \Rightarrow \{919, 324001, 2013121, 1073907559, 986921046721\}$

$(993276, 164000, 1006724) \Rightarrow \{918, 328001, 2013447, 1074724632, 986597212176\}$

$(993111, 166000, 1006889) \Rightarrow \{917, 332001, 2013777, 1075539213, 986269458321\}$

$(992944, 168000, 1007056) \Rightarrow \{916, 336001, 2014111, 1076351296, 985937787136\}$

$(992775, 170000, 1007225) \Rightarrow \{915, 340001, 2014449, 1077160875, 985602200625\}$

$(992604, 172000, 1007396) \Rightarrow \{914, 344001, 2014791, 1077967944, 985262700816\}$

$(992431, 174000, 1007569) \Rightarrow \{913, 348001, 2015137, 1078772497, 984919289761\}$

$(992256, 176000, 1007744) \Rightarrow \{912, 352001, 2015487, 1079574528, 984571969536\}$

$(992079, 178000, 1007921) \Rightarrow \{911, 356001, 2015841, 1080374031, 984220742241\}$

$(991900, 180000, 1008100) \Rightarrow \{910, 360001, 2016199, 1081171000, 983865610000\}$

$(991719, 182000, 1008281) \Rightarrow \{909, 364001, 2016561, 1081965429, 983506574961\}$

$(991536, 184000, 1008464) \Rightarrow \{908, 368001, 2016927, 1082757312, 983143639296\}$

$(991351, 186000, 1008649) \Rightarrow \{907, 372001, 2017297, 1083546643, 982776805201\}$

$(991164, 188000, 1008836) \Rightarrow \{906, 376001, 2017671, 1084333416, 982406074896\}$

$(990975, 190000, 1009025) \Rightarrow \{905, 380001, 2018049, 1085117625, 982031450625\}$

$(990784, 192000, 1009216) \Rightarrow \{904, 384001, 2018431, 1085899264, 981652934656\}$

$(990591, 194000, 1009409) \Rightarrow \{903, 388001, 2018817, 1086678327, 981270529281\}$

$(990396, 196000, 1009604) \Rightarrow \{902, 392001, 2019207, 1087454808, 980884236816\}$

$(990199, 198000, 1009801) \Rightarrow \{901, 396001, 2019601, 1088228701, 980494059601\}$

$(990000, 200000, 1010000) \Rightarrow \{900, 400001, 2019999, 1089000000, 980100000000\}$

$(989799, 202000, 1010201) \Rightarrow \{899, 404001, 2020401, 1089768699, 979702060401\}$

$(989596, 204000, 1010404) \Rightarrow \{898, 408001, 2020807, 1090534792, 979300243216\}$

$(989391, 206000, 1010609) \Rightarrow \{897, 412001, 2021217, 1091298273, 978894550881\}$

$(989184, 208000, 1010816) \Rightarrow \{896, 416001, 2021631, 1092059136, 978484985856\}$

$(988975, 210000, 1011025) \Rightarrow \{895, 420001, 2022049, 1092817375, 978071550625\}$

$(988764, 212000, 1011236) \Rightarrow \{894, 424001, 2022471, 1093572984, 977654247696\}$

$(988551, 214000, 1011449) \Rightarrow \{893, 428001, 2022897, 1094325957, 977233079601\}$

$(988336, 216000, 1011664) \Rightarrow \{892, 432001, 2023327, 1095076288, 976808048896\}$

$(988119, 218000, 1011881) \Rightarrow \{891, 436001, 2023761, 1095823971, 976379158161\}$

$(987900, 220000, 1012100) \Rightarrow \{890, 440001, 2024199, 1096569000, 975946410000\}$

$(987679, 222000, 1012321) \Rightarrow \{889, 444001, 2024641, 1097311369, 975509807041\}$

$(987456, 224000, 1012544) \Rightarrow \{888, 448001, 2025087, 1098051072, 975069351936\}$

$(987231, 226000, 1012769) \Rightarrow \{887, 452001, 2025537, 1098788103, 974625047361\}$

$(987004, 228000, 1012996) \Rightarrow \{886, 456001, 2025991, 1099522456, 974176896016\}$

$(986775, 230000, 1013225) \Rightarrow \{885, 460001, 2026449, 1100254125, 973724900625\}$

$(986544, 232000, 1013456) \Rightarrow \{884, 464001, 2026911, 1100983104, 973269063936\}$

$(986311, 234000, 1013689) \Rightarrow \{883, 468001, 2027377, 1101709387, 972809388721\}$

$(986076, 236000, 1013924) \Rightarrow \{882, 472001, 2027847, 1102432968, 972345877776\}$

$(985839, 238000, 1014161) \Rightarrow \{881, 476001, 2028321, 1103153841, 971878533921\}$

$(985600, 240000, 1014400) \Rightarrow \{880, 480001, 2028799, 1103872000, 971407360000\}$

$(985359, 242000, 1014641) \Rightarrow \{879, 484001, 2029281, 1104587439, 970932358881\}$

$(985116, 244000, 1014884) \Rightarrow \{878, 488001, 2029767, 1105300152, 970453533456\}$

$(984871, 246000, 1015129) \Rightarrow \{877, 492001, 2030257, 1106010133, 969970886641\}$

$(984624, 248000, 1015376) \Rightarrow \{876, 496001, 2030751, 1106717376, 969484421376\}$

$(984375, 250000, 1015625) \Rightarrow \{875, 500001, 2031249, 1107421875, 968994140625\}$

$(984124, 252000, 1015876) \Rightarrow \{874, 504001, 2031751, 1108123624, 968500047376\}$

$(983871, 254000, 1016129) \Rightarrow \{873, 508001, 2032257, 1108822617, 968002144641\}$

$(983616, 256000, 1016384) \Rightarrow \{872, 512001, 2032767, 1109518848, 967500435456\}$

$(983359, 258000, 1016641) \Rightarrow \{871, 516001, 2033281, 1110212311, 966994922881\}$

$(983100, 260000, 1016900) \Rightarrow \{870, 520001, 2033799, 1110903000, 966485610000\}$

$(982839, 262000, 1017161) \Rightarrow \{869, 524001, 2034321, 1111590909, 965972499921\}$

$(982576, 264000, 1017424) \Rightarrow \{868, 528001, 2034847, 1112276032, 965455595776\}$

$(982311, 266000, 1017689) \Rightarrow \{867, 532001, 2035377, 1112958363, 964934900721\}$

$(982044, 268000, 1017956) \Rightarrow \{866, 536001, 2035911, 1113637896, 964410417936\}$

$(981775, 270000, 1018225) \Rightarrow \{865, 540001, 2036449, 1114314625, 963882150625\}$

$(981504, 272000, 1018496) \Rightarrow \{864, 544001, 2036991, 1114988544, 963350102016\}$

$(981231, 274000, 1018769) \Rightarrow \{863, 548001, 2037537, 1115659647, 962814275361\}$

$(980956, 276000, 1019044) \Rightarrow \{862, 552001, 2038087, 1116327928, 962274673936\}$

$(980679, 278000, 1019321) \Rightarrow \{861, 556001, 2038641, 1116993381, 961731301041\}$

$(980400, 280000, 1019600) \Rightarrow \{860, 560001, 2039199, 1117656000, 961184160000\}$

$(980119, 282000, 1019881) \Rightarrow \{859, 564001, 2039761, 1118315779, 960633254161\}$

$(979836, 284000, 1020164) \Rightarrow \{858, 568001, 2040327, 1118972712, 960078586896\}$

$(979551, 286000, 1020449) \Rightarrow \{857, 572001, 2040897, 1119626793, 959520161601\}$

$(979264, 288000, 1020736) \Rightarrow \{856, 576001, 2041471, 1120278016, 958957981696\}$

$(978975, 290000, 1021025) \Rightarrow \{855, 580001, 2042049, 1120926375, 958392050625\}$

$(978684, 292000, 1021316) \Rightarrow \{854, 584001, 2042631, 1121571864, 957822371856\}$

$(978391, 294000, 1021609) \Rightarrow \{853, 588001, 2043217, 1122214477, 957248948881\}$

$(978096, 296000, 1021904) \Rightarrow \{852, 592001, 2043807, 1122854208, 956671785216\}$

$(977799, 298000, 1022201) \Rightarrow \{851, 596001, 2044401, 1123491051, 956090884401\}$

$(977500, 300000, 1022500) \Rightarrow \{850, 600001, 2044999, 1124125000, 955506250000\}$

$(977199, 302000, 1022801) \Rightarrow \{849, 604001, 2045601, 1124756049, 954917885601\}$

$(976896, 304000, 1023104) \Rightarrow \{848, 608001, 2046207, 1125384192, 954325794816\}$

$(976591, 306000, 1023409) \Rightarrow \{847, 612001, 2046817, 1126009423, 953729981281\}$

$(976284, 308000, 1023716) \Rightarrow \{846, 616001, 2047431, 1126631736, 953130448656\}$

$(975975, 310000, 1024025) \Rightarrow \{845, 620001, 2048049, 1127251125, 952527200625\}$

$(975664, 312000, 1024336) \Rightarrow \{844, 624001, 2048671, 1127867584, 951920240896\}$

$(975351, 314000, 1024649) \Rightarrow \{843, 628001, 2049297, 1128481107, 951309573201\}$

$(975036, 316000, 1024964) \Rightarrow \{842, 632001, 2049927, 1129091688, 950695201296\}$

$(974719, 318000, 1025281) \Rightarrow \{841, 636001, 2050561, 1129699321, 950077128961\}$

$(974400, 320000, 1025600) \Rightarrow \{840, 640001, 2051199, 1130304000, 949455360000\}$

$(974079, 322000, 1025921) \Rightarrow \{839, 644001, 2051841, 1130905719, 948829898241\}$

$(973756, 324000, 1026244) \Rightarrow \{838, 648001, 2052487, 1131504472, 948200747536\}$

$(973431, 326000, 1026569) \Rightarrow \{837, 652001, 2053137, 1132100253, 947567911761\}$

$(973104, 328000, 1026896) \Rightarrow \{836, 656001, 2053791, 1132693056, 946931394816\}$

$(972775, 330000, 1027225) \Rightarrow \{835, 660001, 2054449, 1133282875, 946291200625\}$

$(972444, 332000, 1027556) \Rightarrow \{834, 664001, 2055111, 1133869704, 945647333136\}$

$(972111, 334000, 1027889) \Rightarrow \{833, 668001, 2055777, 1134453537, 944999796321\}$

$(971776, 336000, 1028224) \Rightarrow \{832, 672001, 2056447, 1135034368, 944348594176\}$

$(971439, 338000, 1028561) \Rightarrow \{831, 676001, 2057121, 1135612191, 943693730721\}$

$(971100, 340000, 1028900) \Rightarrow \{830, 680001, 2057799, 1136187000, 943035210000\}$

$(970759, 342000, 1029241) \Rightarrow \{829, 684001, 2058481, 1136758789, 942373036081\}$

$(970416, 344000, 1029584) \Rightarrow \{828, 688001, 2059167, 1137327552, 941707213056\}$

$(970071, 346000, 1029929) \Rightarrow \{827, 692001, 2059857, 1137893283, 941037745041\}$

$(969724, 348000, 1030276) \Rightarrow \{826, 696001, 2060551, 1138455976, 940364636176\}$

$(969375, 350000, 1030625) \Rightarrow \{825, 700001, 2061249, 1139015625, 939687890625\}$

$(969024, 352000, 1030976) \Rightarrow \{824, 704001, 2061951, 1139572224, 939007512576\}$

$(968671, 354000, 1031329) \Rightarrow \{823, 708001, 2062657, 1140125767, 938323506241\}$

$(968316, 356000, 1031684) \Rightarrow \{822, 712001, 2063367, 1140676248, 937635875856\}$

$(967959, 358000, 1032041) \Rightarrow \{821, 716001, 2064081, 1141223661, 936944625681\}$

$(967600, 360000, 1032400) \Rightarrow \{820, 720001, 2064799, 1141768000, 936249760000\}$

$(967239, 362000, 1032761) \Rightarrow \{819, 724001, 2065521, 1142309259, 935551283121\}$

$(966876, 364000, 1033124) \Rightarrow \{818, 728001, 2066247, 1142847432, 934849199376\}$

$(966511, 366000, 1033489) \Rightarrow \{817, 732001, 2066977, 1143382513, 934143513121\}$

$(966144, 368000, 1033856) \Rightarrow \{816, 736001, 2067711, 1143914496, 933434228736\}$

$(965775, 370000, 1034225) \Rightarrow \{815, 740001, 2068449, 1144443375, 932721350625\}$

$(965404, 372000, 1034596) \Rightarrow \{814, 744001, 2069191, 1144969144, 932004883216\}$

$(965031, 374000, 1034969) \Rightarrow \{813, 748001, 2069937, 1145491797, 931284830961\}$

$(964656, 376000, 1035344) \Rightarrow \{812, 752001, 2070687, 1146011328, 930561198336\}$

$(964279, 378000, 1035721) \Rightarrow \{811, 756001, 2071441, 1146527731, 929833989841\}$

$(963900, 380000, 1036100) \Rightarrow \{810, 760001, 2072199, 1147041000, 929103210000\}$

$(963519, 382000, 1036481) \Rightarrow \{809, 764001, 2072961, 1147551129, 928368863361\}$

$(963136, 384000, 1036864) \Rightarrow \{808, 768001, 2073727, 1148058112, 927630954496\}$

$(962751, 386000, 1037249) \Rightarrow \{807, 772001, 2074497, 1148561943, 926889488001\}$

$(962364, 388000, 1037636) \Rightarrow \{806, 776001, 2075271, 1149062616, 926144468496\}$

$(961975, 390000, 1038025) \Rightarrow \{805, 780001, 2076049, 1149560125, 925395900625\}$

$(961584, 392000, 1038416) \Rightarrow \{804, 784001, 2076831, 1150054464, 924643789056\}$

$(961191, 394000, 1038809) \Rightarrow \{803, 788001, 2077617, 1150545627, 923888138481\}$

$(960796, 396000, 1039204) \Rightarrow \{802, 792001, 2078407, 1151033608, 923128953616\}$

$(960399, 398000, 1039601) \Rightarrow \{801, 796001, 2079201, 1151518401, 922366239201\}$

$(960000, 400000, 1040000) \Rightarrow \{800, 800001, 2079999, 1152000000, 921600000000\}$

$(959599, 402000, 1040401) \Rightarrow \{799, 804001, 2080801, 1152478399, 920830240801\}$

$(959196, 404000, 1040804) \Rightarrow \{798, 808001, 2081607, 1152953592, 920056966416\}$

$(958791, 406000, 1041209) \Rightarrow \{797, 812001, 2082417, 1153425573, 919280181681\}$

$(958384, 408000, 1041616) \Rightarrow \{796, 816001, 2083231, 1153894336, 918499891456\}$

$(957975, 410000, 1042025) \Rightarrow \{795, 820001, 2084049, 1154359875, 917716100625\}$

$(957564, 412000, 1042436) \Rightarrow \{794, 824001, 2084871, 1154822184, 916928814096\}$

$(957151, 414000, 1042849) \Rightarrow \{793, 828001, 2085697, 1155281257, 916138036801\}$

$(956736, 416000, 1043264) \Rightarrow \{792, 832001, 2086527, 1155737088, 915343773696\}$

$(956319, 418000, 1043681) \Rightarrow \{791, 836001, 2087361, 1156189671, 914546029761\}$

$(955900, 420000, 1044100) \Rightarrow \{790, 840001, 2088199, 1156639000, 913744810000\}$

$(955479, 422000, 1044521) \Rightarrow \{789, 844001, 2089041, 1157085069, 912940119441\}$

$(955056, 424000, 1044944) \Rightarrow \{788, 848001, 2089887, 1157527872, 912131963136\}$

$(954631, 426000, 1045369) \Rightarrow \{787, 852001, 2090737, 1157967403, 911320346161\}$

$(954204, 428000, 1045796) \Rightarrow \{786, 856001, 2091591, 1158403656, 910505273616\}$

$(953775, 430000, 1046225) \Rightarrow \{785, 860001, 2092449, 1158836625, 909686750625\}$

$(953344, 432000, 1046656) \Rightarrow \{784, 864001, 2093311, 1159266304, 908864782336\}$

$(952911, 434000, 1047089) \Rightarrow \{783, 868001, 2094177, 1159692687, 908039373921\}$

$(952476, 436000, 1047524) \Rightarrow \{782, 872001, 2095047, 1160115768, 907210530576\}$

$(952039, 438000, 1047961) \Rightarrow \{781, 876001, 2095921, 1160535541, 906378257521\}$

$(951600, 440000, 1048400) \Rightarrow \{780, 880001, 2096799, 1160952000, 905542560000\}$

$(951159, 442000, 1048841) \Rightarrow \{779, 884001, 2097681, 1161365139, 904703443281\}$

$(950716, 444000, 1049284) \Rightarrow \{778, 888001, 2098567, 1161774952, 903860912656\}$

$(950271, 446000, 1049729) \Rightarrow \{777, 892001, 2099457, 1162181433, 903014973441\}$

$(949824, 448000, 1050176) \Rightarrow \{776, 896001, 2100351, 1162584576, 902165630976\}$

$(949375, 450000, 1050625) \Rightarrow \{775, 900001, 2101249, 1162984375, 901312890625\}$

$(948924, 452000, 1051076) \Rightarrow \{774, 904001, 2102151, 1163380824, 900456757776\}$

$(948471, 454000, 1051529) \Rightarrow \{773, 908001, 2103057, 1163773917, 899597237841\}$

$(948016, 456000, 1051984) \Rightarrow \{772, 912001, 2103967, 1164163648, 898734336256\}$

$(947559, 458000, 1052441) \Rightarrow \{771, 916001, 2104881, 1164550011, 897868058481\}$

$(947100, 460000, 1052900) \Rightarrow \{770, 920001, 2105799, 1164933000, 896998410000\}$

$(946639, 462000, 1053361) \Rightarrow \{769, 924001, 2106721, 1165312609, 896125396321\}$

$(946176, 464000, 1053824) \Rightarrow \{768, 928001, 2107647, 1165688832, 895249022976\}$

$(945711, 466000, 1054289) \Rightarrow \{767, 932001, 2108577, 1166061663, 894369295521\}$

$(945244, 468000, 1054756) \Rightarrow \{766, 936001, 2109511, 1166431096, 893486219536\}$

$(944775, 470000, 1055225) \Rightarrow \{765, 940001, 2110449, 1166797125, 892599800625\}$

$(944304, 472000, 1055696) \Rightarrow \{764, 944001, 2111391, 1167159744, 891710044416\}$

$(943831, 474000, 1056169) \Rightarrow \{763, 948001, 2112337, 1167518947, 890816956561\}$

$(943356, 476000, 1056644) \Rightarrow \{762, 952001, 2113287, 1167874728, 889920542736\}$

$(942879, 478000, 1057121) \Rightarrow \{761, 956001, 2114241, 1168227081, 889020808641\}$

$(942400, 480000, 1057600) \Rightarrow \{760, 960001, 2115199, 1168576000, 888117760000\}$

$(941919, 482000, 1058081) \Rightarrow \{759, 964001, 2116161, 1168921479, 887211402561\}$

$(941436, 484000, 1058564) \Rightarrow \{758, 968001, 2117127, 1169263512, 886301742096\}$

$(940951, 486000, 1059049) \Rightarrow \{757, 972001, 2118097, 1169602093, 885388784401\}$

$(940464, 488000, 1059536) \Rightarrow \{756, 976001, 2119071, 1169937216, 884472535296\}$

$(939975, 490000, 1060025) \Rightarrow \{755, 980001, 2120049, 1170268875, 883553000625\}$

$(939484, 492000, 1060516) \Rightarrow \{754, 984001, 2121031, 1170597064, 882630186256\}$

$(938991, 494000, 1061009) \Rightarrow \{753, 988001, 2122017, 1170921777, 881704098081\}$

$(938496, 496000, 1061504) \Rightarrow \{752, 992001, 2123007, 1171243008, 880774742016\}$

$(937999, 498000, 1062001) \Rightarrow \{751, 996001, 2124001, 1171560751, 879842124001\}$

$(937500, 500000, 1062500) \Rightarrow \{750, 1000001, 2124999, 1171875000, 878906250000\}$

$(936999, 502000, 1063001) \Rightarrow \{749, 1004001, 2126001, 1172185749, 877967126001\}$

$(936496, 504000, 1063504) \Rightarrow \{748, 1008001, 2127007, 1172492992, 877024758016\}$

$(935991, 506000, 1064009) \Rightarrow \{747, 1012001, 2128017, 1172796723, 876079152081\}$

$(935484, 508000, 1064516) \Rightarrow \{746, 1016001, 2129031, 1173096936, 875130314256\}$

$(934975, 510000, 1065025) \Rightarrow \{745, 1020001, 2130049, 1173393625, 874178250625\}$

$(934464, 512000, 1065536) \Rightarrow \{744, 1024001, 2131071, 1173686784, 873222967296\}$

$(933951, 514000, 1066049) \Rightarrow \{743, 1028001, 2132097, 1173976407, 872264470401\}$

$(933436, 516000, 1066564) \Rightarrow \{742, 1032001, 2133127, 1174262488, 871302766096\}$

$(932919, 518000, 1067081) \Rightarrow \{741, 1036001, 2134161, 1174545021, 870337860561\}$

$(932400, 520000, 1067600) \Rightarrow \{740, 1040001, 2135199, 1174824000, 869369760000\}$

$(931879, 522000, 1068121) \Rightarrow \{739, 1044001, 2136241, 1175099419, 868398470641\}$

$(931356, 524000, 1068644) \Rightarrow \{738, 1048001, 2137287, 1175371272, 867423998736\}$

$(930831, 526000, 1069169) \Rightarrow \{737, 1052001, 2138337, 1175639553, 866446350561\}$

$(930304, 528000, 1069696) \Rightarrow \{736, 1056001, 2139391, 1175904256, 865465532416\}$

$(929775, 530000, 1070225) \Rightarrow \{735, 1060001, 2140449, 1176165375, 864481550625\}$

$(929244, 532000, 1070756) \Rightarrow \{734, 1064001, 2141511, 1176422904, 863494411536\}$

$(928711, 534000, 1071289) \Rightarrow \{733, 1068001, 2142577, 1176676837, 862504121521\}$

$(928176, 536000, 1071824) \Rightarrow \{732, 1072001, 2143647, 1176927168, 861510686976\}$

$(927639, 538000, 1072361) \Rightarrow \{731, 1076001, 2144721, 1177173891, 860514114321\}$

$(927100, 540000, 1072900) \Rightarrow \{730, 1080001, 2145799, 1177417000, 859514410000\}$

$(926559, 542000, 1073441) \Rightarrow \{729, 1084001, 2146881, 1177656489, 858511580481\}$

$(926016, 544000, 1073984) \Rightarrow \{728, 1088001, 2147967, 1177892352, 857505632256\}$

$(925471, 546000, 1074529) \Rightarrow \{727, 1092001, 2149057, 1178124583, 856496571841\}$

$(924924, 548000, 1075076) \Rightarrow \{726, 1096001, 2150151, 1178353176, 855484405776\}$

$(924375, 550000, 1075625) \Rightarrow \{725, 1100001, 2151249, 1178578125, 854469140625\}$

$(923824, 552000, 1076176) \Rightarrow \{724, 1104001, 2152351, 1178799424, 853450782976\}$

$(923271, 554000, 1076729) \Rightarrow \{723, 1108001, 2153457, 1179017067, 852429339441\}$

$(922716, 556000, 1077284) \Rightarrow \{722, 1112001, 2154567, 1179231048, 851404816656\}$

$(922159, 558000, 1077841) \Rightarrow \{721, 1116001, 2155681, 1179441361, 850377221281\}$

$(921600, 560000, 1078400) \Rightarrow \{720, 1120001, 2156799, 1179648000, 849346560000\}$

$(921039, 562000, 1078961) \Rightarrow \{719, 1124001, 2157921, 1179850959, 848312839521\}$

$(920476, 564000, 1079524) \Rightarrow \{718, 1128001, 2159047, 1180050232, 847276066576\}$

$(919911, 566000, 1080089) \Rightarrow \{717, 1132001, 2160177, 1180245813, 846236247921\}$

$(919344, 568000, 1080656) \Rightarrow \{716, 1136001, 2161311, 1180437696, 845193390336\}$

$(918775, 570000, 1081225) \Rightarrow \{715, 1140001, 2162449, 1180625875, 844147500625\}$

$(918204, 572000, 1081796) \Rightarrow \{714, 1144001, 2163591, 1180810344, 843098585616\}$

$(917631, 574000, 1082369) \Rightarrow \{713, 1148001, 2164737, 1180991097, 842046652161\}$

$(917056, 576000, 1082944) \Rightarrow \{712, 1152001, 2165887, 1181168128, 840991707136\}$

$(916479, 578000, 1083521) \Rightarrow \{711, 1156001, 2167041, 1181341431, 839933757441\}$

$(915900, 580000, 1084100) \Rightarrow \{710, 1160001, 2168199, 1181511000, 838872810000\}$

$(915319, 582000, 1084681) \Rightarrow \{709, 1164001, 2169361, 1181676829, 837808871761\}$

$(914736, 584000, 1085264) \Rightarrow \{708, 1168001, 2170527, 1181838912, 836741949696\}$

$(914151, 586000, 1085849) \Rightarrow \{707, 1172001, 2171697, 1181997243, 835672050801\}$

$(913564, 588000, 1086436) \Rightarrow \{706, 1176001, 2172871, 1182151816, 834599182096\}$

$(912975, 590000, 1087025) \Rightarrow \{705, 1180001, 2174049, 1182302625, 833523350625\}$

$(912384, 592000, 1087616) \Rightarrow \{704, 1184001, 2175231, 1182449664, 832444563456\}$

$(911791, 594000, 1088209) \Rightarrow \{703, 1188001, 2176417, 1182592927, 831362827681\}$

$(911196, 596000, 1088804) \Rightarrow \{702, 1192001, 2177607, 1182732408, 830278150416\}$

$(910599, 598000, 1089401) \Rightarrow \{701, 1196001, 2178801, 1182868101, 829190538801\}$

$(910000, 600000, 1090000) \Rightarrow \{700, 1200001, 2179999, 1183000000, 828100000000\}$

$(909399, 602000, 1090601) \Rightarrow \{699, 1204001, 2181201, 1183128099, 827006541201\}$

$(908796, 604000, 1091204) \Rightarrow \{698, 1208001, 2182407, 1183252392, 825910169616\}$

$(908191, 606000, 1091809) \Rightarrow \{697, 1212001, 2183617, 1183372873, 824810892481\}$

$(907584, 608000, 1092416) \Rightarrow \{696, 1216001, 2184831, 1183489536, 823708717056\}$

$(906975, 610000, 1093025) \Rightarrow \{695, 1220001, 2186049, 1183602375, 822603650625\}$

$(906364, 612000, 1093636) \Rightarrow \{694, 1224001, 2187271, 1183711384, 821495700496\}$

$(905751, 614000, 1094249) \Rightarrow \{693, 1228001, 2188497, 1183816557, 820384874001\}$

$(905136, 616000, 1094864) \Rightarrow \{692, 1232001, 2189727, 1183917888, 819271178496\}$

$(904519, 618000, 1095481) \Rightarrow \{691, 1236001, 2190961, 1184015371, 818154621361\}$

$(903900, 620000, 1096100) \Rightarrow \{690, 1240001, 2192199, 1184109000, 817035210000\}$

$(903279, 622000, 1096721) \Rightarrow \{689, 1244001, 2193441, 1184198769, 815912951841\}$

$(902656, 624000, 1097344) \Rightarrow \{688, 1248001, 2194687, 1184284672, 814787854336\}$

$(902031, 626000, 1097969) \Rightarrow \{687, 1252001, 2195937, 1184366703, 813659924961\}$

$(901404, 628000, 1098596) \Rightarrow \{686, 1256001, 2197191, 1184444856, 812529171216\}$

$(900775, 630000, 1099225) \Rightarrow \{685, 1260001, 2198449, 1184519125, 811395600625\}$

$(900144, 632000, 1099856) \Rightarrow \{684, 1264001, 2199711, 1184589504, 810259220736\}$

$(899511, 634000, 1100489) \Rightarrow \{683, 1268001, 2200977, 1184655987, 809120039121\}$

$(898876, 636000, 1101124) \Rightarrow \{682, 1272001, 2202247, 1184718568, 807978063376\}$

$(898239, 638000, 1101761) \Rightarrow \{681, 1276001, 2203521, 1184777241, 806833301121\}$

$(897600, 640000, 1102400) \Rightarrow \{680, 1280001, 2204799, 1184832000, 805685760000\}$

$(896959, 642000, 1103041) \Rightarrow \{679, 1284001, 2206081, 1184882839, 804535447681\}$

$(896316, 644000, 1103684) \Rightarrow \{678, 1288001, 2207367, 1184929752, 803382371856\}$

$(895671, 646000, 1104329) \Rightarrow \{677, 1292001, 2208657, 1184972733, 802226540241\}$

$(895024, 648000, 1104976) \Rightarrow \{676, 1296001, 2209951, 1185011776, 801067960576\}$

$(894375, 650000, 1105625) \Rightarrow \{675, 1300001, 2211249, 1185046875, 799906640625\}$

$(893724, 652000, 1106276) \Rightarrow \{674, 1304001, 2212551, 1185078024, 798742588176\}$

$(893071, 654000, 1106929) \Rightarrow \{673, 1308001, 2213857, 1185105217, 797575811041\}$

$(892416, 656000, 1107584) \Rightarrow \{672, 1312001, 2215167, 1185128448, 796406317056\}$

$(891759, 658000, 1108241) \Rightarrow \{671, 1316001, 2216481, 1185147711, 795234114081\}$

$(891100, 660000, 1108900) \Rightarrow \{670, 1320001, 2217799, 1185163000, 794059210000\}$

$(890439, 662000, 1109561) \Rightarrow \{669, 1324001, 2219121, 1185174309, 792881612721\}$

$(889776, 664000, 1110224) \Rightarrow \{668, 1328001, 2220447, 1185181632, 791701330176\}$

$(889111, 666000, 1110889) \Rightarrow \{667, 1332001, 2221777, 1185184963, 790518370321\}$

$(888444, 668000, 1111556) \Rightarrow \{666, 1336001, 2223111, 1185184296, 789332741136\}$

$(887775, 670000, 1112225) \Rightarrow \{665, 1340001, 2224449, 1185179625, 788144450625\}$

$(887104, 672000, 1112896) \Rightarrow \{664, 1344001, 2225791, 1185170944, 786953506816\}$

$(886431, 674000, 1113569) \Rightarrow \{663, 1348001, 2227137, 1185158247, 785759917761\}$

$(885756, 676000, 1114244) \Rightarrow \{662, 1352001, 2228487, 1185141528, 784563691536\}$

$(885079, 678000, 1114921) \Rightarrow \{661, 1356001, 2229841, 1185120781, 783364836241\}$

$(884400, 680000, 1115600) \Rightarrow \{660, 1360001, 2231199, 1185096000, 782163360000\}$

$(883719, 682000, 1116281) \Rightarrow \{659, 1364001, 2232561, 1185067179, 780959270961\}$

$(883036, 684000, 1116964) \Rightarrow \{658, 1368001, 2233927, 1185034312, 779752577296\}$

$(882351, 686000, 1117649) \Rightarrow \{657, 1372001, 2235297, 1184997393, 778543287201\}$

$(881664, 688000, 1118336) \Rightarrow \{656, 1376001, 2236671, 1184956416, 777331408896\}$

$(880975, 690000, 1119025) \Rightarrow \{655, 1380001, 2238049, 1184911375, 776116950625\}$

$(880284, 692000, 1119716) \Rightarrow \{654, 1384001, 2239431, 1184862264, 774899920656\}$

$(879591, 694000, 1120409) \Rightarrow \{653, 1388001, 2240817, 1184809077, 773680327281\}$

$(878896, 696000, 1121104) \Rightarrow \{652, 1392001, 2242207, 1184751808, 772458178816\}$

$(878199, 698000, 1121801) \Rightarrow \{651, 1396001, 2243601, 1184690451, 771233483601\}$

$(877500, 700000, 1122500) \Rightarrow \{650, 1400001, 2244999, 1184625000, 770006250000\}$

$(876799, 702000, 1123201) \Rightarrow \{649, 1404001, 2246401, 1184555449, 768776486401\}$

$(876096, 704000, 1123904) \Rightarrow \{648, 1408001, 2247807, 1184481792, 767544201216\}$

$(875391, 706000, 1124609) \Rightarrow \{647, 1412001, 2249217, 1184404023, 766309402881\}$

$(874684, 708000, 1125316) \Rightarrow \{646, 1416001, 2250631, 1184322136, 765072099856\}$

$(873975, 710000, 1126025) \Rightarrow \{645, 1420001, 2252049, 1184236125, 763832300625\}$

$(873264, 712000, 1126736) \Rightarrow \{644, 1424001, 2253471, 1184145984, 762590013696\}$

$(872551, 714000, 1127449) \Rightarrow \{643, 1428001, 2254897, 1184051707, 761345247601\}$

$(871836, 716000, 1128164) \Rightarrow \{642, 1432001, 2256327, 1183953288, 760098010896\}$

$(871119, 718000, 1128881) \Rightarrow \{641, 1436001, 2257761, 1183850721, 758848312161\}$

$(870400, 720000, 1129600) \Rightarrow \{640, 1440001, 2259199, 1183744000, 757596160000\}$

$(869679, 722000, 1130321) \Rightarrow \{639, 1444001, 2260641, 1183633119, 756341563041\}$

$(868956, 724000, 1131044) \Rightarrow \{638, 1448001, 2262087, 1183518072, 755084529936\}$

$(868231, 726000, 1131769) \Rightarrow \{637, 1452001, 2263537, 1183398853, 753825069361\}$

$(867504, 728000, 1132496) \Rightarrow \{636, 1456001, 2264991, 1183275456, 752563190016\}$

$(866775, 730000, 1133225) \Rightarrow \{635, 1460001, 2266449, 1183147875, 751298900625\}$

$(866044, 732000, 1133956) \Rightarrow \{634, 1464001, 2267911, 1183016104, 750032209936\}$

$(865311, 734000, 1134689) \Rightarrow \{633, 1468001, 2269377, 1182880137, 748763126721\}$

$(864576, 736000, 1135424) \Rightarrow \{632, 1472001, 2270847, 1182739968, 747491659776\}$

$(863839, 738000, 1136161) \Rightarrow \{631, 1476001, 2272321, 1182595591, 746217817921\}$

$(863100, 740000, 1136900) \Rightarrow \{630, 1480001, 2273799, 1182447000, 744941610000\}$

$(862359, 742000, 1137641) \Rightarrow \{629, 1484001, 2275281, 1182294189, 743663044881\}$

$(861616, 744000, 1138384) \Rightarrow \{628, 1488001, 2276767, 1182137152, 742382131456\}$

$(860871, 746000, 1139129) \Rightarrow \{627, 1492001, 2278257, 1181975883, 741098878641\}$

$(860124, 748000, 1139876) \Rightarrow \{626, 1496001, 2279751, 1181810376, 739813295376\}$

$(859375, 750000, 1140625) \Rightarrow \{625, 1500001, 2281249, 1181640625, 738525390625\}$

$(858624, 752000, 1141376) \Rightarrow \{624, 1504001, 2282751, 1181466624, 737235173376\}$

$(857871, 754000, 1142129) \Rightarrow \{623, 1508001, 2284257, 1181288367, 735942652641\}$

$(857116, 756000, 1142884) \Rightarrow \{622, 1512001, 2285767, 1181105848, 734647837456\}$

$(856359, 758000, 1143641) \Rightarrow \{621, 1516001, 2287281, 1180919061, 733350736881\}$

$(855600, 760000, 1144400) \Rightarrow \{620, 1520001, 2288799, 1180728000, 732051360000\}$

$(854839, 762000, 1145161) \Rightarrow \{619, 1524001, 2290321, 1180532659, 730749715921\}$

$(854076, 764000, 1145924) \Rightarrow \{618, 1528001, 2291847, 1180333032, 729445813776\}$

$(853311, 766000, 1146689) \Rightarrow \{617, 1532001, 2293377, 1180129113, 728139662721\}$

$(852544, 768000, 1147456) \Rightarrow \{616, 1536001, 2294911, 1179920896, 726831271936\}$

$(851775, 770000, 1148225) \Rightarrow \{615, 1540001, 2296449, 1179708375, 725520650625\}$

$(851004, 772000, 1148996) \Rightarrow \{614, 1544001, 2297991, 1179491544, 724207808016\}$

$(850231, 774000, 1149769) \Rightarrow \{613, 1548001, 2299537, 1179270397, 722892753361\}$

$(849456, 776000, 1150544) \Rightarrow \{612, 1552001, 2301087, 1179044928, 721575495936\}$

$(848679, 778000, 1151321) \Rightarrow \{611, 1556001, 2302641, 1178815131, 720256045041\}$

$(847900, 780000, 1152100) \Rightarrow \{610, 1560001, 2304199, 1178581000, 718934410000\}$

$(847119, 782000, 1152881) \Rightarrow \{609, 1564001, 2305761, 1178342529, 717610600161\}$

$(846336, 784000, 1153664) \Rightarrow \{608, 1568001, 2307327, 1178099712, 716284624896\}$

$(845551, 786000, 1154449) \Rightarrow \{607, 1572001, 2308897, 1177852543, 714956493601\}$

$(844764, 788000, 1155236) \Rightarrow \{606, 1576001, 2310471, 1177601016, 713626215696\}$

$(843975, 790000, 1156025) \Rightarrow \{605, 1580001, 2312049, 1177345125, 712293800625\}$

$(843184, 792000, 1156816) \Rightarrow \{604, 1584001, 2313631, 1177084864, 710959257856\}$

$(842391, 794000, 1157609) \Rightarrow \{603, 1588001, 2315217, 1176820227, 709622596881\}$

$(841596, 796000, 1158404) \Rightarrow \{602, 1592001, 2316807, 1176551208, 708283827216\}$

$(840799, 798000, 1159201) \Rightarrow \{601, 1596001, 2318401, 1176277801, 706942958401\}$

$(840000, 800000, 1160000) \Rightarrow \{600, 1600001, 2319999, 1176000000, 705600000000\}$

$(839199, 802000, 1160801) \Rightarrow \{599, 1604001, 2321601, 1175717799, 704254961601\}$

$(838396, 804000, 1161604) \Rightarrow \{598, 1608001, 2323207, 1175431192, 702907852816\}$

$(837591, 806000, 1162409) \Rightarrow \{597, 1612001, 2324817, 1175140173, 701558683281\}$

$(836784, 808000, 1163216) \Rightarrow \{596, 1616001, 2326431, 1174844736, 700207462656\}$

$(835975, 810000, 1164025) \Rightarrow \{595, 1620001, 2328049, 1174544875, 698854200625\}$

$(835164, 812000, 1164836) \Rightarrow \{594, 1624001, 2329671, 1174240584, 697498906896\}$

$(834351, 814000, 1165649) \Rightarrow \{593, 1628001, 2331297, 1173931857, 696141591201\}$

$(833536, 816000, 1166464) \Rightarrow \{592, 1632001, 2332927, 1173618688, 694782263296\}$

$(832719, 818000, 1167281) \Rightarrow \{591, 1636001, 2334561, 1173301071, 693420932961\}$

$(831900, 820000, 1168100) \Rightarrow \{590, 1640001, 2336199, 1172979000, 692057610000\}$

$(831079, 822000, 1168921) \Rightarrow \{589, 1644001, 2337841, 1172652469, 690692304241\}$

$(830256, 824000, 1169744) \Rightarrow \{588, 1648001, 2339487, 1172321472, 689325025536\}$

$(829431, 826000, 1170569) \Rightarrow \{587, 1652001, 2341137, 1171986003, 687955783761\}$

$(828604, 828000, 1171396) \Rightarrow \{586, 1656001, 2342791, 1171646056, 686584588816\}$

$(827775, 830000, 1172225) \Rightarrow \{585, 1660001, 2344449, 1171301625, 685211450625\}$

$(826944, 832000, 1173056) \Rightarrow \{584, 1664001, 2346111, 1170952704, 683836379136\}$

$(826111, 834000, 1173889) \Rightarrow \{583, 1668001, 2347777, 1170599287, 682459384321\}$

$(825276, 836000, 1174724) \Rightarrow \{582, 1672001, 2349447, 1170241368, 681080476176\}$

$(824439, 838000, 1175561) \Rightarrow \{581, 1676001, 2351121, 1169878941, 679699664721\}$

$(823600, 840000, 1176400) \Rightarrow \{580, 1680001, 2352799, 1169512000, 678316960000\}$

$(822759, 842000, 1177241) \Rightarrow \{579, 1684001, 2354481, 1169140539, 676932372081\}$

$(821916, 844000, 1178084) \Rightarrow \{578, 1688001, 2356167, 1168764552, 675545911056\}$

$(821071, 846000, 1178929) \Rightarrow \{577, 1692001, 2357857, 1168384033, 674157587041\}$

$(820224, 848000, 1179776) \Rightarrow \{576, 1696001, 2359551, 1167998976, 672767410176\}$

$(819375, 850000, 1180625) \Rightarrow \{575, 1700001, 2361249, 1167609375, 671375390625\}$

$(818524, 852000, 1181476) \Rightarrow \{574, 1704001, 2362951, 1167215224, 669981538576\}$

$(817671, 854000, 1182329) \Rightarrow \{573, 1708001, 2364657, 1166816517, 668585864241\}$

$(816816, 856000, 1183184) \Rightarrow \{572, 1712001, 2366367, 1166413248, 667188377856\}$

$(815959, 858000, 1184041) \Rightarrow \{571, 1716001, 2368081, 1166005411, 665789089681\}$

$(815100, 860000, 1184900) \Rightarrow \{570, 1720001, 2369799, 1165593000, 664388010000\}$

$(814239, 862000, 1185761) \Rightarrow \{569, 1724001, 2371521, 1165176009, 662985149121\}$

$(813376, 864000, 1186624) \Rightarrow \{568, 1728001, 2373247, 1164754432, 661580517376\}$

$(812511, 866000, 1187489) \Rightarrow \{567, 1732001, 2374977, 1164328263, 660174125121\}$

$(811644, 868000, 1188356) \Rightarrow \{566, 1736001, 2376711, 1163897496, 658765982736\}$

$(810775, 870000, 1189225) \Rightarrow \{565, 1740001, 2378449, 1163462125, 657356100625\}$

$(809904, 872000, 1190096) \Rightarrow \{564, 1744001, 2380191, 1163022144, 655944489216\}$

$(809031, 874000, 1190969) \Rightarrow \{563, 1748001, 2381937, 1162577547, 654531158961\}$

$(808156, 876000, 1191844) \Rightarrow \{562, 1752001, 2383687, 1162128328, 653116120336\}$

$(807279, 878000, 1192721) \Rightarrow \{561, 1756001, 2385441, 1161674481, 651699383841\}$

$(806400, 880000, 1193600) \Rightarrow \{560, 1760001, 2387199, 1161216000, 650280960000\}$

$(805519, 882000, 1194481) \Rightarrow \{559, 1764001, 2388961, 1160752879, 648860859361\}$

$(804636, 884000, 1195364) \Rightarrow \{558, 1768001, 2390727, 1160285112, 647439092496\}$

$(803751, 886000, 1196249) \Rightarrow \{557, 1772001, 2392497, 1159812693, 646015670001\}$

$(802864, 888000, 1197136) \Rightarrow \{556, 1776001, 2394271, 1159335616, 644590602496\}$

$(801975, 890000, 1198025) \Rightarrow \{555, 1780001, 2396049, 1158853875, 643163900625\}$

$(801084, 892000, 1198916) \Rightarrow \{554, 1784001, 2397831, 1158367464, 641735575056\}$

$(800191, 894000, 1199809) \Rightarrow \{553, 1788001, 2399617, 1157876377, 640305636481\}$

$(799296, 896000, 1200704) \Rightarrow \{552, 1792001, 2401407, 1157380608, 638874095616\}$

$(798399, 898000, 1201601) \Rightarrow \{551, 1796001, 2403201, 1156880151, 637440963201\}$

$(797500, 900000, 1202500) \Rightarrow \{550, 1800001, 2404999, 1156375000, 636006250000\}$

$(796599, 902000, 1203401) \Rightarrow \{549, 1804001, 2406801, 1155865149, 634569966801\}$

$(795696, 904000, 1204304) \Rightarrow \{548, 1808001, 2408607, 1155350592, 633132124416\}$

$(794791, 906000, 1205209) \Rightarrow \{547, 1812001, 2410417, 1154831323, 631692733681\}$

$(793884, 908000, 1206116) \Rightarrow \{546, 1816001, 2412231, 1154307336, 630251805456\}$

$(792975, 910000, 1207025) \Rightarrow \{545, 1820001, 2414049, 1153778625, 628809350625\}$

$(792064, 912000, 1207936) \Rightarrow \{544, 1824001, 2415871, 1153245184, 627365380096\}$

$(791151, 914000, 1208849) \Rightarrow \{543, 1828001, 2417697, 1152707007, 625919904801\}$

$(790236, 916000, 1209764) \Rightarrow \{542, 1832001, 2419527, 1152164088, 624472935696\}$

$(789319, 918000, 1210681) \Rightarrow \{541, 1836001, 2421361, 1151616421, 623024483761\}$

$(788400, 920000, 1211600) \Rightarrow \{540, 1840001, 2423199, 1151064000, 621574560000\}$

$(787479, 922000, 1212521) \Rightarrow \{539, 1844001, 2425041, 1150506819, 620123175441\}$

$(786556, 924000, 1213444) \Rightarrow \{538, 1848001, 2426887, 1149944872, 618670341136\}$

$(785631, 926000, 1214369) \Rightarrow \{537, 1852001, 2428737, 1149378153, 617216068161\}$

$(784704, 928000, 1215296) \Rightarrow \{536, 1856001, 2430591, 1148806656, 615760367616\}$

$(783775, 930000, 1216225) \Rightarrow \{535, 1860001, 2432449, 1148230375, 614303250625\}$

$(782844, 932000, 1217156) \Rightarrow \{534, 1864001, 2434311, 1147649304, 612844728336\}$

$(781911, 934000, 1218089) \Rightarrow \{533, 1868001, 2436177, 1147063437, 611384811921\}$

$(780976, 936000, 1219024) \Rightarrow \{532, 1872001, 2438047, 1146472768, 609923512576\}$

$(780039, 938000, 1219961) \Rightarrow \{531, 1876001, 2439921, 1145877291, 608460841521\}$

$(779100, 940000, 1220900) \Rightarrow \{530, 1880001, 2441799, 1145277000, 606996810000\}$

$(778159, 942000, 1221841) \Rightarrow \{529, 1884001, 2443681, 1144671889, 605531429281\}$

$(777216, 944000, 1222784) \Rightarrow \{528, 1888001, 2445567, 1144061952, 604064710656\}$

$(776271, 946000, 1223729) \Rightarrow \{527, 1892001, 2447457, 1143447183, 602596665441\}$

$(775324, 948000, 1224676) \Rightarrow \{526, 1896001, 2449351, 1142827576, 601127304976\}$

$(774375, 950000, 1225625) \Rightarrow \{525, 1900001, 2451249, 1142203125, 599656640625\}$

$(773424, 952000, 1226576) \Rightarrow \{524, 1904001, 2453151, 1141573824, 598184683776\}$

$(772471, 954000, 1227529) \Rightarrow \{523, 1908001, 2455057, 1140939667, 596711445841\}$

$(771516, 956000, 1228484) \Rightarrow \{522, 1912001, 2456967, 1140300648, 595236938256\}$

$(770559, 958000, 1229441) \Rightarrow \{521, 1916001, 2458881, 1139656761, 593761172481\}$

$(769600, 960000, 1230400) \Rightarrow \{520, 1920001, 2460799, 1139008000, 592284160000\}$

$(768639, 962000, 1231361) \Rightarrow \{519, 1924001, 2462721, 1138354359, 590805912321\}$

$(767676, 964000, 1232324) \Rightarrow \{518, 1928001, 2464647, 1137695832, 589326440976\}$

$(766711, 966000, 1233289) \Rightarrow \{517, 1932001, 2466577, 1137032413, 587845757521\}$

$(765744, 968000, 1234256) \Rightarrow \{516, 1936001, 2468511, 1136364096, 586363873536\}$

$(764775, 970000, 1235225) \Rightarrow \{515, 1940001, 2470449, 1135690875, 584880800625\}$

$(763804, 972000, 1236196) \Rightarrow \{514, 1944001, 2472391, 1135012744, 583396550416\}$

$(762831, 974000, 1237169) \Rightarrow \{513, 1948001, 2474337, 1134329697, 581911134561\}$

$(761856, 976000, 1238144) \Rightarrow \{512, 1952001, 2476287, 1133641728, 580424564736\}$

$(760879, 978000, 1239121) \Rightarrow \{511, 1956001, 2478241, 1132948831, 578936852641\}$

$(759900, 980000, 1240100) \Rightarrow \{510, 1960001, 2480199, 1132251000, 577448010000\}$

$(758919, 982000, 1241081) \Rightarrow \{509, 1964001, 2482161, 1131548229, 575958048561\}$

$(757936, 984000, 1242064) \Rightarrow \{508, 1968001, 2484127, 1130840512, 574466980096\}$

$(756951, 986000, 1243049) \Rightarrow \{507, 1972001, 2486097, 1130127843, 572974816401\}$

$(755964, 988000, 1244036) \Rightarrow \{506, 1976001, 2488071, 1129410216, 571481569296\}$

$(754975, 990000, 1245025) \Rightarrow \{505, 1980001, 2490049, 1128687625, 569987250625\}$

$(753984, 992000, 1246016) \Rightarrow \{504, 1984001, 2492031, 1127960064, 568491872256\}$

$(752991, 994000, 1247009) \Rightarrow \{503, 1988001, 2494017, 1127227527, 566995446081\}$

$(751996, 996000, 1248004) \Rightarrow \{502, 1992001, 2496007, 1126490008, 565497984016\}$

$(750999, 998000, 1249001) \Rightarrow \{501, 1996001, 2498001, 1125747501, 563999498001\}$

$(750000, 1000000, 1250000) \Rightarrow \{500, 2000001, 2499999, 1125000000, 562500000000\}$

$(748999, 1002000, 1251001) \Rightarrow \{499, 2004001, 2502001, 1124247499, 560999502001\}$

$(747996, 1004000, 1252004) \Rightarrow \{498, 2008001, 2504007, 1123489992, 559498016016\}$

$(746991, 1006000, 1253009) \Rightarrow \{497, 2012001, 2506017, 1122727473, 557995554081\}$

$(745984, 1008000, 1254016) \Rightarrow \{496, 2016001, 2508031, 1121959936, 556492128256\}$

$(744975, 1010000, 1255025) \Rightarrow \{495, 2020001, 2510049, 1121187375, 554987750625\}$

$(743964, 1012000, 1256036) \Rightarrow \{494, 2024001, 2512071, 1120409784, 553482433296\}$

$(742951, 1014000, 1257049) \Rightarrow \{493, 2028001, 2514097, 1119627157, 551976188401\}$

$(741936, 1016000, 1258064) \Rightarrow \{492, 2032001, 2516127, 1118839488, 550469028096\}$

$(740919, 1018000, 1259081) \Rightarrow \{491, 2036001, 2518161, 1118046771, 548960964561\}$

$(739900, 1020000, 1260100) \Rightarrow \{490, 2040001, 2520199, 1117249000, 547452010000\}$

$(738879, 1022000, 1261121) \Rightarrow \{489, 2044001, 2522241, 1116446169, 545942176641\}$

$(737856, 1024000, 1262144) \Rightarrow \{488, 2048001, 2524287, 1115638272, 544431476736\}$

$(736831, 1026000, 1263169) \Rightarrow \{487, 2052001, 2526337, 1114825303, 542919922561\}$

$(735804, 1028000, 1264196) \Rightarrow \{486, 2056001, 2528391, 1114007256, 541407526416\}$

$(734775, 1030000, 1265225) \Rightarrow \{485, 2060001, 2530449, 1113184125, 539894300625\}$

$(733744, 1032000, 1266256) \Rightarrow \{484, 2064001, 2532511, 1112355904, 538380257536\}$

$(732711, 1034000, 1267289) \Rightarrow \{483, 2068001, 2534577, 1111522587, 536865409521\}$

$(731676, 1036000, 1268324) \Rightarrow \{482, 2072001, 2536647, 1110684168, 535349768976\}$

$(730639, 1038000, 1269361) \Rightarrow \{481, 2076001, 2538721, 1109840641, 533833348321\}$

$(729600, 1040000, 1270400) \Rightarrow \{480, 2080001, 2540799, 1108992000, 532316160000\}$

$(728559, 1042000, 1271441) \Rightarrow \{479, 2084001, 2542881, 1108138239, 530798216481\}$

$(727516, 1044000, 1272484) \Rightarrow \{478, 2088001, 2544967, 1107279352, 529279530256\}$

$(726471, 1046000, 1273529) \Rightarrow \{477, 2092001, 2547057, 1106415333, 527760113841\}$

$(725424, 1048000, 1274576) \Rightarrow \{476, 2096001, 2549151, 1105546176, 526239979776\}$

$(724375, 1050000, 1275625) \Rightarrow \{475, 2100001, 2551249, 1104671875, 524719140625\}$

$(723324, 1052000, 1276676) \Rightarrow \{474, 2104001, 2553351, 1103792424, 523197608976\}$

$(722271, 1054000, 1277729) \Rightarrow \{473, 2108001, 2555457, 1102907817, 521675397441\}$

$(721216, 1056000, 1278784) \Rightarrow \{472, 2112001, 2557567, 1102018048, 520152518656\}$

$(720159, 1058000, 1279841) \Rightarrow \{471, 2116001, 2559681, 1101123111, 518628985281\}$

$(719100, 1060000, 1280900) \Rightarrow \{470, 2120001, 2561799, 1100223000, 517104810000\}$

$(718039, 1062000, 1281961) \Rightarrow \{469, 2124001, 2563921, 1099317709, 515580005521\}$

$(716976, 1064000, 1283024) \Rightarrow \{468, 2128001, 2566047, 1098407232, 514054584576\}$

$(715911, 1066000, 1284089) \Rightarrow \{467, 2132001, 2568177, 1097491563, 512528559921\}$

$(714844, 1068000, 1285156) \Rightarrow \{466, 2136001, 2570311, 1096570696, 511001944336\}$

$(713775, 1070000, 1286225) \Rightarrow \{465, 2140001, 2572449, 1095644625, 509474750625\}$

$(712704, 1072000, 1287296) \Rightarrow \{464, 2144001, 2574591, 1094713344, 507946991616\}$

$(711631, 1074000, 1288369) \Rightarrow \{463, 2148001, 2576737, 1093776847, 506418680161\}$

$(710556, 1076000, 1289444) \Rightarrow \{462, 2152001, 2578887, 1092835128, 504889829136\}$

$(709479, 1078000, 1290521) \Rightarrow \{461, 2156001, 2581041, 1091888181, 503360451441\}$

$(708400, 1080000, 1291600) \Rightarrow \{460, 2160001, 2583199, 1090936000, 501830560000\}$

$(707319, 1082000, 1292681) \Rightarrow \{459, 2164001, 2585361, 1089978579, 500300167761\}$

$(706236, 1084000, 1293764) \Rightarrow \{458, 2168001, 2587527, 1089015912, 498769287696\}$
$(705151, 1086000, 1294849) \Rightarrow \{457, 2172001, 2589697, 1088047993, 497237932801\}$
$(704064, 1088000, 1295936) \Rightarrow \{456, 2176001, 2591871, 1087074816, 495706116096\}$
$(702975, 1090000, 1297025) \Rightarrow \{455, 2180001, 2594049, 1086096375, 494173850625\}$
$(701884, 1092000, 1298116) \Rightarrow \{454, 2184001, 2596231, 1085112664, 492641149456\}$
$(700791, 1094000, 1299209) \Rightarrow \{453, 2188001, 2598417, 1084123677, 491108025681\}$
$(699696, 1096000, 1300304) \Rightarrow \{452, 2192001, 2600607, 1083129408, 489574492416\}$
$(698599, 1098000, 1301401) \Rightarrow \{451, 2196001, 2602801, 1082129851, 488040562801\}$
$(697500, 1100000, 1302500) \Rightarrow \{450, 2200001, 2604999, 1081125000, 486506250000\}$
$(696399, 1102000, 1303601) \Rightarrow \{449, 2204001, 2607201, 1080114849, 484971567201\}$
$(695296, 1104000, 1304704) \Rightarrow \{448, 2208001, 2609407, 1079099392, 483436527616\}$
$(694191, 1106000, 1305809) \Rightarrow \{447, 2212001, 2611617, 1078078623, 481901144481\}$
$(693084, 1108000, 1306916) \Rightarrow \{446, 2216001, 2613831, 1077052536, 480365431056\}$
$(691975, 1110000, 1308025) \Rightarrow \{445, 2220001, 2616049, 1076021125, 478829400625\}$
$(690864, 1112000, 1309136) \Rightarrow \{444, 2224001, 2618271, 1074984384, 477293066496\}$
$(689751, 1114000, 1310249) \Rightarrow \{443, 2228001, 2620497, 1073942307, 475756442001\}$
$(688636, 1116000, 1311364) \Rightarrow \{442, 2232001, 2622727, 1072894888, 474219540496\}$
$(687519, 1118000, 1312481) \Rightarrow \{441, 2236001, 2624961, 1071842121, 472682375361\}$
$(686400, 1120000, 1313600) \Rightarrow \{440, 2240001, 2627199, 1070784000, 471144960000\}$
$(685279, 1122000, 1314721) \Rightarrow \{439, 2244001, 2629441, 1069720519, 469607307841\}$
$(684156, 1124000, 1315844) \Rightarrow \{438, 2248001, 2631687, 1068651672, 468069432336\}$
$(683031, 1126000, 1316969) \Rightarrow \{437, 2252001, 2633937, 1067577453, 466531346961\}$
$(681904, 1128000, 1318096) \Rightarrow \{436, 2256001, 2636191, 1066497856, 464993065216\}$
$(680775, 1130000, 1319225) \Rightarrow \{435, 2260001, 2638449, 1065412875, 463454600625\}$
$(679644, 1132000, 1320356) \Rightarrow \{434, 2264001, 2640711, 1064322504, 461915966736\}$
$(678511, 1134000, 1321489) \Rightarrow \{433, 2268001, 2642977, 1063226737, 460377177121\}$
$(677376, 1136000, 1322624) \Rightarrow \{432, 2272001, 2645247, 1062125568, 458838245376\}$
$(676239, 1138000, 1323761) \Rightarrow \{431, 2276001, 2647521, 1061018991, 457299185121\}$
$(675100, 1140000, 1324900) \Rightarrow \{430, 2280001, 2649799, 1059907000, 455760010000\}$
$(673959, 1142000, 1326041) \Rightarrow \{429, 2284001, 2652081, 1058789589, 454220733681\}$
$(672816, 1144000, 1327184) \Rightarrow \{428, 2288001, 2654367, 1057666752, 452681369856\}$
$(671671, 1146000, 1328329) \Rightarrow \{427, 2292001, 2656657, 1056538483, 451141932241\}$
$(670524, 1148000, 1329476) \Rightarrow \{426, 2296001, 2658951, 1055404776, 449602434576\}$
$(669375, 1150000, 1330625) \Rightarrow \{425, 2300001, 2661249, 1054265625, 448062890625\}$
$(668224, 1152000, 1331776) \Rightarrow \{424, 2304001, 2663551, 1053121024, 446523314176\}$
$(667071, 1154000, 1332929) \Rightarrow \{423, 2308001, 2665857, 1051970967, 444983719041\}$
$(665916, 1156000, 1334084) \Rightarrow \{422, 2312001, 2668167, 1050815448, 443444119056\}$
$(664759, 1158000, 1335241) \Rightarrow \{421, 2316001, 2670481, 1049654461, 441904528081\}$
$(663600, 1160000, 1336400) \Rightarrow \{420, 2320001, 2672799, 1048488000, 440364960000\}$
$(662439, 1162000, 1337561) \Rightarrow \{419, 2324001, 2675121, 1047316059, 438825428721\}$

$(661276, 1164000, 1338724) \Rightarrow \{418, 2328001, 2677447, 1046138632, 437285948176\}$

$(660111, 1166000, 1339889) \Rightarrow \{417, 2332001, 2679777, 1044955713, 435746532321\}$

$(658944, 1168000, 1341056) \Rightarrow \{416, 2336001, 2682111, 1043767296, 434207195136\}$

$(657775, 1170000, 1342225) \Rightarrow \{415, 2340001, 2684449, 1042573375, 432667950625\}$

$(656604, 1172000, 1343396) \Rightarrow \{414, 2344001, 2686791, 1041373944, 431128812816\}$

$(655431, 1174000, 1344569) \Rightarrow \{413, 2348001, 2689137, 1040168997, 429589795761\}$

$(654256, 1176000, 1345744) \Rightarrow \{412, 2352001, 2691487, 1038958528, 428050913536\}$

$(653079, 1178000, 1346921) \Rightarrow \{411, 2356001, 2693841, 1037742531, 426512180241\}$

$(651900, 1180000, 1348100) \Rightarrow \{410, 2360001, 2696199, 1036521000, 424973610000\}$

$(650719, 1182000, 1349281) \Rightarrow \{409, 2364001, 2698561, 1035293929, 423435216961\}$

$(649536, 1184000, 1350464) \Rightarrow \{408, 2368001, 2700927, 1034061312, 421897015296\}$

$(648351, 1186000, 1351649) \Rightarrow \{407, 2372001, 2703297, 1032823143, 420359019201\}$

$(647164, 1188000, 1352836) \Rightarrow \{406, 2376001, 2705671, 1031579416, 418821242896\}$

$(645975, 1190000, 1354025) \Rightarrow \{405, 2380001, 2708049, 1030330125, 417283700625\}$

$(644784, 1192000, 1355216) \Rightarrow \{404, 2384001, 2710431, 1029075264, 415746406656\}$

$(643591, 1194000, 1356409) \Rightarrow \{403, 2388001, 2712817, 1027814827, 414209375281\}$

$(642396, 1196000, 1357604) \Rightarrow \{402, 2392001, 2715207, 1026548808, 412672620816\}$

$(641199, 1198000, 1358801) \Rightarrow \{401, 2396001, 2717601, 1025277201, 411136157601\}$

$(640000, 1200000, 1360000) \Rightarrow \{400, 2400001, 2719999, 1024000000, 409600000000\}$

$(638799, 1202000, 1361201) \Rightarrow \{399, 2404001, 2722401, 1022717199, 408064162401\}$

$(637596, 1204000, 1362404) \Rightarrow \{398, 2408001, 2724807, 1021428792, 406528659216\}$

$(636391, 1206000, 1363609) \Rightarrow \{397, 2412001, 2727217, 1020134773, 404993504881\}$

$(635184, 1208000, 1364816) \Rightarrow \{396, 2416001, 2729631, 1018835136, 403458713856\}$

$(633975, 1210000, 1366025) \Rightarrow \{395, 2420001, 2732049, 1017529875, 401924300625\}$

$(632764, 1212000, 1367236) \Rightarrow \{394, 2424001, 2734471, 1016218984, 400390279696\}$

$(631551, 1214000, 1368449) \Rightarrow \{393, 2428001, 2736897, 1014902457, 398856665601\}$

$(630336, 1216000, 1369664) \Rightarrow \{392, 2432001, 2739327, 1013580288, 397323472896\}$

$(629119, 1218000, 1370881) \Rightarrow \{391, 2436001, 2741761, 1012252471, 395790716161\}$

$(627900, 1220000, 1372100) \Rightarrow \{390, 2440001, 2744199, 1010919000, 394258410000\}$

$(626679, 1222000, 1373321) \Rightarrow \{389, 2444001, 2746641, 1009579869, 392726569041\}$

$(625456, 1224000, 1374544) \Rightarrow \{388, 2448001, 2749087, 1008235072, 391195207936\}$

$(624231, 1226000, 1375769) \Rightarrow \{387, 2452001, 2751537, 1006884603, 389664341361\}$

$(623004, 1228000, 1376996) \Rightarrow \{386, 2456001, 2753991, 1005528456, 388133984016\}$

$(621775, 1230000, 1378225) \Rightarrow \{385, 2460001, 2756449, 1004166625, 386604150625\}$

$(620544, 1232000, 1379456) \Rightarrow \{384, 2464001, 2758911, 1002799104, 385074855936\}$

$(619311, 1234000, 1380689) \Rightarrow \{383, 2468001, 2761377, 1001425887, 383546114721\}$

$(618076, 1236000, 1381924) \Rightarrow \{382, 2472001, 2763847, 1000046968, 382017941776\}$

$(616839, 1238000, 1383161) \Rightarrow \{381, 2476001, 2766321, 998662341, 380490351921\}$

$(615600, 1240000, 1384400) \Rightarrow \{380, 2480001, 2768799, 997272000, 378963360000\}$

$(614359, 1242000, 1385641) \Rightarrow \{379, 2484001, 2771281, 995875939, 377436980881\}$

$(613116, 1244000, 1386884) \Rightarrow \{378, 2488001, 2773767, 994474152, 375911229456\}$

$(611871, 1246000, 1388129) \Rightarrow \{377, 2492001, 2776257, 993066633, 374386120641\}$

$(610624, 1248000, 1389376) \Rightarrow \{376, 2496001, 2778751, 991653376, 372861669376\}$

$(609375, 1250000, 1390625) \Rightarrow \{375, 2500001, 2781249, 990234375, 371337890625\}$

$(608124, 1252000, 1391876) \Rightarrow \{374, 2504001, 2783751, 988809624, 369814799376\}$

$(606871, 1254000, 1393129) \Rightarrow \{373, 2508001, 2786257, 987379117, 368292410641\}$

$(605616, 1256000, 1394384) \Rightarrow \{372, 2512001, 2788767, 985942848, 366770739456\}$

$(604359, 1258000, 1395641) \Rightarrow \{371, 2516001, 2791281, 984500811, 365249800881\}$

$(603100, 1260000, 1396900) \Rightarrow \{370, 2520001, 2793799, 983053000, 363729610000\}$

$(601839, 1262000, 1398161) \Rightarrow \{369, 2524001, 2796321, 981599409, 362210181921\}$

$(600576, 1264000, 1399424) \Rightarrow \{368, 2528001, 2798847, 980140032, 360691531776\}$

$(599311, 1266000, 1400689) \Rightarrow \{367, 2532001, 2801377, 978674863, 359173674721\}$

$(598044, 1268000, 1401956) \Rightarrow \{366, 2536001, 2803911, 977203896, 357656625936\}$

$(596775, 1270000, 1403225) \Rightarrow \{365, 2540001, 2806449, 975727125, 356140400625\}$

$(595504, 1272000, 1404496) \Rightarrow \{364, 2544001, 2808991, 974244544, 354625014016\}$

$(594231, 1274000, 1405769) \Rightarrow \{363, 2548001, 2811537, 972756147, 353110481361\}$

$(592956, 1276000, 1407044) \Rightarrow \{362, 2552001, 2814087, 971261928, 351596817936\}$

$(591679, 1278000, 1408321) \Rightarrow \{361, 2556001, 2816641, 969761881, 350084039041\}$

$(590400, 1280000, 1409600) \Rightarrow \{360, 2560001, 2819199, 968256000, 348572160000\}$

$(589119, 1282000, 1410881) \Rightarrow \{359, 2564001, 2821761, 966744279, 347061196161\}$

$(587836, 1284000, 1412164) \Rightarrow \{358, 2568001, 2824327, 965226712, 345551162896\}$

$(586551, 1286000, 1413449) \Rightarrow \{357, 2572001, 2826897, 963703293, 344042075601\}$

$(585264, 1288000, 1414736) \Rightarrow \{356, 2576001, 2829471, 962174016, 342533949696\}$

$(583975, 1290000, 1416025) \Rightarrow \{355, 2580001, 2832049, 960638875, 341026800625\}$

$(582684, 1292000, 1417316) \Rightarrow \{354, 2584001, 2834631, 959097864, 339520643856\}$

$(581391, 1294000, 1418609) \Rightarrow \{353, 2588001, 2837217, 957550977, 338015494881\}$

$(580096, 1296000, 1419904) \Rightarrow \{352, 2592001, 2839807, 955998208, 336511369216\}$

$(578799, 1298000, 1421201) \Rightarrow \{351, 2596001, 2842401, 954439551, 335008282401\}$

$(577500, 1300000, 1422500) \Rightarrow \{350, 2600001, 2844999, 952875000, 333506250000\}$

$(576199, 1302000, 1423801) \Rightarrow \{349, 2604001, 2847601, 951304549, 332005287601\}$

$(574896, 1304000, 1425104) \Rightarrow \{348, 2608001, 2850207, 949728192, 330505410816\}$

$(573591, 1306000, 1426409) \Rightarrow \{347, 2612001, 2852817, 948145923, 329006635281\}$

$(572284, 1308000, 1427716) \Rightarrow \{346, 2616001, 2855431, 946557736, 327508976656\}$

$(570975, 1310000, 1429025) \Rightarrow \{345, 2620001, 2858049, 944963625, 326012450625\}$

$(569664, 1312000, 1430336) \Rightarrow \{344, 2624001, 2860671, 943363584, 324517072896\}$

$(568351, 1314000, 1431649) \Rightarrow \{343, 2628001, 2863297, 941757607, 323022859201\}$

$(567036, 1316000, 1432964) \Rightarrow \{342, 2632001, 2865927, 940145688, 321529825296\}$

$(565719, 1318000, 1434281) \Rightarrow \{341, 2636001, 2868561, 938527821, 320037986961\}$

$(564400, 1320000, 1435600) \Rightarrow \{340, 2640001, 2871199, 936904000, 318547360000\}$

$(563079, 1322000, 1436921) \Rightarrow \{339, 2644001, 2873841, 935274219, 317057960241\}$

$(561756, 1324000, 1438244) \Rightarrow \{338, 2648001, 2876487, 933638472, 315569803536\}$

$(560431, 1326000, 1439569) \Rightarrow \{337, 2652001, 2879137, 931996753, 314082905761\}$

$(559104, 1328000, 1440896) \Rightarrow \{336, 2656001, 2881791, 930349056, 312597282816\}$

$(557775, 1330000, 1442225) \Rightarrow \{335, 2660001, 2884449, 928695375, 311112950625\}$

$(556444, 1332000, 1443556) \Rightarrow \{334, 2664001, 2887111, 927035704, 309629925136\}$

$(555111, 1334000, 1444889) \Rightarrow \{333, 2668001, 2889777, 925370037, 308148222321\}$

$(553776, 1336000, 1446224) \Rightarrow \{332, 2672001, 2892447, 923698368, 306667858176\}$

$(552439, 1338000, 1447561) \Rightarrow \{331, 2676001, 2895121, 922020691, 305188848721\}$

$(551100, 1340000, 1448900) \Rightarrow \{330, 2680001, 2897799, 920337000, 303711210000\}$

$(549759, 1342000, 1450241) \Rightarrow \{329, 2684001, 2900481, 918647289, 302234958081\}$

$(548416, 1344000, 1451584) \Rightarrow \{328, 2688001, 2903167, 916951552, 300760109056\}$

$(547071, 1346000, 1452929) \Rightarrow \{327, 2692001, 2905857, 915249783, 299286679041\}$

$(545724, 1348000, 1454276) \Rightarrow \{326, 2696001, 2908551, 913541976, 297814684176\}$

$(544375, 1350000, 1455625) \Rightarrow \{325, 2700001, 2911249, 911828125, 296344140625\}$

$(543024, 1352000, 1456976) \Rightarrow \{324, 2704001, 2913951, 910108224, 294875064576\}$

$(541671, 1354000, 1458329) \Rightarrow \{323, 2708001, 2916657, 908382267, 293407472241\}$

$(540316, 1356000, 1459684) \Rightarrow \{322, 2712001, 2919367, 906650248, 291941379856\}$

$(538959, 1358000, 1461041) \Rightarrow \{321, 2716001, 2922081, 904912161, 290476803681\}$

$(537600, 1360000, 1462400) \Rightarrow \{320, 2720001, 2924799, 903168000, 289013760000\}$

$(536239, 1362000, 1463761) \Rightarrow \{319, 2724001, 2927521, 901417759, 287552265121\}$

$(534876, 1364000, 1465124) \Rightarrow \{318, 2728001, 2930247, 899661432, 286092335376\}$

$(533511, 1366000, 1466489) \Rightarrow \{317, 2732001, 2932977, 897899013, 284633987121\}$

$(532144, 1368000, 1467856) \Rightarrow \{316, 2736001, 2935711, 896130496, 283177236736\}$

$(530775, 1370000, 1469225) \Rightarrow \{315, 2740001, 2938449, 894355875, 281722100625\}$

$(529404, 1372000, 1470596) \Rightarrow \{314, 2744001, 2941191, 892575144, 280268595216\}$

$(528031, 1374000, 1471969) \Rightarrow \{313, 2748001, 2943937, 890788297, 278816736961\}$

$(526656, 1376000, 1473344) \Rightarrow \{312, 2752001, 2946687, 888995328, 277366542336\}$

$(525279, 1378000, 1474721) \Rightarrow \{311, 2756001, 2949441, 887196231, 275918027841\}$

$(523900, 1380000, 1476100) \Rightarrow \{310, 2760001, 2952199, 885391000, 274471210000\}$

$(522519, 1382000, 1477481) \Rightarrow \{309, 2764001, 2954961, 883579629, 273026105361\}$

$(521136, 1384000, 1478864) \Rightarrow \{308, 2768001, 2957727, 881762112, 271582730496\}$

$(519751, 1386000, 1480249) \Rightarrow \{307, 2772001, 2960497, 879938443, 270141102001\}$

$(518364, 1388000, 1481636) \Rightarrow \{306, 2776001, 2963271, 878108616, 268701236496\}$

$(516975, 1390000, 1483025) \Rightarrow \{305, 2780001, 2966049, 876272625, 267263150625\}$

$(515584, 1392000, 1484416) \Rightarrow \{304, 2784001, 2968831, 874430464, 265826861056\}$

$(514191, 1394000, 1485809) \Rightarrow \{303, 2788001, 2971617, 872582127, 264392384481\}$

$(512796, 1396000, 1487204) \Rightarrow \{302, 2792001, 2974407, 870727608, 262959737616\}$

$(511399, 1398000, 1488601) \Rightarrow \{301, 2796001, 2977201, 868866901, 261528937201\}$

$(510000, 1400000, 1490000) \Rightarrow \{300, 2800001, 2979999, 867000000, 260100000000\}$

$(508599, 1402000, 1491401) \Rightarrow \{299, 2804001, 2982801, 865126899, 258672942801\}$

$(507196, 1404000, 1492804) \Rightarrow \{298, 2808001, 2985607, 863247592, 257247782416\}$

$(505791, 1406000, 1494209) \Rightarrow \{297, 2812001, 2988417, 861362073, 255824535681\}$

$(504384, 1408000, 1495616) \Rightarrow \{296, 2816001, 2991231, 859470336, 254403219456\}$

$(502975, 1410000, 1497025) \Rightarrow \{295, 2820001, 2994049, 857572375, 252983850625\}$

$(501564, 1412000, 1498436) \Rightarrow \{294, 2824001, 2996871, 855668184, 251566446096\}$

$(500151, 1414000, 1499849) \Rightarrow \{293, 2828001, 2999697, 853757757, 250151022801\}$

$(498736, 1416000, 1501264) \Rightarrow \{292, 2832001, 3002527, 851841088, 248737597696\}$

$(497319, 1418000, 1502681) \Rightarrow \{291, 2836001, 3005361, 849918171, 247326187761\}$

$(495900, 1420000, 1504100) \Rightarrow \{290, 2840001, 3008199, 847989000, 245916810000\}$

$(494479, 1422000, 1505521) \Rightarrow \{289, 2844001, 3011041, 846053569, 244509481441\}$

$(493056, 1424000, 1506944) \Rightarrow \{288, 2848001, 3013887, 844111872, 243104219136\}$

$(491631, 1426000, 1508369) \Rightarrow \{287, 2852001, 3016737, 842163903, 241701040161\}$

$(490204, 1428000, 1509796) \Rightarrow \{286, 2856001, 3019591, 840209656, 240299961616\}$

$(488775, 1430000, 1511225) \Rightarrow \{285, 2860001, 3022449, 838249125, 238901000625\}$

$(487344, 1432000, 1512656) \Rightarrow \{284, 2864001, 3025311, 836282304, 237504174336\}$

$(485911, 1434000, 1514089) \Rightarrow \{283, 2868001, 3028177, 834309187, 236109499921\}$

$(484476, 1436000, 1515524) \Rightarrow \{282, 2872001, 3031047, 832329768, 234716994576\}$

$(483039, 1438000, 1516961) \Rightarrow \{281, 2876001, 3033921, 830344041, 233326675521\}$

$(481600, 1440000, 1518400) \Rightarrow \{280, 2880001, 3036799, 828352000, 231938560000\}$

$(480159, 1442000, 1519841) \Rightarrow \{279, 2884001, 3039681, 826353639, 230552665281\}$

$(478716, 1444000, 1521284) \Rightarrow \{278, 2888001, 3042567, 824348952, 229169008656\}$

$(477271, 1446000, 1522729) \Rightarrow \{277, 2892001, 3045457, 822337933, 227787607441\}$

$(475824, 1448000, 1524176) \Rightarrow \{276, 2896001, 3048351, 820320576, 226408478976\}$

$(474375, 1450000, 1525625) \Rightarrow \{275, 2900001, 3051249, 818296875, 225031640625\}$

$(472924, 1452000, 1527076) \Rightarrow \{274, 2904001, 3054151, 816266824, 223657109776\}$

$(471471, 1454000, 1528529) \Rightarrow \{273, 2908001, 3057057, 814230417, 222284903841\}$

$(470016, 1456000, 1529984) \Rightarrow \{272, 2912001, 3059967, 812187648, 220915040256\}$

$(468559, 1458000, 1531441) \Rightarrow \{271, 2916001, 3062881, 810138511, 219547536481\}$

$(467100, 1460000, 1532900) \Rightarrow \{270, 2920001, 3065799, 808083000, 218182410000\}$

$(465639, 1462000, 1534361) \Rightarrow \{269, 2924001, 3068721, 806021109, 216819678321\}$

$(464176, 1464000, 1535824) \Rightarrow \{268, 2928001, 3071647, 803952832, 215459358976\}$

$(462711, 1466000, 1537289) \Rightarrow \{267, 2932001, 3074577, 801878163, 214101469521\}$

$(461244, 1468000, 1538756) \Rightarrow \{266, 2936001, 3077511, 799797096, 212746027536\}$

$(459775, 1470000, 1540225) \Rightarrow \{265, 2940001, 3080449, 797709625, 211393050625\}$

$(458304, 1472000, 1541696) \Rightarrow \{264, 2944001, 3083391, 795615744, 210042556416\}$

$(456831, 1474000, 1543169) \Rightarrow \{263, 2948001, 3086337, 793515447, 208694562561\}$

$(455356, 1476000, 1544644) \Rightarrow \{262, 2952001, 3089287, 791408728, 207349086736\}$

$(453879, 1478000, 1546121) \Rightarrow \{261, 2956001, 3092241, 789295581, 206006146641\}$

$(452400, 1480000, 1547600) \Rightarrow \{260, 2960001, 3095199, 787176000, 204665760000\}$

$(450919, 1482000, 1549081) \Rightarrow \{259, 2964001, 3098161, 785049979, 203327944561\}$

$(449436, 1484000, 1550564) \Rightarrow \{258, 2968001, 3101127, 782917512, 201992718096\}$

$(447951, 1486000, 1552049) \Rightarrow \{257, 2972001, 3104097, 780778593, 200660098401\}$

$(446464, 1488000, 1553536) \Rightarrow \{256, 2976001, 3107071, 778633216, 199330103296\}$

$(444975, 1490000, 1555025) \Rightarrow \{255, 2980001, 3110049, 776481375, 198002750625\}$

$(443484, 1492000, 1556516) \Rightarrow \{254, 2984001, 3113031, 774323064, 196678058256\}$

$(441991, 1494000, 1558009) \Rightarrow \{253, 2988001, 3116017, 772158277, 195356044081\}$

$(440496, 1496000, 1559504) \Rightarrow \{252, 2992001, 3119007, 769987008, 194036726016\}$

$(438999, 1498000, 1561001) \Rightarrow \{251, 2996001, 3122001, 767809251, 192720122001\}$

$(437500, 1500000, 1562500) \Rightarrow \{250, 3000001, 3124999, 765625000, 191406250000\}$

$(435999, 1502000, 1564001) \Rightarrow \{249, 3004001, 3128001, 763434249, 190095128001\}$

$(434496, 1504000, 1565504) \Rightarrow \{248, 3008001, 3131007, 761236992, 188786774016\}$

$(432991, 1506000, 1567009) \Rightarrow \{247, 3012001, 3134017, 759033223, 187481206081\}$

$(431484, 1508000, 1568516) \Rightarrow \{246, 3016001, 3137031, 756822936, 186178442256\}$

$(429975, 1510000, 1570025) \Rightarrow \{245, 3020001, 3140049, 754606125, 184878500625\}$

$(428464, 1512000, 1571536) \Rightarrow \{244, 3024001, 3143071, 752382784, 183581399296\}$

$(426951, 1514000, 1573049) \Rightarrow \{243, 3028001, 3146097, 750152907, 182287156401\}$

$(425436, 1516000, 1574564) \Rightarrow \{242, 3032001, 3149127, 747916488, 180995790096\}$

$(423919, 1518000, 1576081) \Rightarrow \{241, 3036001, 3152161, 745673521, 179707318561\}$

$(422400, 1520000, 1577600) \Rightarrow \{240, 3040001, 3155199, 743424000, 178421760000\}$

$(420879, 1522000, 1579121) \Rightarrow \{239, 3044001, 3158241, 741167919, 177139132641\}$

$(419356, 1524000, 1580644) \Rightarrow \{238, 3048001, 3161287, 738905272, 175859454736\}$

$(417831, 1526000, 1582169) \Rightarrow \{237, 3052001, 3164337, 736636053, 174582744561\}$

$(416304, 1528000, 1583696) \Rightarrow \{236, 3056001, 3167391, 734360256, 173309020416\}$

$(414775, 1530000, 1585225) \Rightarrow \{235, 3060001, 3170449, 732077875, 172038300625\}$

$(413244, 1532000, 1586756) \Rightarrow \{234, 3064001, 3173511, 729788904, 170770603536\}$

$(411711, 1534000, 1588289) \Rightarrow \{233, 3068001, 3176577, 727493337, 169505947521\}$

$(410176, 1536000, 1589824) \Rightarrow \{232, 3072001, 3179647, 725191168, 168244350976\}$

$(408639, 1538000, 1591361) \Rightarrow \{231, 3076001, 3182721, 722882391, 166985832321\}$

$(407100, 1540000, 1592900) \Rightarrow \{230, 3080001, 3185799, 720567000, 165730410000\}$

$(405559, 1542000, 1594441) \Rightarrow \{229, 3084001, 3188881, 718244989, 164478102481\}$

$(404016, 1544000, 1595984) \Rightarrow \{228, 3088001, 3191967, 715916352, 163228928256\}$

$(402471, 1546000, 1597529) \Rightarrow \{227, 3092001, 3195057, 713581083, 161982905841\}$

$(400924, 1548000, 1599076) \Rightarrow \{226, 3096001, 3198151, 711239176, 160740053776\}$

$(399375, 1550000, 1600625) \Rightarrow \{225, 3100001, 3201249, 708890625, 159500390625\}$

$(397824, 1552000, 1602176) \Rightarrow \{224, 3104001, 3204351, 706535424, 158263934976\}$

$(396271, 1554000, 1603729) \Rightarrow \{223, 3108001, 3207457, 704173567, 157030705441\}$

$(394716, 1556000, 1605284) \Rightarrow \{222, 3112001, 3210567, 701805048, 155800720656\}$

$(393159, 1558000, 1606841) \Rightarrow \{221, 3116001, 3213681, 699429861, 154573999281\}$

$(391600, 1560000, 1608400) \Rightarrow \{220, 3120001, 3216799, 697048000, 153350560000\}$

$(390039, 1562000, 1609961) \Rightarrow \{219, 3124001, 3219921, 694659459, 152130421521\}$

$(388476, 1564000, 1611524) \Rightarrow \{218, 3128001, 3223047, 692264232, 150913602576\}$

$(386911, 1566000, 1613089) \Rightarrow \{217, 3132001, 3226177, 689862313, 149700121921\}$

$(385344, 1568000, 1614656) \Rightarrow \{216, 3136001, 3229311, 687453696, 148489998336\}$

$(383775, 1570000, 1616225) \Rightarrow \{215, 3140001, 3232449, 685038375, 147283250625\}$

$(382204, 1572000, 1617796) \Rightarrow \{214, 3144001, 3235591, 682616344, 146079897616\}$

$(380631, 1574000, 1619369) \Rightarrow \{213, 3148001, 3238737, 680187597, 144879958161\}$

$(379056, 1576000, 1620944) \Rightarrow \{212, 3152001, 3241887, 677752128, 143683451136\}$

$(377479, 1578000, 1622521) \Rightarrow \{211, 3156001, 3245041, 675309931, 142490395441\}$

$(375900, 1580000, 1624100) \Rightarrow \{210, 3160001, 3248199, 672861000, 141300810000\}$

$(374319, 1582000, 1625681) \Rightarrow \{209, 3164001, 3251361, 670405329, 140114713761\}$

$(372736, 1584000, 1627264) \Rightarrow \{208, 3168001, 3254527, 667942912, 138932125696\}$

$(371151, 1586000, 1628849) \Rightarrow \{207, 3172001, 3257697, 665473743, 137753064801\}$

$(369564, 1588000, 1630436) \Rightarrow \{206, 3176001, 3260871, 662997816, 136577550096\}$

$(367975, 1590000, 1632025) \Rightarrow \{205, 3180001, 3264049, 660515125, 135405600625\}$

$(366384, 1592000, 1633616) \Rightarrow \{204, 3184001, 3267231, 658025664, 134237235456\}$

$(364791, 1594000, 1635209) \Rightarrow \{203, 3188001, 3270417, 655529427, 133072473681\}$

$(363196, 1596000, 1636804) \Rightarrow \{202, 3192001, 3273607, 653026408, 131911334416\}$

$(361599, 1598000, 1638401) \Rightarrow \{201, 3196001, 3276801, 650516601, 130753836801\}$

$(360000, 1600000, 1640000) \Rightarrow \{200, 3200001, 3279999, 648000000, 129600000000\}$

$(358399, 1602000, 1641601) \Rightarrow \{199, 3204001, 3283201, 645476599, 128449843201\}$

$(356796, 1604000, 1643204) \Rightarrow \{198, 3208001, 3286407, 642946392, 127303385616\}$

$(355191, 1606000, 1644809) \Rightarrow \{197, 3212001, 3289617, 640409373, 126160646481\}$

$(353584, 1608000, 1646416) \Rightarrow \{196, 3216001, 3292831, 637865536, 125021645056\}$

$(351975, 1610000, 1648025) \Rightarrow \{195, 3220001, 3296049, 635314875, 123886400625\}$

$(350364, 1612000, 1649636) \Rightarrow \{194, 3224001, 3299271, 632757384, 122754932496\}$

$(348751, 1614000, 1651249) \Rightarrow \{193, 3228001, 3302497, 630193057, 121627260001\}$

$(347136, 1616000, 1652864) \Rightarrow \{192, 3232001, 3305727, 627621888, 120503402496\}$

$(345519, 1618000, 1654481) \Rightarrow \{191, 3236001, 3308961, 625043871, 119383379361\}$

$(343900, 1620000, 1656100) \Rightarrow \{190, 3240001, 3312199, 622459000, 118267210000\}$

$(342279, 1622000, 1657721) \Rightarrow \{189, 3244001, 3315441, 619867269, 117154913841\}$

$(340656, 1624000, 1659344) \Rightarrow \{188, 3248001, 3318687, 617268672, 116046510336\}$

$(339031, 1626000, 1660969) \Rightarrow \{187, 3252001, 3321937, 614663203, 114942018961\}$

$(337404, 1628000, 1662596) \Rightarrow \{186, 3256001, 3325191, 612050856, 113841459216\}$

$(335775, 1630000, 1664225) \Rightarrow \{185, 3260001, 3328449, 609431625, 112744850625\}$

$(334144, 1632000, 1665856) \Rightarrow \{184, 3264001, 3331711, 606805504, 111652212736\}$

$(332511, 1634000, 1667489) \Rightarrow \{183, 3268001, 3334977, 604172487, 110563565121\}$

$(330876, 1636000, 1669124) \Rightarrow \{182, 3272001, 3338247, 601532568, 109478927376\}$

$(329239, 1638000, 1670761) \Rightarrow \{181, 3276001, 3341521, 598885741, 108398319121\}$

$(327600, 1640000, 1672400) \Rightarrow \{180, 3280001, 3344799, 596232000, 107321760000\}$

$(325959, 1642000, 1674041) \Rightarrow \{179, 3284001, 3348081, 593571339, 106249269681\}$

$(324316, 1644000, 1675684) \Rightarrow \{178, 3288001, 3351367, 590903752, 105180867856\}$

$(322671, 1646000, 1677329) \Rightarrow \{177, 3292001, 3354657, 588229233, 104116574241\}$

$(321024, 1648000, 1678976) \Rightarrow \{176, 3296001, 3357951, 585547776, 103056408576\}$

$(319375, 1650000, 1680625) \Rightarrow \{175, 3300001, 3361249, 582859375, 102000390625\}$

$(317724, 1652000, 1682276) \Rightarrow \{174, 3304001, 3364551, 580164024, 100948540176\}$

$(316071, 1654000, 1683929) \Rightarrow \{173, 3308001, 3367857, 577461717, 99900877041\}$

$(314416, 1656000, 1685584) \Rightarrow \{172, 3312001, 3371167, 574752448, 98857421056\}$

$(312759, 1658000, 1687241) \Rightarrow \{171, 3316001, 3374481, 572036211, 97818192081\}$

$(311100, 1660000, 1688900) \Rightarrow \{170, 3320001, 3377799, 569313000, 96783210000\}$

$(309439, 1662000, 1690561) \Rightarrow \{169, 3324001, 3381121, 566582809, 95752494721\}$

$(307776, 1664000, 1692224) \Rightarrow \{168, 3328001, 3384447, 563845632, 94726066176\}$

$(306111, 1666000, 1693889) \Rightarrow \{167, 3332001, 3387777, 561101463, 93703944321\}$

$(304444, 1668000, 1695556) \Rightarrow \{166, 3336001, 3391111, 558350296, 92686149136\}$

$(302775, 1670000, 1697225) \Rightarrow \{165, 3340001, 3394449, 555592125, 91672700625\}$

$(301104, 1672000, 1698896) \Rightarrow \{164, 3344001, 3397791, 552826944, 90663618816\}$

$(299431, 1674000, 1700569) \Rightarrow \{163, 3348001, 3401137, 550054747, 89658923761\}$

$(297756, 1676000, 1702244) \Rightarrow \{162, 3352001, 3404487, 547275528, 88658635536\}$

$(296079, 1678000, 1703921) \Rightarrow \{161, 3356001, 3407841, 544489281, 87662774241\}$

$(294400, 1680000, 1705600) \Rightarrow \{160, 3360001, 3411199, 541696000, 86671360000\}$

$(292719, 1682000, 1707281) \Rightarrow \{159, 3364001, 3414561, 538895679, 85684412961\}$

$(291036, 1684000, 1708964) \Rightarrow \{158, 3368001, 3417927, 536088312, 84701953296\}$

$(289351, 1686000, 1710649) \Rightarrow \{157, 3372001, 3421297, 533273893, 83724001201\}$

$(287664, 1688000, 1712336) \Rightarrow \{156, 3376001, 3424671, 530452416, 82750576896\}$

$(285975, 1690000, 1714025) \Rightarrow \{155, 3380001, 3428049, 527623875, 81781700625\}$

$(284284, 1692000, 1715716) \Rightarrow \{154, 3384001, 3431431, 524788264, 80817392656\}$

$(282591, 1694000, 1717409) \Rightarrow \{153, 3388001, 3434817, 521945577, 79857673281\}$

$(280896, 1696000, 1719104) \Rightarrow \{152, 3392001, 3438207, 519095808, 78902562816\}$

$(279199, 1698000, 1720801) \Rightarrow \{151, 3396001, 3441601, 516238951, 77952081601\}$

$(277500, 1700000, 1722500) \Rightarrow \{150, 3400001, 3444999, 513375000, 77006250000\}$

$(275799, 1702000, 1724201) \Rightarrow \{149, 3404001, 3448401, 510503949, 76065088401\}$

$(274096, 1704000, 1725904) \Rightarrow \{148, 3408001, 3451807, 507625792, 75128617216\}$

$(272391, 1706000, 1727609) \Rightarrow \{147, 3412001, 3455217, 504740523, 74196856881\}$

$(270684, 1708000, 1729316) \Rightarrow \{146, 3416001, 3458631, 501848136, 73269827856\}$

$(268975, 1710000, 1731025) \Rightarrow \{145, 3420001, 3462049, 498948625, 72347550625\}$

$(267264, 1712000, 1732736) \Rightarrow \{144, 3424001, 3465471, 496041984, 71430045696\}$

$(265551, 1714000, 1734449) \Rightarrow \{143, 3428001, 3468897, 493128207, 70517333601\}$

$(263836, 1716000, 1736164) \Rightarrow \{142, 3432001, 3472327, 490207288, 69609434896\}$

$(262119, 1718000, 1737881) \Rightarrow \{141, 3436001, 3475761, 487279221, 68706370161\}$

$(260400, 1720000, 1739600) \Rightarrow \{140, 3440001, 3479199, 484344000, 67808160000\}$

$(258679, 1722000, 1741321) \Rightarrow \{139, 3444001, 3482641, 481401619, 66914825041\}$

$(256956, 1724000, 1743044) \Rightarrow \{138, 3448001, 3486087, 478452072, 66026385936\}$

$(255231, 1726000, 1744769) \Rightarrow \{137, 3452001, 3489537, 475495353, 65142863361\}$

$(253504, 1728000, 1746496) \Rightarrow \{136, 3456001, 3492991, 472531456, 64264278016\}$

$(251775, 1730000, 1748225) \Rightarrow \{135, 3460001, 3496449, 469560375, 63390650625\}$

$(250044, 1732000, 1749956) \Rightarrow \{134, 3464001, 3499911, 466582104, 62522001936\}$

$(248311, 1734000, 1751689) \Rightarrow \{133, 3468001, 3503377, 463596637, 61658352721\}$

$(246576, 1736000, 1753424) \Rightarrow \{132, 3472001, 3506847, 460603968, 60799723776\}$

$(244839, 1738000, 1755161) \Rightarrow \{131, 3476001, 3510321, 457604091, 59946135921\}$

$(243100, 1740000, 1756900) \Rightarrow \{130, 3480001, 3513799, 454597000, 59097610000\}$

$(241359, 1742000, 1758641) \Rightarrow \{129, 3484001, 3517281, 451582689, 58254166881\}$

$(239616, 1744000, 1760384) \Rightarrow \{128, 3488001, 3520767, 448561152, 57415827456\}$

$(237871, 1746000, 1762129) \Rightarrow \{127, 3492001, 3524257, 445532383, 56582612641\}$

$(236124, 1748000, 1763876) \Rightarrow \{126, 3496001, 3527751, 442496376, 55754543376\}$

$(234375, 1750000, 1765625) \Rightarrow \{125, 3500001, 3531249, 439453125, 54931640625\}$

$(232624, 1752000, 1767376) \Rightarrow \{124, 3504001, 3534751, 436402624, 54113925376\}$

$(230871, 1754000, 1769129) \Rightarrow \{123, 3508001, 3538257, 433344867, 53301418641\}$

$(229116, 1756000, 1770884) \Rightarrow \{122, 3512001, 3541767, 430279848, 52494141456\}$

$(227359, 1758000, 1772641) \Rightarrow \{121, 3516001, 3545281, 427207561, 51692114881\}$

$(225600, 1760000, 1774400) \Rightarrow \{120, 3520001, 3548799, 424128000, 50895360000\}$

$(223839, 1762000, 1776161) \Rightarrow \{119, 3524001, 3552321, 421041159, 50103897921\}$

$(222076, 1764000, 1777924) \Rightarrow \{118, 3528001, 3555847, 417947032, 49317749776\}$

$(220311, 1766000, 1779689) \Rightarrow \{117, 3532001, 3559377, 414845613, 48536936721\}$

$(218544, 1768000, 1781456) \Rightarrow \{116, 3536001, 3562911, 411736896, 47761479936\}$

$(216775, 1770000, 1783225) \Rightarrow \{115, 3540001, 3566449, 408620875, 46991400625\}$

$(215004, 1772000, 1784996) \Rightarrow \{114, 3544001, 3569991, 405497544, 46226720016\}$

$(213231, 1774000, 1786769) \Rightarrow \{113, 3548001, 3573537, 402366897, 45467459361\}$

$(211456, 1776000, 1788544) \Rightarrow \{112, 3552001, 3577087, 399228928, 44713639936\}$

$(209679, 1778000, 1790321) \Rightarrow \{111, 3556001, 3580641, 396083631, 43965283041\}$

$(207900, 1780000, 1792100) \Rightarrow \{110, 3560001, 3584199, 392931000, 43222410000\}$

$(206119, 1782000, 1793881) \Rightarrow \{109, 3564001, 3587761, 389771029, 42485042161\}$

$(204336, 1784000, 1795664) \Rightarrow \{108, 3568001, 3591327, 386603712, 41753200896\}$

$(202551, 1786000, 1797449) \Rightarrow \{107, 3572001, 3594897, 383429043, 41026907601\}$

$(200764, 1788000, 1799236) \Rightarrow \{106, 3576001, 3598471, 380247016, 40306183696\}$

$(198975, 1790000, 1801025) \Rightarrow \{105, 3580001, 3602049, 377057625, 39591050625\}$

$(197184, 1792000, 1802816) \Rightarrow \{104, 3584001, 3605631, 373860864, 38881529856\}$

$(195391, 1794000, 1804609) \Rightarrow \{103, 3588001, 3609217, 370656727, 38177642881\}$

$(193596, 1796000, 1806404) \Rightarrow \{102, 3592001, 3612807, 367445208, 37479411216\}$

$(191799, 1798000, 1808201) \Rightarrow \{101, 3596001, 3616401, 364226301, 36786856401\}$

$(190000, 1800000, 1810000) \Rightarrow \{100, 3600001, 3619999, 361000000, 36100000000\}$

$(188199, 1802000, 1811801) \Rightarrow \{99, 3604001, 3623601, 357766299, 35418863601\}$

$(186396, 1804000, 1813604) \Rightarrow \{98, 3608001, 3627207, 354525192, 34743468816\}$

$(184591, 1806000, 1815409) \Rightarrow \{97, 3612001, 3630817, 351276673, 34073837281\}$

$(182784, 1808000, 1817216) \Rightarrow \{96, 3616001, 3634431, 348020736, 33409990656\}$

$(180975, 1810000, 1819025) \Rightarrow \{95, 3620001, 3638049, 344757375, 32751950625\}$

$(179164, 1812000, 1820836) \Rightarrow \{94, 3624001, 3641671, 341486584, 32099738896\}$

$(177351, 1814000, 1822649) \Rightarrow \{93, 3628001, 3645297, 338208357, 31453377201\}$

$(175536, 1816000, 1824464) \Rightarrow \{92, 3632001, 3648927, 334922688, 30812887296\}$

$(173719, 1818000, 1826281) \Rightarrow \{91, 3636001, 3652561, 331629571, 30178290961\}$

$(171900, 1820000, 1828100) \Rightarrow \{90, 3640001, 3656199, 328329000, 29549610000\}$

$(170079, 1822000, 1829921) \Rightarrow \{89, 3644001, 3659841, 325020969, 28926866241\}$

$(168256, 1824000, 1831744) \Rightarrow \{88, 3648001, 3663487, 321705472, 28310081536\}$

$(166431, 1826000, 1833569) \Rightarrow \{87, 3652001, 3667137, 318382503, 27699277761\}$

$(164604, 1828000, 1835396) \Rightarrow \{86, 3656001, 3670791, 315052056, 27094476816\}$

$(162775, 1830000, 1837225) \Rightarrow \{85, 3660001, 3674449, 311714125, 26495700625\}$

$(160944, 1832000, 1839056) \Rightarrow \{84, 3664001, 3678111, 308368704, 25902971136\}$

$(159111, 1834000, 1840889) \Rightarrow \{83, 3668001, 3681777, 305015787, 25316310321\}$

$(157276, 1836000, 1842724) \Rightarrow \{82, 3672001, 3685447, 301655368, 24735740176\}$

$(155439, 1838000, 1844561) \Rightarrow \{81, 3676001, 3689121, 298287441, 24161282721\}$

$(153600, 1840000, 1846400) \Rightarrow \{80, 3680001, 3692799, 294912000, 23592960000\}$

$(151759, 1842000, 1848241) \Rightarrow \{79, 3684001, 3696481, 291529039, 23030794081\}$

$(149916, 1844000, 1850084) \Rightarrow \{78, 3688001, 3700167, 288138552, 22474807056\}$

$(148071, 1846000, 1851929) \Rightarrow \{77, 3692001, 3703857, 284740533, 21925021041\}$

$(146224, 1848000, 1853776) \Rightarrow \{76, 3696001, 3707551, 281334976, 21381458176\}$

$(144375, 1850000, 1855625) \Rightarrow \{75, 3700001, 3711249, 277921875, 20844140625\}$

$(142524, 1852000, 1857476) \Rightarrow \{74, 3704001, 3714951, 274501224, 20313090576\}$

$(140671, 1854000, 1859329) \Rightarrow \{73, 3708001, 3718657, 271073017, 19788330241\}$

$(138816, 1856000, 1861184) \Rightarrow \{72, 3712001, 3722367, 267637248, 19269881856\}$

$(136959, 1858000, 1863041) \Rightarrow \{71, 3716001, 3726081, 264193911, 18757767681\}$

$(135100, 1860000, 1864900) \Rightarrow \{70, 3720001, 3729799, 260743000, 18252010000\}$

$(133239, 1862000, 1866761) \Rightarrow \{69, 3724001, 3733521, 257284509, 17752631121\}$

$(131376, 1864000, 1868624) \Rightarrow \{68, 3728001, 3737247, 253818432, 17259653376\}$

$(129511, 1866000, 1870489) \Rightarrow \{67, 3732001, 3740977, 250344763, 16773099121\}$

$(127644, 1868000, 1872356) \Rightarrow \{66, 3736001, 3744711, 246863496, 16292990736\}$

$(125775, 1870000, 1874225) \Rightarrow \{65, 3740001, 3748449, 243374625, 15819350625\}$

$(123904, 1872000, 1876096) \Rightarrow \{64, 3744001, 3752191, 239878144, 15352201216\}$

$(122031, 1874000, 1877969) \Rightarrow \{63, 3748001, 3755937, 236374047, 14891564961\}$

$(120156, 1876000, 1879844) \Rightarrow \{62, 3752001, 3759687, 232862328, 14437464336\}$

$(118279, 1878000, 1881721) \Rightarrow \{61, 3756001, 3763441, 229342981, 13989921841\}$

$(116400, 1880000, 1883600) \Rightarrow \{60, 3760001, 3767199, 225816000, 13548960000\}$

$(114519, 1882000, 1885481) \Rightarrow \{59, 3764001, 3770961, 222281379, 13114601361\}$

$(112636, 1884000, 1887364) \Rightarrow \{58, 3768001, 3774727, 218739112, 12686868496\}$

$(110751, 1886000, 1889249) \Rightarrow \{57, 3772001, 3778497, 215189193, 12265784001\}$

$(108864, 1888000, 1891136) \Rightarrow \{56, 3776001, 3782271, 211631616, 11851370496\}$

$(106975, 1890000, 1893025) \Rightarrow \{55, 3780001, 3786049, 208066375, 11443650625\}$

$(105084, 1892000, 1894916) \Rightarrow \{54, 3784001, 3789831, 204493464, 11042647056\}$

$(103191, 1894000, 1896809) \Rightarrow \{53, 3788001, 3793617, 200912877, 10648382481\}$

$(101296, 1896000, 1898704) \Rightarrow \{52, 3792001, 3797407, 197324608, 10260879616\}$

$(099399, 1898000, 1900601) \Rightarrow \{51, 3796001, 3801201, 193728651, 9880161201\}$

$(097500, 1900000, 1902500) \Rightarrow \{50, 3800001, 3804999, 190125000, 9506250000\}$

$(095599, 1902000, 1904401) \Rightarrow \{49, 3804001, 3808801, 186513649, 9139168801\}$

$(093696, 1904000, 1906304) \Rightarrow \{48, 3808001, 3812607, 182894592, 8778940416\}$

$(091791, 1906000, 1908209) \Rightarrow \{47, 3812001, 3816417, 179267823, 8425587681\}$

$(089884, 1908000, 1910116) \Rightarrow \{46, 3816001, 3820231, 175633336, 8079133456\}$

$0(87975, 1910000, 1912025) \Rightarrow \{45, 3820001, 3824049, 171991125, 7739600625\}$

$(086064, 1912000, 1913936) \Rightarrow \{44, 3824001, 3827871, 168341184, 7407012096\}$

$(084151, 1914000, 1915849) \Rightarrow \{43, 3828001, 3831697, 164683507, 7081390801\}$

$(082236, 1916000, 1917764) \Rightarrow \{42, 3832001, 3835527, 161018088, 6762759696\}$

$(080319, 1918000, 1919681) \Rightarrow \{41, 3836001, 3839361, 157344921, 6451141761\}$

$(078400, 1920000, 1921600) \Rightarrow \{40, 3840001, 3843199, 153664000, 6146560000\}$

$(076479, 1922000, 1923521) \Rightarrow \{39, 3844001, 3847041, 149975319, 5849037441\}$

$(074556, 1924000, 1925444) \Rightarrow \{38, 3848001, 3850887, 146278872, 5558597136\}$

$(072631, 1926000, 1927369) \Rightarrow \{37, 3852001, 3854737, 142574653, 5275262161\}$

$(070704, 1928000, 1929296) \Rightarrow \{36, 3856001, 3858591, 138862656, 4999055616\}$

$(068775, 1930000, 1931225) \Rightarrow \{35, 3860001, 3862449, 135142875, 4730000625\}$

$(066844, 1932000, 1933156) \Rightarrow \{34, 3864001, 3866311, 131415304, 4468120336\}$

$(064911, 1934000, 1935089) \Rightarrow \{33, 3868001, 3870177, 127679937, 4213437921\}$

$(062976, 1936000, 1937024) \Rightarrow \{32, 3872001, 3874047, 123936768, 3965976576\}$

$(061039, 1938000, 1938961) \Rightarrow \{31, 3876001, 3877921, 120185791, 3725759521\}$

$(059100, 1940000, 1940900) \Rightarrow \{30, 3880001, 3881799, 116427000, 3492810000\}$

$(057159, 1942000, 1942841) \Rightarrow \{29, 3884001, 3885681, 112660389, 3267151281\}$

$(055216, 1944000, 1944784) \Rightarrow \{28, 3888001, 3889567, 108885952, 3048806656\}$

$(053271, 1946000, 1946729) \Rightarrow \{27, 3892001, 3893457, 105103683, 2837799441\}$

$(051324, 1948000, 1948676) \Rightarrow \{26, 3896001, 3897351, 101313576, 2634152976\}$

$(049375, 1950000, 1950625) \Rightarrow \{25, 3900001, 3901249, 97515625, 2437890625\}$

$(047424, 1952000, 1952576) \Rightarrow \{24, 3904001, 3905151, 93709824, 2249035776\}$

$(045471, 1954000, 1954529) \Rightarrow \{23, 3908001, 3909057, 89896167, 2067611841\}$

$(043516, 1956000, 1956484) \Rightarrow \{22, 3912001, 3912967, 86074648, 1893642256\}$

$(041559, 1958000, 1958441) \Rightarrow \{21, 3916001, 3916881, 82245261, 1727150481\}$

$(039600, 1960000, 1960400) \Rightarrow \{20, 3920001, 3920799, 78408000, 1568160000\}$

$(037639, 1962000, 1962361) \Rightarrow \{19, 3924001, 3924721, 74562859, 1416694321\}$

$(035676, 1964000, 1964324) \Rightarrow \{18, 3928001, 3928647, 70709832, 1272776976\}$

$(033711, 1966000, 1966289) \Rightarrow \{17, 3932001, 3932577, 66848913, 1136431521\}$

$(031744, 1968000, 1968256) \Rightarrow \{16, 3936001, 3936511, 62980096, 1007681536\}$

$(029775, 1970000, 1970225) \Rightarrow \{15, 3940001, 3940449, 59103375, 886550625\}$

$(027804, 1972000, 1972196) \Rightarrow \{14, 3944001, 3944391, 55218744, 773062416\}$

$(025831, 1974000, 1974169) \Rightarrow \{13, 3948001, 3948337, 51326197, 667240561\}$

$(023856, 1976000, 1976144) \Rightarrow \{12, 3952001, 3952287, 47425728, 569108736\}$

$(021879, 1978000, 1978121) \Rightarrow \{11, 3956001, 3956241, 43517331, 478690641\}$

$(019900, 1980000, 1980100) \Rightarrow \{10, 3960001, 3960199, 39601000, 396010000\}$

$(017919, 1982000, 1982081) \Rightarrow \{9, 3964001, 3964161, 35676729, 321090561\}$

$(015936, 1984000, 1984064) \Rightarrow \{8, 3968001, 3968127, 31744512, 253956096\}$

$(013951, 1986000, 1986049) \Rightarrow \{7, 3972001, 3972097, 27804343, 194630401\}$

$(011964, 1988000, 1988036) \Rightarrow \{6, 3976001, 3976071, 23856216, 143137296\}$

$(009975, 1990000, 1990025) \Rightarrow \{5, 3980001, 3980049, 19900125, 99500625\}$

$(007984, 1992000, 1992016) \Rightarrow \{4, 3984001, 3984031, 15936064, 63744256\}$

$(005991, 1994000, 1994009) \Rightarrow \{3, 3988001, 3988017, 11964027, 35892081\}$

$(3996, 1996000, 1996004) \Rightarrow \{2, 3992001, 3992007, 7984008, 15968016\}$

$(1999, 1998000, 1998001) \Rightarrow \{1, 3996001\}$ \hfill (22)

From above we observe that there are 997 **perfect square sum magic squares of consecutive odd orders** from 999 to 3. This construction can be done on similar lines of subsection 1.1.

## 3.2  Palindromic-Type Pandigital Patterns

Let's consider

$m = 1000, 11000, 111000, 1111000, 11111000, 111111000, 1111111000, 11111111000, 111111111000$

in (5), then for $n = 1$ and $n = 999$, we have the first and the last *palindromic-type pandigital Pythagorean patterns* given below:

▶ **First Pattern -1**

$$0999999^2 + 2000^2 = \mathbf{1}\,000001^2$$

$$\mathbf{12}\,0999999^2 + 22000^2 = \mathbf{121}\,000001^2$$

$$\mathbf{1232}\,0999999^2 + 222000^2 = \mathbf{12321}\,000001^2$$

$$\mathbf{123432}\,0999999^2 + 2222000^2 = \mathbf{1234321}\,000001^2$$

$$\mathbf{12345432}\,0999999^2 + 22222000^2 = \mathbf{123454321}\,000001^2$$

$$\mathbf{1234565432}\,0999999^2 + 222222000^2 = \mathbf{12345654321}\,000001^2$$

$$\mathbf{123456765432}\,0999999^2 + 2222222000^2 = \mathbf{1234567654321}\,000001^2$$

$$\mathbf{12345678765432}\,0999999^2 + 22222222000^2 = \mathbf{123456787654321}\,000001^2$$

$$\mathbf{1234567898765432}\,0999999^2 + 222222222000^2 = \mathbf{12345678987654321}\,000001^2 \quad (23)$$

▶ **Last Pattern - 999**

$$0001999^2 + 1998000^2 \qquad = \mathbf{1}\,998001^2$$
$$\mathbf{12}\,0001999^2 + 21978000^2 \qquad = \mathbf{121}\,998001^2$$
$$\mathbf{1232}\,0001999^2 + 221778000^2 \qquad = \mathbf{12321}\,998001^2$$
$$\mathbf{123432}\,0001999^2 + 2219778000^2 \qquad = \mathbf{1234321}\,998001^2$$
$$\mathbf{12345432}\,0001999^2 + 22199778000^2 \qquad = \mathbf{123454321}\,998001^2$$
$$\mathbf{1234565432}\,0001999^2 + 221999778000^2 \qquad = \mathbf{12345654321}\,998001^2$$
$$\mathbf{123456765432}\,0001999^2 + 2219999778000^2 \quad = \mathbf{1234567654321}\,998001^2$$
$$\mathbf{12345678765432}\,0001999^2 + 22199999778000^2 \ = \mathbf{123456787654321}\,998001^2$$
$$\mathbf{1234567898765432}\,0001999^2 + 221999999778000^2 = \mathbf{12345678987654321}\,998001^2 \qquad (24)$$

In this case, we observe that the second term in the first line of pattern 24 doesn't give good pattern. It happens with many results. Below are some remarks based on above ressults:

**Remark 4.** *(i) The **first lines** of each pattern are the same given in (21).*

*(ii) The **last six digits** follow the square of as of numbers, i.e.,*

$$000001 = 1^2, \ 000004 = 2^2, \ \dots, 999801 = 999^2.$$

*(iii) The sum of the **last six digits** of first and third members are the same as given in (20).*

# 4　Final Remarks

1. *Magic squares are constructed only for first block, i.e., Section 1. On the similar lines, we can construct magic square of consecutive odd numbers for the other blocks given in Sections 2 and 3. In case of Sections 2, there are 97 magic squares of orders 99 to 3. In case of Sections 3, there are 997 magic squares of orders 999 to 3. All magic squares are with **consecutive odd numbers and perfect square entries** as per given in (17) and (22) respectively.*

2. *There are 9 **Palindromic-type pandigital patterns** given in first block, i.e., Section 1. While, in case of second and third blocks (Sections 2 and 3) only two examples are given for each case, i.e., first and last case. Complete list of examples can be seen in author's another work [7].*

3. *On similar lines of Section 1, 2 and 3, we can proceed further for the numbers 100000000, 10000000000, etc. **generating magic squares** and **palindromic-type pandigital patterns**. The magic squares generated are in decreasing orders of consecutive odd numbers giving sum of entries as perfect square.*

4. *For $n = 1$; $m = 10, 1010, 101010, 10101010, 1010101010, \dots$ in (5), we get another type of*

*palindromic-type pandigital patterns* given below:

$$\mathbf{1}0099^2 + 20^2 \qquad = \mathbf{1}\,01^2$$
$$\mathbf{102}\,0099^2 + 2020^2 \qquad = \mathbf{10201}\,01^2$$
$$\mathbf{1020302}\,0099^2 + 202020^2 \qquad = \mathbf{102030201}\,01^2$$
$$\mathbf{10203040302}\,0099^2 + 20202020^2 \qquad = \mathbf{1020304030201}\,01^2$$
$$\mathbf{102030405040302}\,0099^2 + 2020202020^2 \qquad = \mathbf{10203040504030201}\,01^2$$
$$\mathbf{1020304050605040302}\,0099^2 + 202020202020^2 \qquad = \mathbf{102030405060504030201}\,01^2$$
$$\mathbf{10203040506070605040302}\,0099^2 + 20202020202020^2 \qquad = \mathbf{1020304050607060504030201}\,01^2$$
$$\mathbf{102030405060708070605040302}\,0099^2 + 2020202020202020^2 \qquad = \mathbf{10203040506070807060504030201}\,01^2$$
$$\mathbf{1020304050607080908070605040302}\,0099^2 + 202020202020202020^2 = \mathbf{102030405060708090807060504030201}\,01^2$$

(25)

*Above there is only one example. For $n = 2 ..., 9$, we get more 8 patterns of similiar kind as given in subsection 1.2. More extended study of patterns similar to 25, refer to author's work [7].*

5.  (a) *First lines each patterns 6, 18, 23, etc. give another interesting Pythagorean pattern:*

$$99^2 + 20^2 \qquad = 101^2 \qquad := 10201$$
$$9999^2 + 200^2 \qquad = 10001^2 \qquad := 100020001$$
$$999999^2 + 2000^2 \qquad = 1000001^2 \qquad := 1000002000001$$
$$99999999^2 + 20000^2 \qquad = 100000001^2 \qquad := 10000000200000001$$
$$9999999999^2 + 200000^2 \qquad = 10000000001^2 \qquad := 100000000020000000001$$
$$999999999999^2 + 2000000^2 = 1000000000001^2 := 1000000000002000000000001$$

(26)

*Last terms appearing in each line of (26) are the final sums forming again a good pattern.*

(b) *Uniformity among the similar lines of different patterns brings hundreds or thousands of more Pythagorean patterns, for example, **first line of second patterns** of each block 1.2, 2.2, 3.2, etc. give another interesting Pythagorean pattern:*

$$96^2 + 40^2 \qquad = 104^2 \qquad := 10816$$
$$9996^2 + 400^2 \qquad = 10004^2 \qquad := 100080016$$
$$999996^2 + 4000^2 \qquad = 1000004^2 \qquad := 1000008000016$$
$$99999996^2 + 40000^2 \qquad = 100000004^2 \qquad := 10000000800000016$$
$$9999999996^2 + 400000^2 \qquad = 10000000004^2 \qquad := 100000000080000000016$$
$$999999999996^2 + 4000000^2 = 1000000000004^2 := 1000000000008000000000016$$

(27)

6. *More studies on **palindromic-type pandigital patterns** and **general Pythagorean patterns** can be seen in author's work [4, 5, 6, 7, 8].*

# References

[1] R. KNOTT, Pythagorean Right-Angled Triangles, *http://www.maths.surrey.ac.uk/hosted-sites/R.Knott/Pythag/pythag.html*.

[2]  Pythagorean triple - Wikipedia, *https://goo.gl/Zwu7sC*

[3]  I.J. TANEJA, Magic Squares with Perfect Square Number Sums, Research Report Collection, **20**(2017), Article 11, pp.1-24, *http://rgmia.org/papers/v20/v20a11.pdf*.

[4]  I.J. TANEJA, Palindromic-Type Pandigital Patterns in Pythagorean Triples, RGMIA Research Report Collection, **21**(2018), Art 76, pp. 1-11. *http://rgmia.org/papers/v21/v21a76.pdf*

[5]  I.J. TANEJA, Patterns in Pythagorean Triples Using Single Variable Procedures, RGMIA Research Report Collection, **21**(2018), pp. 1-40, *http://rgmia.org/v21.php*

[6]  I.J. TANEJA, Patterns in Pythagorean Triples Using Double Variable Procedures, RGMIA Research Report Collection, **21**(2018), pp. 1-93, *http://rgmia.org/v21.php*

[7]  I.J. TANEJA, Palindromic-Type Pandigital Patterns in Pythagorean Triples - I, RGMIA Research Report Collection, **21**(2018), *http://rgmia.org/v21.php*

[8]  I.J. TANEJA, Palindromic-Type Pandigital Patterns in Pythagorean Triples - II, RGMIA Research Report Collection, **21**(2018), *http://rgmia.org/v21.php*

—————————————————————