

Same Digits Equality Expressions - II

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Abstract

This paper is a continuation of first part, where we studied expressions with powers and bases are of same digits of the expressions. This is done for expressions with positive and negative signs. In first part, we worked up to 5 terms equality expressions. Here the work is for 6 to 10 terms equality expressions

The work is divided in following sections and subsections:

- 1 Introduction;
- 2 Selfie Numbers;
 - 2.1 Selfie Numbers with Factorial and Square-Root;
 - 2.2 Fibonacci Sequence and Selfie Numbers;
 - 2.3 Flexible Power Selfie Numbers;
 - 2.4 Selfie Fraction;
 - 2.5 Narcissistic-Type Selfie Numbers;
 - 2.6 Semi-Selfie Numbers;
- 3 Same Digits Equality Expressions;
 - 3.1 Multiplication;
 - 3.2 Power and Addition;
- 4 Six Terms Equalities Expressions;
- 5 Seven Terms Equalities Expressions;
- 6 Eight Terms Equalities Expressions;
- 7 Nine Terms Equalities Expressions;
- 8 Ten Terms Equalities Expressions.

1 Introduction

Let write below three different categories of numbers:

(i) Crazy Representations

Here the number are written in such a way that, when you see, become very curious. Below are examples of two different ways of representations of natural numbers:

• First Type

$$\begin{aligned}
 999 &= 12 \times 3 \times (4 + 5) + (67 + 8) \times 9 &= 9 + 8 + 7 + 654 + 321. \\
 2535 &= 1 + 2345 + (6 + 7 + 8) \times 9 &= 9 + 87 \times (6 + 5 \times 4 + 3) + 2 + 1. \\
 2607 &= 123 \times 4 \times 5 + 6 + (7 + 8) \times 9 &= 987 + 6 \times 54 \times (3 + 2) \times 1. \\
 10958 &= 12 \times 3 + \sqrt{4} + 5! \times (67 + 8 \times \sqrt{9}) &= (9 + 8 \times 7 \times 65 + 4) \times 3 - 2 + 1. \\
 11807 &= 1 \times 234 \times (5 + 6 \times 7) + 89 &= -9 + 8 + 7 \times (6 + 5) \times (4 \times 3)^2 \times 1.
 \end{aligned}$$

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- **Second Type**

$$\begin{aligned}
 666 &:= -2^5 + 3^2 + 4^3 + 5^4. \\
 786 &:= -1^4 + 3^6 + 4^3 - 6^1. \\
 9711 &:= 1^3 + 2^4 + 3^8 + 4^2 + 5^5 - 8^1. \\
 9777 &:= 1^9 + 2^1 + 4^7 - 7^2 - 9^4. \\
 11110 &:= 1^1 + 2^2 + 3^9 - 5^6 + 6^5 - 9^3. \\
 11111 &:= -1^1 + 2^7 + 3^8 - 4^2 + 7^3 + 8^4.
 \end{aligned}$$

For more details refer author's work written as a summary of other works [29].

(ii) **Selife Numbers**

In this category, the numbers are written in such a way that both sides of the expressions are with same digits. One side is just with number and other side is same digits with operations. More details of this type of numbers are explained in section 2.

(iii) **Same Digits Equality Expressions**

This category is very much similar to *selfie numbers*, but the difference is that in place of numbers on one side, there are expressions on both sides, i.e., *same digits equality expressions*. We may call it as *selfie expressions*. Below are two different ways of expressing equalities with same digits on both sides:

$$abcd... \times efgh... = cbad... \times gfhe.. \quad \forall a, b, c, d, e, ... \in \mathbb{N}_+. \quad (1)$$

$$a^b + c^d + ... = ab + cd + ..., \quad \forall a, b, c, d, .. \in \mathbb{N}. \quad (2)$$

In (1) and (2), both sides are with same digits. There are much more categories of this kind, but we have written only two.

In this paper, we study extensively, the numbers of type (2). More details are in section 3. For type (1) refer [32].

2 Selife Numbers

Recently, author studied different ways of expressing numbers in such a way that both sides, there are same digits. One side is with number, and other side is an expression formed by same digits with some operations. These types of numbers we call "*selfie number*", i.e., numbers represented by their own digits by use of certain operations are considered as "*selfie number*". There are many ways to do it. See below some different ideas.

2.1 Selfie Numbers with Factorial and Square-Root

This subsection brings selfie numbers with use of factorial and/or square-root. See below some examples:

$$\begin{array}{ll}
 936 = (\sqrt{9})!^3 + 6!; & 936 = 6! + (3!)^{\sqrt{9}}; \\
 1296 = \sqrt{(1+2)!^9/6}; & 1296 = 6^{(\sqrt{9}+2-1)}; \\
 2896 = 2 \times (8 + (\sqrt{9})!! + 6!). & 2896 = (6! + (\sqrt{9})!! + 8) \times 2.
 \end{array}$$

Examples above are with *factorial* and *square-root* [27, 28]. First column expressions are in **digit's order** and second columns expressions are in **reverse order of digits**. For details refer author's work [7, 8, 9, 10, 11, 12].

Still, one can have interesting, just with factorial [12], see below:

$$\begin{aligned} 145 &= 1! + 4! + 5!. & 363239 &= 36 + 323 + 9!. \\ 733 &= 7 + 3!! + 3!. & 363269 &= 363 + 26 + 9!. \\ 5177 &= 5! + 17 + 7!. & 403199 &= 40319 + 9!. \end{aligned}$$

2.2 Fibonacci Sequence and Selfie Numbers

The examples given in subsection 2.1 are with *factorial* and *square-root*. Still, one can have similar kind of examples, using Fibonacci sequence values [23, 24, 25]. See below:

$$\begin{aligned} 235 &= 2 + F(F(F(3) + 5)). & 63 &= 3 \times F(F(6)). \\ 256 &= 2^5 \times F(6). & 882 &= 2 \times F(8) \times F(8). \\ 4427 &= (F(4) + 4^2) \times F(F(7)). & 1631 &= F(13) \times (6 + 1). \\ 46493 &= F(4 \times 6) + (-4 + 9)^3. & 54128 &= 8 \times (F(2) + F(1 \times 4 \times 5)). \end{aligned}$$

First column expressions are in **digit's order** and second columns expressions are in **reverse order of digits**. Results in *Pascal's triangle values*, *binomial expressions*, etc. are under study.

2.3 Flexible Power Selfie Numbers

Below are examples of such type of selfie numbers, where powers and bases are with same digits of number [13, 15, 16, 17]:

$$\begin{aligned} 23 &= -2^2 + 3^3. & 397612 &= 3^2 + 9^1 + 7^6 + 6^7 + 1^9 + 2^3. \\ 1654 &= -1^6 + 6^1 + 5^4 + 4^5. & 423858 &= 4^3 + 2^8 + 3^4 + 8^2 + 5^8 + 8^5. \\ 3435 &= 3^3 + 4^4 + 3^3 + 5^5. & 637395 &= 6^5 + 3^3 + 7^3 + 3^9 + 9^6 + 5^7. \\ 4355 &= 4^5 + 3^4 + 5^3 + 5^5. & 758014 &= 7^7 + 5^1 + 8^0 + 0^5 + 1^4 - 4^8. \\ 39339 &= -3^3 + 9^3 + 3^9 + 3^9 - 9^3. & 778530 &= 7^7 + 7^3 + 8^5 - 5^7 + 3^0 + 0^8. \\ 46360 &= 4^0 + 6^6 - 3^4 - 6^3 + 0^6. & 804637 &= 8^0 + 0^4 - 4^8 + 6^6 - 3^3 + 7^7. \end{aligned}$$

2.4 Selfie Fraction

Selfie fractions are formed in such a way that numerator and denominator are with same digits. One side is number and another side with same digits with basic operations [18, 19, 20]. See below some examples:

$$\begin{aligned} \frac{182}{6734} &:= \frac{18 + 2}{6 + 734}. & \frac{4980}{5312} &:= \frac{4 - 9 + 80}{5 \times (3 + 1)^2}. \\ \frac{416}{728} &:= \frac{4 \times 16}{7 \times 2 \times 8}. & \frac{3249}{5168} &:= \frac{(3 + 2^4) \times 9}{(5 - 1) \times 68}. \end{aligned}$$

Still, one can have *equivalent selfie fractions* with same properties [21, 22]. See examples below:

$$\begin{aligned} \frac{284}{639} &:= \frac{2 \times 8 + 4}{6 + 39} = \frac{28 + 4}{6 \times (3 + 9)}. \\ \frac{302}{8154} &:= \frac{30 \times 2}{81 \times 5 \times 4} = \frac{3 + 02}{81 + 54} = \frac{3 - 02}{81 - 54}. \\ \frac{73842}{90516} &:= \frac{7 - 3 \times (8 - 4^2)}{9 \times 05 - 1 - 6} = \frac{7 \times (3 + 8) + 4^2}{90 + (5 - 1) \times 6} = \frac{738 + 4 + 2}{905 + 1 + 6}. \end{aligned}$$

2.5 Narcissistic-Type Selfie Numbers

In case of *narcissistic number*, the both sides of the expression are not necessary have the digits, for example,

$$153 = 1^3 + 5^3 + 3^3.$$

$$1634 = 1^4 + 6^4 + 3^4 + 4^4.$$

Here, both sides are with same digits, but with extra digit as power 3. Power is fixed in case of narcissistic numbers, but still, one can have these kind of numbers with flexible power and also with positive negative sign. This we call as *narcissistic-type selfie numbers* [14]. See below few examples,

$$\begin{array}{ll} 24 = 2^3 + 4^2. & 2352 = 2^3 + 3^7 + 5^3 + 2^5. \\ 48 = -4^2 + 8^2. & 2374 = -2^1 - 3^2 + 7^4 - 4^2. \\ 267 = 2^1 + 6^3 + 7^2. & 10693 = 1^1 + 0^1 + 6^5 + 9^3 + 3^7. \\ 2345 = 2^5 + 3^7 + 4^0 + 5^3. & 10846 = -1^1 - 0^0 + 8^4 - 4^5 + 6^5. \end{array}$$

These numbers are different from the one given in subsection 2.3. In subsection 2.3, the powers and bases are with same digits, while, here the powers don't have any relations with bases.

Following same idea as above, one can have *narcissistic-type selfie numbers with division* [14]. See examples below. These are divided in two types. The first column is with fixed powers and second column with variable powers:

$$\begin{array}{ll} 2464 = \frac{2^5 + 4^5 + 6^5 + 4^5}{2^0 + 4^0 + 6^0 + 4^0}. & 353 = \frac{-3^5 - 5^2 + 3^9}{3^1 + 5^2 + 3^3}. \\ 4714 = \frac{4^5 + 7^5 + 1^5 + 4^5}{4^0 + 7^0 + 1^0 + 4^0}. & 1337 = \frac{1^0 + 3^1 + 3^1 + 7^6}{-1^0 + 3^0 + 3^4 + 7^1}. \\ 5247 = \frac{5^5 + 2^5 + 4^5 + 7^5}{5^0 + 2^0 + 4^0 + 7^0}. & 10954 = \frac{-1^0 - 0^0 + 9^3 + 5^2 + 4^9}{1^0 + 0^0 + 9^0 + 5^1 + 4^2}. \\ 8200 = \frac{8^5 + 2^5 + 0^5 + 0^5}{8^0 + 2^0 + 0^0 + 0^0}. & 10958 = \frac{-1^0 + 0^0 + 9^2 + 5^2 + 8^5}{-1^0 + 0^0 + 9^0 + 5^0 + 8^0}. \end{array}$$

It is understood that $a^0 := 0, a \neq 0$ and $0^0 := 1$.

2.6 Semi-Selfie Numbers

This is a simplified form of subsection 2.5. Here the expressions are with same digits on both sides, except, the power. See examples below:

$$\begin{array}{ll} 2025 = (20 + 25)^2. & 494209 = (494 + 209)^2. \\ 3025 = (30 + 25)^2. & 1656369 = (1656 - 369)^2. \\ 314432 = (31 - 4 + 43 - 2)^3. & 1860496 = (1860 - 496)^2. \\ 893025 = (8 + 930 + 2 + 5)^2. & 4941729 = (494 + 1729)^2. \end{array}$$

For detailed study refer Taneja [32]. These numbers are extensions of the one studied by Madachy [5], p.167 - 170. Also see Heinz [3]. Madachy's work is just with single digit and positive sign.

3 Same Digits Equality Expressions

In section 2, we explained idea of *selfie numbers* in different categories. Here, the aim is little different, i.e., we want to write expressions with same digits both sides. A little idea is given in section 1(iii). The following subsections give same idea with examples.

3.1 Multiplication

Below are are examples written in such a way that both sides, and each block separated by multiplication are with same digits.

$$\begin{array}{ll}
 2017 \times 3404 = 1702 \times 4034 & 1729 \times 4358 = 2179 \times 3458. \\
 2017 \times 6808 = 1702 \times 8068. & 1729 \times 4732 = 2197 \times 3724. \\
 1729 \times 3584 = 1792 \times 3458. & 1729 \times 5438 = 2719 \times 3458. \\
 1729 \times 3854 = 1927 \times 3458. & 1729 \times 5781 = 1927 \times 5187.
 \end{array}$$

More study of this kind number shall be dealt elsewhere. Few examples can be seen at [4].

3.2 Power and Addition

Recently, author wrote the numbers 2017 [30] and 1729 [31] in the following way:

$$\begin{array}{ll}
 2017 := 4^4 + 41^2 + 77^0 + 79^1 & = 44 + 412 + 770 + 791. \\
 := 1^4 + 44^2 + 77^0 + 79^1 & = 14 + 442 + 770 + 791. \\
 := 2^4 + 2^8 + 4^2 + 12^3 + 180^0 & = 24 + 28 + 42 + 123 + 1800. \\
 := 1^1 + 3^6 + 5^4 + 5^4 + 6^2 + 180^0 & = 11 + 36 + 54 + 54 + 62 + 1800. \\
 \\
 1729 := 2^7 + 40^2 + 130^0 & = 27 + 402 + 1300. \\
 := 2^6 + 40^2 + 64^1 + 66^0 & = 26 + 402 + 641 + 660. \\
 := 1^6 + 41^2 + 46^1 + 84^0 & = 16 + 412 + 461 + 840.
 \end{array}$$

... (3)

The sections 3.1 and 3.2 are still not studied extensively. In section 3.1, we use only multiplicative factors to have same digits on both sides. In section 3.2, the expressions are separated by equality signs, but uses same digits on both sides in little different way than 3.1. First side we have expressions with powers and additions, and the second side just with numbers and addition. The quantity of numbers separated by addition are same on both sides. Few results of this kind can also be seen at [2], where, the power and bases both are bigger than one. Moreover, the results are just for three terms sum. See below

$$\begin{array}{ll}
 81 := 2^3 + 2^6 + 3^2 & = 23 + 26 + 32. & 246 := 5^2 + 5^2 + 14^2 & = 52 + 52 + 142. \\
 99 := 2^3 + 3^3 + 4^3 & = 23 + 33 + 43. & 266 := 4^2 + 9^2 + 13^2 & = 42 + 92 + 132. \\
 121 := 2^3 + 2^6 + 7^2 & = 23 + 26 + 72. & 286 := 6^2 + 9^2 + 13^2 & = 62 + 92 + 132. \\
 170 := 2^6 + 5^2 + 9^2 & = 26 + 52 + 92. & 306 := 8^2 + 11^2 + 11^2 & = 82 + 112 + 112. \\
 246 := 2^2 + 11^2 + 11^2 & = 22 + 112 + 112. & 306 := 9^2 + 9^2 + 12^2 & = 92 + 92 + 122.
 \end{array}$$

... (4)

By *three terms sum, it is understand that the equality expressions are formed by three terms on both sides*. In this way, we can say that the representations of 2017 and 1729 are with *different terms equality expressions*, while the numbers given in (2) [2] are only of three terms. This kind of study is not very much developed. The expressions given in (2) are for powers and bases bigger than 1, while in (3), there is no restriction of this kind. Moreover, the results given in (3) and (4) are only with positive signs.

In this paper, our aim is to work with *6 to 10 terms equality expressions* using only positive sign, with powers and bases bigger than one. For the results for 2 to 5 terms equality expressions refer Part I [33].

For good study on numbers refer historical work [1, 3, 5, 6].

4 Six Terms Equalities Expressions

This section deals with six terms equality expressions, where we have considered only positive expressions with both powers and bases bigger than one.

$$153 := 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 3^4 = 23 + 24 + 24 + 24 + 24 + 34.$$

$$155 := 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^3 = 24 + 24 + 24 + 24 + 26 + 33.$$

$$160 := 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 4^3 = 22 + 22 + 23 + 24 + 26 + 43.$$

$$:= 2^2 + 2^3 + 2^3 + 2^5 + 3^3 + 3^4 = 22 + 23 + 23 + 25 + 33 + 34.$$

$$162 := 2^2 + 2^3 + 2^5 + 2^6 + 3^3 + 3^3 = 22 + 23 + 25 + 26 + 33 + 33.$$

$$:= 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 3^2 = 23 + 23 + 26 + 26 + 32 + 32.$$

$$:= 2^3 + 2^4 + 2^4 + 2^5 + 3^2 + 3^4 = 23 + 24 + 24 + 25 + 32 + 34.$$

$$164 := 2^2 + 2^4 + 2^5 + 2^5 + 2^6 + 4^2 = 22 + 24 + 25 + 25 + 26 + 42.$$

$$:= 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^3 = 24 + 24 + 25 + 26 + 32 + 33.$$

$$171 := 2^3 + 2^5 + 2^5 + 3^2 + 3^2 + 3^4 = 23 + 25 + 25 + 32 + 32 + 34.$$

$$173 := 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 = 25 + 25 + 26 + 32 + 32 + 33.$$

$$176 := 2^2 + 2^2 + 2^3 + 2^3 + 3^3 + 5^3 = 22 + 22 + 23 + 23 + 33 + 53.$$

$$178 := 2^2 + 2^2 + 2^3 + 2^7 + 3^2 + 5^2 = 22 + 22 + 23 + 27 + 32 + 52.$$

$$:= 2^2 + 2^2 + 2^6 + 3^2 + 3^4 + 4^2 = 22 + 22 + 26 + 32 + 34 + 42.$$

$$:= 2^2 + 2^3 + 2^4 + 2^4 + 3^2 + 5^3 = 22 + 23 + 24 + 24 + 32 + 53.$$

$$:= 2^3 + 2^3 + 2^3 + 3^2 + 3^4 + 4^3 = 23 + 23 + 23 + 32 + 34 + 43.$$

$$180 := 2^2 + 2^4 + 2^4 + 2^4 + 4^3 + 4^3 = 22 + 24 + 24 + 24 + 43 + 43.$$

$$:= 2^3 + 2^3 + 2^6 + 3^2 + 3^3 + 4^3 = 23 + 23 + 26 + 32 + 33 + 43.$$

$$182 := 2^2 + 2^4 + 2^6 + 2^6 + 3^2 + 5^2 = 22 + 24 + 26 + 26 + 32 + 52.$$

$$:= 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 4^3 = 24 + 24 + 25 + 33 + 33 + 43.$$

$$184 := 2^2 + 2^4 + 2^5 + 2^5 + 2^6 + 6^2 = 22 + 24 + 25 + 25 + 26 + 62.$$

$$187 := 2^2 + 2^3 + 2^5 + 3^2 + 3^2 + 5^3 = 22 + 23 + 25 + 32 + 32 + 53.$$

$$189 := 2^2 + 2^3 + 2^3 + 2^7 + 4^2 + 5^2 = 22 + 23 + 23 + 27 + 42 + 52.$$

$$:= 2^2 + 2^3 + 2^6 + 3^4 + 4^2 + 4^2 = 22 + 23 + 26 + 34 + 42 + 42.$$

$$:= 2^2 + 2^4 + 2^5 + 3^2 + 4^3 + 4^3 = 22 + 24 + 25 + 32 + 43 + 43.$$

$$:= 2^2 + 2^4 + 2^7 + 3^2 + 4^2 + 4^2 = 22 + 24 + 27 + 32 + 42 + 42.$$

$$:= 2^3 + 2^3 + 2^4 + 2^4 + 4^2 + 5^3 = 23 + 23 + 24 + 24 + 42 + 53.$$

$$191 := 2^2 + 2^6 + 2^6 + 3^3 + 4^2 + 4^2 = 22 + 26 + 26 + 33 + 42 + 42.$$

$$:= 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 4^3 = 25 + 25 + 32 + 33 + 33 + 43.$$

$$193 := 2^3 + 2^4 + 2^6 + 2^6 + 4^2 + 5^2 = 23 + 24 + 26 + 26 + 42 + 52.$$

$$:= 2^3 + 2^5 + 2^5 + 2^5 + 4^3 + 5^2 = 23 + 25 + 25 + 25 + 43 + 52.$$

$$196 := 2^2 + 2^2 + 3^3 + 3^4 + 4^2 + 4^3 = 22 + 22 + 33 + 34 + 42 + 43.$$

$$198 := 2^2 + 2^2 + 2^6 + 3^2 + 3^4 + 6^2 = 22 + 22 + 26 + 32 + 34 + 62.$$

$$:= 2^2 + 2^3 + 2^4 + 3^4 + 4^3 + 5^2 = 22 + 23 + 24 + 34 + 43 + 52.$$

$$:= 2^3 + 2^3 + 2^5 + 3^2 + 4^2 + 5^3 = 23 + 23 + 25 + 32 + 42 + 53.$$

$$:= 2^3 + 2^3 + 3^3 + 3^3 + 4^3 + 4^3 = 23 + 23 + 33 + 33 + 43 + 43.$$

$$:= 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 4^2 = 27 + 32 + 32 + 32 + 33 + 42.$$

$$:= 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 = 32 + 33 + 33 + 33 + 33 + 34.$$

$$200 := 2^2 + 2^4 + 2^6 + 3^3 + 4^3 + 5^2 = 22 + 24 + 26 + 33 + 43 + 52.$$

$$:= 2^3 + 2^4 + 2^5 + 4^2 + 4^3 + 4^3 = 23 + 24 + 25 + 42 + 43 + 43.$$

$$:= 2^3 + 2^4 + 2^7 + 4^2 + 4^2 + 4^2 = 23 + 24 + 27 + 42 + 42 + 42.$$

$$:= 2^3 + 2^5 + 3^3 + 3^3 + 3^4 + 5^2 = 23 + 25 + 33 + 33 + 34 + 52.$$

$$202 := 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 7^2 = 23 + 23 + 26 + 26 + 32 + 72.$$

$$:= 2^3 + 2^4 + 2^4 + 2^5 + 3^4 + 7^2 = 23 + 24 + 24 + 25 + 34 + 72.$$

$$:= 2^4 + 2^5 + 2^5 + 3^4 + 4^2 + 5^2 = 24 + 25 + 25 + 34 + 42 + 52.$$

$$:= 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 5^2 = 25 + 26 + 33 + 33 + 33 + 52.$$

$$204 := 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 7^2 = 24 + 24 + 25 + 26 + 33 + 72.$$

$$209 := 2^2 + 2^3 + 2^3 + 2^7 + 5^2 + 6^2 = 22 + 23 + 23 + 27 + 52 + 62.$$

$$:= 2^2 + 2^3 + 2^6 + 3^4 + 4^2 + 6^2 = 22 + 23 + 26 + 34 + 42 + 62.$$

$$:= 2^2 + 2^4 + 2^7 + 3^2 + 4^2 + 6^2 = 22 + 24 + 27 + 32 + 42 + 62.$$

$$:= 2^3 + 2^3 + 2^4 + 2^4 + 5^3 + 6^2 = 23 + 23 + 24 + 24 + 53 + 62.$$

$$:= 2^4 + 2^4 + 3^4 + 4^2 + 4^2 + 4^3 = 24 + 24 + 34 + 42 + 42 + 43.$$

$$211 := 2^2 + 2^6 + 2^6 + 3^3 + 4^2 + 6^2 = 22 + 26 + 26 + 33 + 42 + 62.$$

$$:= 2^3 + 2^5 + 2^5 + 3^2 + 3^4 + 7^2 = 23 + 25 + 25 + 32 + 34 + 72.$$

$$213 := 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 9^2 = 22 + 24 + 24 + 25 + 26 + 92.$$

$$:= 2^3 + 2^4 + 2^6 + 2^6 + 5^2 + 6^2 = 23 + 24 + 26 + 26 + 52 + 62.$$

$$:= 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 7^2 = 25 + 25 + 26 + 32 + 33 + 72.$$

$$216 := 2^2 + 2^2 + 3^3 + 3^4 + 4^3 + 6^2 = 22 + 22 + 33 + 34 + 43 + 62.$$

$$:= 2^2 + 2^3 + 3^3 + 3^3 + 5^2 + 5^3 = 22 + 23 + 33 + 33 + 52 + 53.$$

$$:= 2^2 + 3^2 + 3^4 + 3^4 + 4^2 + 5^2 = 22 + 32 + 34 + 34 + 42 + 52.$$

$$218 := 2^2 + 2^2 + 2^3 + 2^7 + 5^2 + 7^2 = 22 + 22 + 23 + 27 + 52 + 72.$$

$$:= 2^2 + 2^2 + 2^6 + 3^4 + 4^2 + 7^2 = 22 + 22 + 26 + 34 + 42 + 72.$$

$$:= 2^2 + 2^3 + 2^4 + 2^4 + 5^3 + 7^2 = 22 + 23 + 24 + 24 + 53 + 72.$$

$$:= 2^2 + 2^4 + 2^5 + 4^2 + 5^2 + 5^3 = 22 + 24 + 25 + 42 + 52 + 53.$$

$$:= 2^2 + 2^7 + 3^2 + 3^3 + 5^2 + 5^2 = 22 + 27 + 32 + 33 + 52 + 52.$$

$$:= 2^3 + 2^3 + 2^3 + 3^4 + 4^3 + 7^2 = 23 + 23 + 23 + 34 + 43 + 72.$$

$$:= 2^3 + 2^3 + 2^5 + 3^2 + 5^3 + 6^2 = 23 + 23 + 25 + 32 + 53 + 62.$$

$$:= 2^4 + 2^4 + 3^2 + 3^3 + 5^2 + 5^3 = 24 + 24 + 32 + 33 + 52 + 53.$$

$$:= 2^5 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 = 25 + 32 + 34 + 42 + 42 + 43.$$

$$:= 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 6^2 = 27 + 32 + 32 + 32 + 33 + 62.$$

$$220 := 2^2 + 2^3 + 2^4 + 2^6 + 4^3 + 8^2 = 22 + 23 + 24 + 26 + 43 + 82.$$

$$:= 2^3 + 2^3 + 2^5 + 3^3 + 3^4 + 8^2 = 23 + 23 + 25 + 33 + 34 + 82.$$

$$:= 2^3 + 2^3 + 2^6 + 3^3 + 4^3 + 7^2 = 23 + 23 + 26 + 33 + 43 + 72.$$

$$:= 2^3 + 2^4 + 2^5 + 4^3 + 4^3 + 6^2 = 23 + 24 + 25 + 43 + 43 + 62.$$

$$:= 2^3 + 2^4 + 2^7 + 4^2 + 4^2 + 6^2 = 23 + 24 + 27 + 42 + 42 + 62.$$

$$:= 2^4 + 2^6 + 3^2 + 3^4 + 5^2 + 5^2 = 24 + 26 + 32 + 34 + 52 + 52.$$

$$222 := 2^2 + 2^4 + 2^6 + 2^6 + 5^2 + 7^2 = 22 + 24 + 26 + 26 + 52 + 72.$$

$$:= 2^2 + 2^5 + 2^5 + 2^6 + 3^2 + 9^2 = 22 + 25 + 25 + 26 + 32 + 92.$$

$$:= 2^3 + 2^5 + 2^6 + 3^3 + 3^3 + 8^2 = 23 + 25 + 26 + 33 + 33 + 82.$$

$$:= 2^4 + 2^5 + 2^5 + 3^4 + 5^2 + 6^2 = 24 + 25 + 25 + 34 + 52 + 62.$$

$$224 := 2^4 + 2^5 + 2^5 + 2^6 + 4^2 + 8^2 = 24 + 25 + 25 + 26 + 42 + 82.$$

$$225 := 2^2 + 2^2 + 4^3 + 4^3 + 4^3 + 5^2 = 22 + 22 + 43 + 43 + 43 + 52.$$

$$227 := 2^2 + 2^3 + 2^5 + 3^2 + 5^3 + 7^2 = 22 + 23 + 25 + 32 + 53 + 72.$$

$$:= 2^3 + 3^4 + 3^4 + 4^2 + 4^2 + 5^2 = 23 + 34 + 34 + 42 + 42 + 52.$$

$$:= 2^4 + 3^3 + 3^3 + 4^2 + 4^2 + 5^3 = 24 + 33 + 33 + 42 + 42 + 53.$$

$$:= 2^5 + 3^2 + 3^2 + 3^3 + 5^2 + 5^3 = 25 + 32 + 32 + 33 + 52 + 53.$$

$$\begin{aligned}
229 &:= 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 11^2 = 22 + 22 + 22 + 25 + 26 + 112. \\
&:= 2^2 + 2^3 + 2^3 + 2^6 + 4^3 + 9^2 = 22 + 23 + 23 + 26 + 43 + 92. \\
&:= 2^2 + 2^3 + 2^6 + 3^4 + 6^2 + 6^2 = 22 + 23 + 26 + 34 + 62 + 62. \\
&:= 2^2 + 2^4 + 2^5 + 4^3 + 4^3 + 7^2 = 22 + 24 + 25 + 43 + 43 + 72. \\
&:= 2^2 + 2^4 + 2^7 + 3^2 + 6^2 + 6^2 = 22 + 24 + 27 + 32 + 62 + 62. \\
&:= 2^2 + 2^4 + 2^7 + 4^2 + 4^2 + 7^2 = 22 + 24 + 27 + 42 + 42 + 72. \\
&:= 2^3 + 2^7 + 3^3 + 4^2 + 5^2 + 5^2 = 23 + 27 + 33 + 42 + 52 + 52. \\
&:= 2^4 + 2^4 + 3^4 + 4^2 + 4^3 + 6^2 = 24 + 24 + 34 + 42 + 43 + 62. \\
&:= 2^6 + 3^3 + 3^4 + 4^2 + 4^2 + 5^2 = 26 + 33 + 34 + 42 + 42 + 52.
\end{aligned}$$

$$\begin{aligned}
231 &:= 2^2 + 2^6 + 2^6 + 3^3 + 6^2 + 6^2 = 22 + 26 + 26 + 33 + 62 + 62. \\
&:= 2^5 + 2^5 + 3^3 + 3^3 + 4^3 + 7^2 = 25 + 25 + 33 + 33 + 43 + 72.
\end{aligned}$$

$$\begin{aligned}
233 &:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 11^2 = 23 + 23 + 25 + 25 + 25 + 112. \\
&:= 2^3 + 2^5 + 2^5 + 2^6 + 4^2 + 9^2 = 23 + 25 + 25 + 26 + 42 + 92.
\end{aligned}$$

$$234 := 2^2 + 3^2 + 4^2 + 4^2 + 4^3 + 5^3 = 22 + 32 + 42 + 42 + 43 + 53.$$

$$\begin{aligned}
236 &:= 2^2 + 2^3 + 2^3 + 3^3 + 5^3 + 8^2 = 22 + 23 + 23 + 33 + 53 + 82. \\
&:= 2^2 + 3^2 + 3^4 + 3^4 + 5^2 + 6^2 = 22 + 32 + 34 + 34 + 52 + 62.
\end{aligned}$$

$$\begin{aligned}
238 &:= 2^2 + 2^2 + 2^6 + 3^4 + 6^2 + 7^2 = 22 + 22 + 26 + 34 + 62 + 72. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 3^4 + 11^2 = 22 + 23 + 23 + 24 + 34 + 112. \\
&:= 2^2 + 2^3 + 2^7 + 3^2 + 5^2 + 8^2 = 22 + 23 + 27 + 32 + 52 + 82. \\
&:= 2^2 + 2^4 + 2^5 + 5^2 + 5^3 + 6^2 = 22 + 24 + 25 + 52 + 53 + 62. \\
&:= 2^2 + 2^6 + 3^2 + 3^4 + 4^2 + 8^2 = 22 + 26 + 32 + 34 + 42 + 82. \\
&:= 2^3 + 2^3 + 2^5 + 4^2 + 5^3 + 7^2 = 23 + 23 + 25 + 42 + 53 + 72. \\
&:= 2^3 + 2^4 + 2^4 + 3^2 + 5^3 + 8^2 = 23 + 24 + 24 + 32 + 53 + 82. \\
&:= 2^4 + 3^3 + 3^4 + 4^3 + 5^2 + 5^2 = 24 + 33 + 34 + 43 + 52 + 52. \\
&:= 2^5 + 3^2 + 3^4 + 4^2 + 4^3 + 6^2 = 25 + 32 + 34 + 42 + 43 + 62. \\
&:= 2^7 + 3^2 + 3^2 + 3^3 + 4^2 + 7^2 = 27 + 32 + 32 + 33 + 42 + 72. \\
&:= 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 7^2 = 33 + 33 + 33 + 33 + 34 + 72.
\end{aligned}$$

$$\begin{aligned}
240 &:= 2^2 + 2^3 + 2^4 + 2^6 + 3^3 + 11^2 = 22 + 23 + 24 + 26 + 33 + 112. \\
&:= 2^2 + 2^3 + 2^5 + 2^5 + 4^3 + 10^2 = 22 + 23 + 25 + 25 + 43 + 102. \\
&:= 2^2 + 2^5 + 2^5 + 3^3 + 4^3 + 9^2 = 22 + 25 + 25 + 33 + 43 + 92. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 12^2 = 23 + 23 + 23 + 23 + 26 + 122. \\
&:= 2^3 + 2^4 + 2^7 + 4^2 + 6^2 + 6^2 = 23 + 24 + 27 + 42 + 62 + 62. \\
&:= 2^4 + 2^4 + 2^4 + 4^3 + 4^3 + 8^2 = 24 + 24 + 24 + 43 + 43 + 82.
\end{aligned}$$

$$\begin{aligned}
242 &:= 2^3 + 2^3 + 2^6 + 2^6 + 7^2 + 7^2 = 23 + 23 + 26 + 26 + 72 + 72. \\
&:= 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 11^2 = 24 + 24 + 24 + 26 + 32 + 112. \\
&:= 2^4 + 2^6 + 2^6 + 3^2 + 5^2 + 8^2 = 24 + 26 + 26 + 32 + 52 + 82.
\end{aligned}$$

$$\begin{aligned}
244 &:= 2^4 + 2^5 + 2^5 + 2^6 + 6^2 + 8^2 = 24 + 25 + 25 + 26 + 62 + 82. \\
&:= 2^5 + 2^5 + 2^5 + 2^5 + 4^2 + 10^2 = 25 + 25 + 25 + 25 + 42 + 102.
\end{aligned}$$

$$\begin{aligned}
245 &:= 2^2 + 2^2 + 2^2 + 2^3 + 3^4 + 12^2 = 22 + 22 + 22 + 23 + 34 + 122. \\
&:= 2^3 + 4^2 + 4^2 + 4^2 + 4^3 + 5^3 = 23 + 42 + 42 + 42 + 43 + 53.
\end{aligned}$$

$$\begin{aligned}
247 &:= 2^2 + 2^2 + 2^2 + 2^6 + 3^3 + 12^2 = 22 + 22 + 22 + 26 + 33 + 122. \\
&:= 2^2 + 2^3 + 3^3 + 3^3 + 3^4 + 10^2 = 22 + 23 + 33 + 33 + 34 + 102. \\
&:= 2^2 + 2^7 + 3^2 + 3^2 + 4^2 + 9^2 = 22 + 27 + 32 + 32 + 42 + 92. \\
&:= 2^2 + 3^3 + 3^3 + 3^3 + 3^4 + 9^2 = 22 + 33 + 33 + 33 + 34 + 92. \\
&:= 2^3 + 2^3 + 2^4 + 3^2 + 5^3 + 9^2 = 23 + 23 + 24 + 32 + 53 + 92. \\
&:= 2^3 + 2^5 + 3^2 + 3^2 + 5^3 + 8^2 = 23 + 25 + 32 + 32 + 53 + 82. \\
&:= 2^3 + 3^4 + 3^4 + 4^2 + 5^2 + 6^2 = 23 + 34 + 34 + 42 + 52 + 62. \\
&:= 2^4 + 3^3 + 3^3 + 4^2 + 5^3 + 6^2 = 24 + 33 + 33 + 42 + 53 + 62.
\end{aligned}$$

$$\begin{aligned}
249 &:= 2^2 + 2^4 + 2^5 + 3^4 + 4^2 + 10^2 = 22 + 24 + 25 + 34 + 42 + 102. \\
&:= 2^2 + 2^4 + 2^7 + 4^2 + 6^2 + 7^2 = 22 + 24 + 27 + 42 + 62 + 72. \\
&:= 2^2 + 2^6 + 3^3 + 3^3 + 3^3 + 10^2 = 22 + 26 + 33 + 33 + 33 + 102. \\
&:= 2^3 + 2^3 + 2^7 + 4^2 + 5^2 + 8^2 = 23 + 23 + 27 + 42 + 52 + 82. \\
&:= 2^3 + 2^4 + 2^4 + 4^3 + 4^3 + 9^2 = 23 + 24 + 24 + 43 + 43 + 92. \\
&:= 2^3 + 2^6 + 3^4 + 4^2 + 4^2 + 8^2 = 23 + 26 + 34 + 42 + 42 + 82. \\
&:= 2^3 + 2^7 + 3^3 + 5^2 + 5^2 + 6^2 = 23 + 27 + 33 + 52 + 52 + 62. \\
&:= 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 10^2 = 24 + 24 + 32 + 33 + 34 + 102. \\
&:= 2^4 + 2^4 + 3^4 + 4^3 + 6^2 + 6^2 = 24 + 24 + 34 + 43 + 62 + 62. \\
&:= 2^4 + 2^5 + 3^2 + 4^3 + 4^3 + 8^2 = 24 + 25 + 32 + 43 + 43 + 82. \\
&:= 2^4 + 2^7 + 3^2 + 4^2 + 4^2 + 8^2 = 24 + 27 + 32 + 42 + 42 + 82. \\
&:= 2^6 + 3^3 + 3^4 + 4^2 + 5^2 + 6^2 = 26 + 33 + 34 + 42 + 52 + 62.
\end{aligned}$$

$$\begin{aligned}
251 &:= 2^3 + 2^3 + 2^5 + 2^5 + 3^3 + 12^2 = 23 + 23 + 25 + 25 + 33 + 122. \\
&:= 2^3 + 2^5 + 2^5 + 3^4 + 7^2 + 7^2 = 23 + 25 + 25 + 34 + 72 + 72. \\
&:= 2^3 + 2^6 + 2^6 + 3^2 + 5^2 + 9^2 = 23 + 26 + 26 + 32 + 52 + 92. \\
&:= 2^4 + 2^4 + 2^5 + 3^4 + 5^2 + 9^2 = 24 + 24 + 25 + 34 + 52 + 92. \\
&:= 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 11^2 = 24 + 25 + 26 + 32 + 32 + 112. \\
&:= 2^6 + 2^6 + 3^3 + 4^2 + 4^2 + 8^2 = 26 + 26 + 33 + 42 + 42 + 82.
\end{aligned}$$

$$\begin{aligned}
253 &:= 2^3 + 2^5 + 2^5 + 2^6 + 6^2 + 9^2 = 23 + 25 + 25 + 26 + 62 + 92. \\
&:= 2^4 + 2^4 + 2^5 + 2^6 + 5^2 + 10^2 = 24 + 24 + 25 + 26 + 52 + 102. \\
&:= 2^5 + 2^5 + 2^6 + 3^3 + 7^2 + 7^2 = 25 + 25 + 26 + 33 + 72 + 72. \\
254 &:= 2^2 + 3^2 + 4^2 + 4^3 + 5^3 + 6^2 = 22 + 32 + 42 + 43 + 53 + 62.
\end{aligned}$$

$$\begin{aligned}
256 &:= 2^2 + 3^3 + 3^4 + 4^2 + 4^3 + 8^2 = 22 + 33 + 34 + 42 + 43 + 82. \\
&:= 2^2 + 3^4 + 3^4 + 4^2 + 5^2 + 7^2 = 22 + 34 + 34 + 42 + 52 + 72. \\
&:= 3^3 + 3^3 + 3^3 + 5^2 + 5^2 + 5^3 = 33 + 33 + 33 + 52 + 52 + 53.
\end{aligned}$$

$$\begin{aligned}
258 &:= 2^2 + 2^6 + 3^2 + 3^4 + 6^2 + 8^2 = 22 + 26 + 32 + 34 + 62 + 82. \\
&:= 2^2 + 2^7 + 3^3 + 5^2 + 5^2 + 7^2 = 22 + 27 + 33 + 52 + 52 + 72. \\
&:= 2^3 + 2^3 + 2^5 + 5^3 + 6^2 + 7^2 = 23 + 23 + 25 + 53 + 62 + 72. \\
&:= 2^3 + 2^4 + 3^4 + 4^3 + 5^2 + 8^2 = 23 + 24 + 34 + 43 + 52 + 82. \\
&:= 2^3 + 2^5 + 3^2 + 4^3 + 4^3 + 9^2 = 23 + 25 + 32 + 43 + 43 + 92. \\
&:= 2^3 + 2^7 + 3^2 + 4^2 + 4^2 + 9^2 = 23 + 27 + 32 + 42 + 42 + 92. \\
&:= 2^4 + 2^4 + 3^3 + 5^2 + 5^3 + 7^2 = 24 + 24 + 33 + 52 + 53 + 72. \\
&:= 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 10^2 = 25 + 32 + 32 + 33 + 34 + 102. \\
&:= 2^5 + 3^2 + 3^4 + 4^3 + 6^2 + 6^2 = 25 + 32 + 34 + 43 + 62 + 62. \\
&:= 2^5 + 3^4 + 4^2 + 4^2 + 4^3 + 7^2 = 25 + 34 + 42 + 42 + 43 + 72. \\
&:= 2^6 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 = 26 + 42 + 43 + 43 + 52 + 52. \\
&:= 2^7 + 3^2 + 3^2 + 3^3 + 6^2 + 7^2 = 27 + 32 + 32 + 33 + 62 + 72.
\end{aligned}$$

$$\begin{aligned}
260 &:= 2^2 + 2^4 + 2^4 + 2^6 + 4^2 + 12^2 = 22 + 24 + 24 + 26 + 42 + 122. \\
&:= 2^3 + 2^4 + 2^7 + 6^2 + 6^2 + 6^2 = 23 + 24 + 27 + 62 + 62 + 62. \\
&:= 2^4 + 2^4 + 2^4 + 3^3 + 4^3 + 11^2 = 24 + 24 + 24 + 33 + 43 + 112. \\
&:= 2^4 + 2^6 + 3^3 + 4^3 + 5^2 + 8^2 = 24 + 26 + 33 + 43 + 52 + 82. \\
&:= 2^4 + 2^6 + 3^4 + 5^2 + 5^2 + 7^2 = 24 + 26 + 34 + 52 + 52 + 72. \\
&:= 2^5 + 2^5 + 3^2 + 3^4 + 5^2 + 9^2 = 25 + 25 + 32 + 34 + 52 + 92. \\
&:= 2^5 + 2^7 + 5^2 + 5^2 + 5^2 + 5^2 = 25 + 27 + 52 + 52 + 52 + 52.
\end{aligned}$$

$$\begin{aligned}
262 &:= 2^2 + 2^5 + 2^5 + 2^6 + 7^2 + 9^2 = 22 + 25 + 25 + 26 + 72 + 92. \\
&:= 2^5 + 2^5 + 2^6 + 3^2 + 5^2 + 10^2 = 25 + 25 + 26 + 32 + 52 + 102.
\end{aligned}$$

$$264 := 2^5 + 2^5 + 2^5 + 2^5 + 6^2 + 10^2 = 25 + 25 + 25 + 25 + 62 + 102.$$

$$\begin{aligned}
265 &:= 2^2 + 2^2 + 2^3 + 4^3 + 4^3 + 11^2 = 22 + 22 + 23 + 43 + 43 + 112. \\
&:= 2^2 + 2^2 + 2^4 + 4^2 + 5^3 + 10^2 = 22 + 22 + 24 + 42 + 53 + 102. \\
&:= 2^3 + 4^2 + 4^2 + 4^3 + 5^3 + 6^2 = 23 + 42 + 42 + 43 + 53 + 62.
\end{aligned}$$

$$\begin{aligned}
267 &:= 2^2 + 2^2 + 2^5 + 3^4 + 5^2 + 11^2 = 22 + 22 + 25 + 34 + 52 + 112. \\
&:= 2^2 + 2^2 + 2^7 + 5^2 + 5^2 + 9^2 = 22 + 22 + 27 + 52 + 52 + 92. \\
&:= 2^2 + 2^3 + 2^5 + 5^3 + 7^2 + 7^2 = 22 + 23 + 25 + 53 + 72 + 72. \\
&:= 2^2 + 2^4 + 2^4 + 5^2 + 5^3 + 9^2 = 22 + 24 + 24 + 52 + 53 + 92. \\
&:= 2^2 + 2^7 + 3^2 + 3^2 + 6^2 + 9^2 = 22 + 27 + 32 + 32 + 62 + 92. \\
&:= 2^3 + 2^3 + 3^4 + 4^3 + 5^2 + 9^2 = 23 + 23 + 34 + 43 + 52 + 92. \\
&:= 2^3 + 2^4 + 3^2 + 3^2 + 3^4 + 12^2 = 23 + 24 + 32 + 32 + 34 + 122. \\
&:= 2^3 + 3^4 + 3^4 + 5^2 + 6^2 + 6^2 = 23 + 34 + 34 + 52 + 62 + 62. \\
&:= 2^4 + 3^2 + 3^4 + 4^2 + 4^3 + 9^2 = 24 + 32 + 34 + 42 + 43 + 92. \\
&:= 2^4 + 3^3 + 3^3 + 5^3 + 6^2 + 6^2 = 24 + 33 + 33 + 53 + 62 + 62. \\
&:= 2^5 + 3^2 + 3^3 + 5^2 + 5^3 + 7^2 = 25 + 32 + 33 + 52 + 53 + 72.
\end{aligned}$$

$$\begin{aligned}
269 &:= 2^2 + 2^4 + 2^5 + 3^4 + 6^2 + 10^2 = 22 + 24 + 25 + 34 + 62 + 102. \\
&:= 2^2 + 2^4 + 2^7 + 6^2 + 6^2 + 7^2 = 22 + 24 + 27 + 62 + 62 + 72. \\
&:= 2^2 + 2^5 + 2^5 + 4^2 + 4^3 + 11^2 = 22 + 25 + 25 + 42 + 43 + 112. \\
&:= 2^2 + 2^5 + 2^6 + 3^2 + 4^2 + 12^2 = 22 + 25 + 26 + 32 + 42 + 122. \\
&:= 2^3 + 2^3 + 2^6 + 4^3 + 5^2 + 10^2 = 23 + 23 + 26 + 43 + 52 + 102. \\
&:= 2^3 + 2^3 + 2^7 + 5^2 + 6^2 + 8^2 = 23 + 23 + 27 + 52 + 62 + 82. \\
&:= 2^3 + 2^6 + 3^3 + 4^3 + 5^2 + 9^2 = 23 + 26 + 33 + 43 + 52 + 92. \\
&:= 2^3 + 2^6 + 3^4 + 4^2 + 6^2 + 8^2 = 23 + 26 + 34 + 42 + 62 + 82. \\
&:= 2^4 + 2^5 + 3^2 + 3^3 + 4^3 + 11^2 = 24 + 25 + 32 + 33 + 43 + 112. \\
&:= 2^4 + 2^6 + 3^2 + 3^2 + 3^3 + 12^2 = 24 + 26 + 32 + 32 + 33 + 122. \\
&:= 2^4 + 2^6 + 3^2 + 4^2 + 4^3 + 10^2 = 24 + 26 + 32 + 42 + 43 + 102. \\
&:= 2^4 + 2^7 + 3^2 + 4^2 + 6^2 + 8^2 = 24 + 27 + 32 + 42 + 62 + 82. \\
&:= 2^6 + 3^3 + 3^4 + 5^2 + 6^2 + 6^2 = 26 + 33 + 34 + 52 + 62 + 62.
\end{aligned}$$

$$271 := 2^6 + 2^6 + 3^3 + 4^2 + 6^2 + 8^2 = 26 + 26 + 33 + 42 + 62 + 82.$$

$$273 := 2^4 + 2^4 + 2^5 + 2^6 + 8^2 + 9^2 = 24 + 24 + 25 + 26 + 82 + 92.$$

$$\begin{aligned}
274 &:= 2^2 + 3^2 + 3^2 + 3^3 + 5^3 + 10^2 = 22 + 32 + 32 + 33 + 53 + 102. \\
&:= 2^2 + 3^2 + 4^3 + 5^3 + 6^2 + 6^2 = 22 + 32 + 43 + 53 + 62 + 62. \\
&:= 2^2 + 4^2 + 4^2 + 4^3 + 5^3 + 7^2 = 22 + 42 + 42 + 43 + 53 + 72.
\end{aligned}$$

$$\begin{aligned}
276 &:= 2^2 + 2^5 + 3^2 + 5^2 + 5^3 + 9^2 = 22 + 25 + 32 + 52 + 53 + 92. \\
&:= 2^2 + 3^3 + 3^3 + 3^4 + 4^2 + 11^2 = 22 + 33 + 33 + 34 + 42 + 112. \\
&:= 2^2 + 3^3 + 3^4 + 4^3 + 6^2 + 8^2 = 22 + 33 + 34 + 43 + 62 + 82. \\
&:= 2^2 + 3^4 + 3^4 + 5^2 + 6^2 + 7^2 = 22 + 34 + 34 + 52 + 62 + 72. \\
&:= 2^3 + 3^3 + 3^3 + 5^2 + 5^3 + 8^2 = 23 + 33 + 33 + 52 + 53 + 82. \\
&:= 3^2 + 3^4 + 3^4 + 4^2 + 5^2 + 8^2 = 32 + 34 + 34 + 42 + 52 + 82.
\end{aligned}$$

$$\begin{aligned}
278 &:= 2^2 + 2^3 + 2^7 + 5^2 + 7^2 + 8^2 = 22 + 23 + 27 + 52 + 72 + 82. \\
&:= 2^2 + 2^6 + 3^4 + 4^2 + 7^2 + 8^2 = 22 + 26 + 34 + 42 + 72 + 82. \\
&:= 2^3 + 2^4 + 2^4 + 5^3 + 7^2 + 8^2 = 23 + 24 + 24 + 53 + 72 + 82. \\
&:= 2^3 + 2^4 + 3^3 + 3^4 + 5^2 + 11^2 = 23 + 24 + 33 + 34 + 52 + 112. \\
&:= 2^3 + 2^7 + 3^2 + 4^2 + 6^2 + 9^2 = 23 + 27 + 32 + 42 + 62 + 92. \\
&:= 2^4 + 2^5 + 4^2 + 5^2 + 5^3 + 8^2 = 24 + 25 + 42 + 52 + 53 + 82. \\
&:= 2^5 + 3^4 + 4^2 + 4^3 + 6^2 + 7^2 = 25 + 34 + 42 + 43 + 62 + 72. \\
&:= 2^6 + 4^3 + 4^3 + 5^2 + 5^2 + 6^2 = 26 + 43 + 43 + 52 + 52 + 62. \\
&:= 2^7 + 3^2 + 3^3 + 4^2 + 7^2 + 7^2 = 27 + 32 + 33 + 42 + 72 + 72. \\
&:= 2^7 + 3^2 + 3^3 + 5^2 + 5^2 + 8^2 = 27 + 32 + 33 + 52 + 52 + 82.
\end{aligned}$$

$$\begin{aligned}
280 &:= 2^2 + 2^4 + 2^4 + 2^6 + 6^2 + 12^2 = 22 + 24 + 24 + 26 + 62 + 122. \\
&:= 2^3 + 2^4 + 2^6 + 4^3 + 8^2 + 8^2 = 23 + 24 + 26 + 43 + 82 + 82. \\
&:= 2^3 + 2^5 + 2^6 + 4^2 + 4^2 + 12^2 = 23 + 25 + 26 + 42 + 42 + 122. \\
&:= 2^4 + 2^6 + 3^3 + 3^3 + 5^2 + 11^2 = 24 + 26 + 33 + 33 + 52 + 112. \\
&:= 2^5 + 2^5 + 3^3 + 4^3 + 5^2 + 10^2 = 25 + 25 + 33 + 43 + 52 + 102.
\end{aligned}$$

$$\begin{aligned}
282 &:= 2^3 + 2^4 + 2^5 + 2^6 + 9^2 + 9^2 = 23 + 24 + 25 + 26 + 92 + 92. \\
&:= 2^4 + 2^4 + 2^4 + 2^6 + 7^2 + 11^2 = 24 + 24 + 24 + 26 + 72 + 112. \\
&:= 2^4 + 2^6 + 2^6 + 5^2 + 7^2 + 8^2 = 24 + 26 + 26 + 52 + 72 + 82. \\
&:= 2^5 + 2^5 + 2^6 + 3^2 + 8^2 + 9^2 = 25 + 25 + 26 + 32 + 82 + 92.
\end{aligned}$$

$$283 := 2^2 + 2^2 + 2^2 + 5^2 + 5^3 + 11^2 = 22 + 22 + 22 + 52 + 53 + 112.$$

$$\begin{aligned}
285 &:= 2^2 + 2^2 + 2^4 + 5^3 + 6^2 + 10^2 = 22 + 22 + 24 + 53 + 62 + 102. \\
&:= 2^2 + 2^2 + 3^3 + 3^4 + 5^2 + 12^2 = 22 + 22 + 33 + 34 + 52 + 122. \\
&:= 2^2 + 4^3 + 4^3 + 4^3 + 5^2 + 8^2 = 22 + 43 + 43 + 43 + 52 + 82. \\
&:= 2^3 + 3^2 + 3^3 + 4^2 + 5^3 + 10^2 = 23 + 32 + 33 + 42 + 53 + 102. \\
&:= 2^3 + 4^2 + 4^3 + 5^3 + 6^2 + 6^2 = 23 + 42 + 43 + 53 + 62 + 62. \\
&:= 3^2 + 3^3 + 3^3 + 4^2 + 5^3 + 9^2 = 32 + 33 + 33 + 42 + 53 + 92.
\end{aligned}$$

$$\begin{aligned}
287 &:= 2^2 + 2^5 + 3^3 + 4^2 + 4^3 + 12^2 = 22 + 25 + 33 + 42 + 43 + 122. \\
&:= 2^2 + 2^6 + 3^2 + 4^3 + 5^2 + 11^2 = 22 + 26 + 32 + 43 + 52 + 112. \\
&:= 2^2 + 2^7 + 3^2 + 4^2 + 7^2 + 9^2 = 22 + 27 + 32 + 42 + 72 + 92. \\
&:= 2^3 + 2^3 + 2^4 + 5^3 + 7^2 + 9^2 = 23 + 23 + 24 + 53 + 72 + 92. \\
&:= 2^3 + 2^5 + 3^2 + 5^3 + 7^2 + 8^2 = 23 + 25 + 32 + 53 + 72 + 82. \\
&:= 2^3 + 2^5 + 4^2 + 5^2 + 5^3 + 9^2 = 23 + 25 + 42 + 52 + 53 + 92. \\
&:= 2^4 + 3^2 + 3^3 + 3^3 + 4^3 + 12^2 = 24 + 32 + 33 + 33 + 43 + 122.
\end{aligned}$$

$$\begin{aligned}
287 &:= 2^4 + 3^2 + 3^4 + 4^3 + 6^2 + 9^2 = 24 + 32 + 34 + 43 + 62 + 92. \\
&:= 2^4 + 3^3 + 4^2 + 4^3 + 4^3 + 10^2 = 24 + 33 + 42 + 43 + 43 + 102. \\
&:= 2^7 + 3^2 + 3^2 + 4^2 + 5^2 + 10^2 = 27 + 32 + 32 + 42 + 52 + 102. \\
&:= 3^3 + 3^3 + 3^3 + 3^4 + 5^2 + 10^2 = 33 + 33 + 33 + 34 + 52 + 102.
\end{aligned}$$

$$\begin{aligned}
289 &:= 2^2 + 2^2 + 2^5 + 2^6 + 8^2 + 11^2 = 22 + 22 + 25 + 26 + 82 + 112. \\
&:= 2^2 + 2^5 + 2^5 + 4^3 + 6^2 + 11^2 = 22 + 25 + 25 + 43 + 62 + 112. \\
&:= 2^2 + 2^5 + 2^6 + 3^2 + 6^2 + 12^2 = 22 + 25 + 26 + 32 + 62 + 122. \\
&:= 2^3 + 2^3 + 2^6 + 4^3 + 8^2 + 9^2 = 23 + 23 + 26 + 43 + 82 + 92. \\
&:= 2^3 + 2^4 + 2^5 + 4^3 + 5^2 + 12^2 = 23 + 24 + 25 + 43 + 52 + 122. \\
&:= 2^3 + 2^6 + 3^4 + 6^2 + 6^2 + 8^2 = 23 + 26 + 34 + 62 + 62 + 82. \\
&:= 2^4 + 2^4 + 3^3 + 3^4 + 7^2 + 10^2 = 24 + 24 + 33 + 34 + 72 + 102. \\
&:= 2^4 + 2^5 + 4^3 + 4^3 + 7^2 + 8^2 = 24 + 25 + 43 + 43 + 72 + 82. \\
&:= 2^4 + 2^6 + 3^2 + 4^3 + 6^2 + 10^2 = 24 + 26 + 32 + 43 + 62 + 102. \\
&:= 2^4 + 2^7 + 3^2 + 6^2 + 6^2 + 8^2 = 24 + 27 + 32 + 62 + 62 + 82. \\
&:= 2^4 + 2^7 + 4^2 + 4^2 + 7^2 + 8^2 = 24 + 27 + 42 + 42 + 72 + 82.
\end{aligned}$$

$$\begin{aligned}
291 &:= 2^3 + 2^6 + 2^6 + 5^2 + 7^2 + 9^2 = 23 + 26 + 26 + 52 + 72 + 92. \\
&:= 2^4 + 2^5 + 2^6 + 3^2 + 7^2 + 11^2 = 24 + 25 + 26 + 32 + 72 + 112. \\
&:= 2^6 + 2^6 + 3^3 + 6^2 + 6^2 + 8^2 = 26 + 26 + 33 + 62 + 62 + 82.
\end{aligned}$$

$$293 := 2^4 + 2^5 + 2^5 + 2^5 + 9^2 + 10^2 = 24 + 25 + 25 + 25 + 92 + 102.$$

$$\begin{aligned}
294 &:= 2^2 + 3^2 + 3^2 + 4^3 + 4^3 + 12^2 = 22 + 32 + 32 + 43 + 43 + 122. \\
&:= 2^2 + 4^2 + 4^3 + 5^3 + 6^2 + 7^2 = 22 + 42 + 43 + 53 + 62 + 72. \\
&:= 3^2 + 4^2 + 4^2 + 4^3 + 5^3 + 8^2 = 32 + 42 + 42 + 43 + 53 + 82.
\end{aligned}$$

$$\begin{aligned}
296 &:= 2^2 + 3^3 + 3^3 + 3^4 + 6^2 + 11^2 = 22 + 33 + 33 + 34 + 62 + 112. \\
&:= 2^3 + 2^3 + 3^3 + 5^3 + 8^2 + 8^2 = 23 + 23 + 33 + 53 + 82 + 82. \\
&:= 3^2 + 3^4 + 3^4 + 5^2 + 6^2 + 8^2 = 32 + 34 + 34 + 52 + 62 + 82.
\end{aligned}$$

$$\begin{aligned}
298 &:= 2^2 + 2^4 + 2^4 + 3^4 + 9^2 + 10^2 = 22 + 24 + 24 + 34 + 92 + 102. \\
&:= 2^2 + 2^6 + 3^4 + 6^2 + 7^2 + 8^2 = 22 + 26 + 34 + 62 + 72 + 82. \\
&:= 2^3 + 2^3 + 2^4 + 3^4 + 8^2 + 11^2 = 23 + 23 + 24 + 34 + 82 + 112. \\
&:= 2^3 + 2^5 + 4^3 + 4^3 + 7^2 + 9^2 = 23 + 25 + 43 + 43 + 72 + 92. \\
&:= 2^3 + 2^6 + 4^2 + 4^3 + 5^2 + 11^2 = 23 + 26 + 42 + 43 + 52 + 112. \\
&:= 2^3 + 2^7 + 3^2 + 5^2 + 8^2 + 8^2 = 23 + 27 + 32 + 52 + 82 + 82. \\
&:= 2^3 + 2^7 + 3^2 + 6^2 + 6^2 + 9^2 = 23 + 27 + 32 + 62 + 62 + 92. \\
&:= 2^3 + 2^7 + 4^2 + 4^2 + 7^2 + 9^2 = 23 + 27 + 42 + 42 + 72 + 92.
\end{aligned}$$

$$\begin{aligned}
298 &:= 2^4 + 2^4 + 3^4 + 4^2 + 5^2 + 12^2 = 24 + 24 + 34 + 42 + 52 + 122. \\
&:= 2^4 + 2^5 + 5^2 + 5^3 + 6^2 + 8^2 = 24 + 25 + 52 + 53 + 62 + 82. \\
&:= 2^5 + 3^2 + 3^3 + 3^4 + 7^2 + 10^2 = 25 + 32 + 33 + 34 + 72 + 102. \\
&:= 2^5 + 3^4 + 4^3 + 6^2 + 6^2 + 7^2 = 25 + 34 + 43 + 62 + 62 + 72. \\
&:= 2^6 + 3^2 + 3^4 + 4^2 + 8^2 + 8^2 = 26 + 32 + 34 + 42 + 82 + 82. \\
&:= 2^7 + 3^2 + 3^3 + 6^2 + 7^2 + 7^2 = 27 + 32 + 33 + 62 + 72 + 72.
\end{aligned}$$

$$\begin{aligned}
300 &:= 2^2 + 2^4 + 2^4 + 2^6 + 10^2 + 10^2 = 22 + 24 + 24 + 26 + 102 + 102. \\
&:= 2^3 + 2^4 + 2^6 + 3^3 + 8^2 + 11^2 = 23 + 24 + 26 + 33 + 82 + 112. \\
&:= 2^3 + 2^5 + 2^5 + 4^3 + 8^2 + 10^2 = 23 + 25 + 25 + 43 + 82 + 102. \\
&:= 2^3 + 2^5 + 2^6 + 4^2 + 6^2 + 12^2 = 23 + 25 + 26 + 42 + 62 + 122. \\
&:= 2^5 + 2^5 + 3^3 + 4^3 + 8^2 + 9^2 = 25 + 25 + 33 + 43 + 82 + 92. \\
&:= 2^5 + 2^5 + 3^4 + 5^2 + 7^2 + 9^2 = 25 + 25 + 34 + 52 + 72 + 92.
\end{aligned}$$

$$302 := 2^5 + 2^5 + 2^6 + 5^2 + 7^2 + 10^2 = 25 + 25 + 26 + 52 + 72 + 102.$$

$$\begin{aligned}
305 &:= 2^2 + 2^2 + 2^3 + 3^4 + 8^2 + 12^2 = 22 + 22 + 23 + 34 + 82 + 122. \\
&:= 2^2 + 3^3 + 4^3 + 4^3 + 5^2 + 11^2 = 22 + 33 + 43 + 43 + 52 + 112. \\
&:= 2^3 + 3^2 + 3^3 + 5^3 + 6^2 + 10^2 = 23 + 32 + 33 + 53 + 62 + 102. \\
&:= 2^3 + 3^2 + 4^2 + 4^3 + 4^3 + 12^2 = 23 + 32 + 42 + 43 + 43 + 122. \\
&:= 2^3 + 4^3 + 5^3 + 6^2 + 6^2 + 6^2 = 23 + 43 + 53 + 62 + 62 + 62. \\
&:= 2^4 + 3^2 + 3^2 + 5^2 + 5^3 + 11^2 = 24 + 32 + 32 + 52 + 53 + 112. \\
&:= 3^2 + 3^3 + 3^3 + 5^3 + 6^2 + 9^2 = 32 + 33 + 33 + 53 + 62 + 92. \\
&:= 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 9^2 = 42 + 42 + 43 + 43 + 43 + 92.
\end{aligned}$$

$$\begin{aligned}
307 &:= 2^2 + 2^2 + 2^6 + 3^3 + 8^2 + 12^2 = 22 + 22 + 26 + 33 + 82 + 122. \\
&:= 2^2 + 2^5 + 3^2 + 3^4 + 9^2 + 10^2 = 22 + 25 + 32 + 34 + 92 + 102. \\
&:= 2^2 + 2^5 + 3^3 + 4^3 + 6^2 + 12^2 = 22 + 25 + 33 + 43 + 62 + 122. \\
&:= 2^2 + 2^7 + 3^2 + 6^2 + 7^2 + 9^2 = 22 + 27 + 32 + 62 + 72 + 92. \\
&:= 2^2 + 2^7 + 5^2 + 5^2 + 5^2 + 10^2 = 22 + 27 + 52 + 52 + 52 + 102. \\
&:= 2^3 + 2^3 + 2^3 + 3^4 + 9^2 + 11^2 = 23 + 23 + 23 + 34 + 92 + 112. \\
&:= 2^3 + 2^4 + 3^2 + 3^4 + 7^2 + 12^2 = 23 + 24 + 32 + 34 + 72 + 122. \\
&:= 2^3 + 2^5 + 5^2 + 5^3 + 6^2 + 9^2 = 23 + 25 + 52 + 53 + 62 + 92. \\
&:= 2^3 + 3^3 + 3^3 + 3^4 + 8^2 + 10^2 = 23 + 33 + 33 + 34 + 82 + 102. \\
&:= 2^4 + 2^4 + 5^2 + 5^2 + 5^3 + 10^2 = 24 + 24 + 52 + 52 + 53 + 102. \\
&:= 2^4 + 3^3 + 4^3 + 4^3 + 6^2 + 10^2 = 24 + 33 + 43 + 43 + 62 + 102. \\
&:= 2^4 + 3^4 + 4^2 + 4^3 + 7^2 + 9^2 = 24 + 34 + 42 + 43 + 72 + 92.
\end{aligned}$$

$$\begin{aligned}
307 &:= 2^5 + 3^2 + 3^4 + 4^2 + 5^2 + 12^2 = 25 + 32 + 34 + 42 + 52 + 122. \\
&:= 2^5 + 3^3 + 5^2 + 5^3 + 7^2 + 7^2 = 25 + 33 + 52 + 53 + 72 + 72. \\
&:= 2^7 + 3^2 + 3^2 + 4^2 + 8^2 + 9^2 = 27 + 32 + 32 + 42 + 82 + 92. \\
&:= 2^7 + 3^2 + 3^2 + 5^2 + 6^2 + 10^2 = 27 + 32 + 32 + 52 + 62 + 102. \\
&:= 3^3 + 3^3 + 3^3 + 3^4 + 8^2 + 9^2 = 33 + 33 + 33 + 34 + 82 + 92.
\end{aligned}$$

$$\begin{aligned}
309 &:= 2^2 + 2^5 + 2^6 + 3^2 + 10^2 + 10^2 = 22 + 25 + 26 + 32 + 102 + 102. \\
&:= 2^2 + 2^5 + 2^6 + 4^2 + 7^2 + 12^2 = 22 + 25 + 26 + 42 + 72 + 122. \\
&:= 2^3 + 2^3 + 2^3 + 2^6 + 10^2 + 11^2 = 23 + 23 + 23 + 26 + 102 + 112. \\
&:= 2^3 + 2^3 + 2^6 + 3^3 + 9^2 + 11^2 = 23 + 23 + 26 + 33 + 92 + 112. \\
&:= 2^4 + 2^5 + 3^3 + 4^3 + 7^2 + 11^2 = 24 + 25 + 33 + 43 + 72 + 112. \\
&:= 2^4 + 2^5 + 3^4 + 4^2 + 8^2 + 10^2 = 24 + 25 + 34 + 42 + 82 + 102. \\
&:= 2^4 + 2^6 + 3^2 + 3^3 + 7^2 + 12^2 = 24 + 26 + 32 + 33 + 72 + 122. \\
&:= 2^4 + 2^6 + 4^2 + 4^3 + 7^2 + 10^2 = 24 + 26 + 42 + 43 + 72 + 102.
\end{aligned}$$

$$\begin{aligned}
309 &:= 2^4 + 2^7 + 4^2 + 6^2 + 7^2 + 8^2 = 24 + 27 + 42 + 62 + 72 + 82. \\
&:= 2^6 + 3^3 + 3^3 + 3^3 + 8^2 + 10^2 = 26 + 33 + 33 + 33 + 82 + 102.
\end{aligned}$$

$$\begin{aligned}
314 &:= 2^2 + 2^2 + 2^2 + 3^4 + 10^2 + 11^2 = 22 + 22 + 22 + 34 + 102 + 112. \\
&:= 2^2 + 3^2 + 3^3 + 5^3 + 7^2 + 10^2 = 22 + 32 + 33 + 53 + 72 + 102. \\
&:= 2^2 + 4^3 + 5^3 + 6^2 + 6^2 + 7^2 = 22 + 43 + 53 + 62 + 62 + 72. \\
&:= 3^2 + 3^3 + 4^2 + 4^2 + 5^3 + 11^2 = 32 + 33 + 42 + 42 + 53 + 112. \\
&:= 3^2 + 4^2 + 4^3 + 5^3 + 6^2 + 8^2 = 32 + 42 + 43 + 53 + 62 + 82.
\end{aligned}$$

$$\begin{aligned}
316 &:= 2^2 + 2^5 + 5^2 + 5^3 + 7^2 + 9^2 = 22 + 25 + 52 + 53 + 72 + 92. \\
&:= 2^5 + 3^2 + 5^2 + 5^2 + 5^3 + 10^2 = 25 + 32 + 52 + 52 + 53 + 102. \\
&:= 3^3 + 3^4 + 4^2 + 4^3 + 8^2 + 8^2 = 33 + 34 + 42 + 43 + 82 + 82. \\
&:= 3^4 + 3^4 + 4^2 + 5^2 + 7^2 + 8^2 = 34 + 34 + 42 + 52 + 72 + 82.
\end{aligned}$$

$$\begin{aligned}
318 &:= 2^2 + 2^4 + 2^5 + 4^3 + 9^2 + 11^2 = 22 + 24 + 25 + 43 + 92 + 112. \\
&:= 2^2 + 2^4 + 2^6 + 3^2 + 9^2 + 12^2 = 22 + 24 + 26 + 32 + 92 + 122. \\
&:= 2^3 + 2^5 + 3^4 + 4^2 + 9^2 + 10^2 = 23 + 25 + 34 + 42 + 92 + 102. \\
&:= 2^3 + 2^6 + 4^3 + 5^2 + 6^2 + 11^2 = 23 + 26 + 43 + 52 + 62 + 112. \\
&:= 2^3 + 2^7 + 4^2 + 6^2 + 7^2 + 9^2 = 23 + 27 + 42 + 62 + 72 + 92. \\
&:= 2^4 + 2^4 + 3^4 + 5^2 + 6^2 + 12^2 = 24 + 24 + 34 + 52 + 62 + 122. \\
&:= 2^5 + 3^3 + 3^4 + 4^2 + 9^2 + 9^2 = 25 + 33 + 34 + 42 + 92 + 92. \\
&:= 2^6 + 3^2 + 3^4 + 6^2 + 8^2 + 8^2 = 26 + 32 + 34 + 62 + 82 + 82. \\
&:= 2^7 + 3^3 + 4^2 + 7^2 + 7^2 + 7^2 = 27 + 33 + 42 + 72 + 72 + 72. \\
&:= 2^7 + 3^3 + 5^2 + 5^2 + 7^2 + 8^2 = 27 + 33 + 52 + 52 + 72 + 82.
\end{aligned}$$

$$\begin{aligned}
320 &:= 2^3 + 2^5 + 2^5 + 3^3 + 10^2 + 11^2 = 23 + 25 + 25 + 33 + 102 + 112. \\
&:= 2^3 + 2^5 + 2^6 + 4^2 + 10^2 + 10^2 = 23 + 25 + 26 + 42 + 102 + 102. \\
&:= 2^3 + 2^5 + 2^6 + 6^2 + 6^2 + 12^2 = 23 + 25 + 26 + 62 + 62 + 122. \\
&:= 2^4 + 2^4 + 2^6 + 4^2 + 8^2 + 12^2 = 24 + 24 + 26 + 42 + 82 + 122. \\
&:= 2^5 + 2^5 + 3^3 + 3^3 + 9^2 + 11^2 = 25 + 25 + 33 + 33 + 92 + 112. \\
&:= 2^5 + 2^6 + 3^3 + 4^2 + 9^2 + 10^2 = 25 + 26 + 33 + 42 + 92 + 102.
\end{aligned}$$

$$322 := 2^5 + 2^5 + 2^6 + 7^2 + 8^2 + 9^2 = 25 + 25 + 26 + 72 + 82 + 92.$$

$$\begin{aligned}
323 &:= 2^2 + 2^2 + 3^2 + 5^3 + 9^2 + 10^2 = 22 + 22 + 32 + 53 + 92 + 102. \\
&:= 2^2 + 3^2 + 4^2 + 5^2 + 5^3 + 12^2 = 22 + 32 + 42 + 52 + 53 + 122.
\end{aligned}$$

$$\begin{aligned}
325 &:= 2^2 + 2^3 + 4^3 + 4^3 + 8^2 + 11^2 = 22 + 23 + 43 + 43 + 82 + 112. \\
&:= 2^2 + 2^4 + 4^2 + 5^3 + 8^2 + 10^2 = 22 + 24 + 42 + 53 + 82 + 102. \\
&:= 2^3 + 3^2 + 4^3 + 4^3 + 6^2 + 12^2 = 23 + 32 + 43 + 43 + 62 + 122. \\
&:= 2^3 + 3^3 + 4^2 + 5^3 + 7^2 + 10^2 = 23 + 33 + 42 + 53 + 72 + 102. \\
&:= 3^2 + 3^2 + 3^4 + 4^3 + 9^2 + 9^2 = 32 + 32 + 34 + 43 + 92 + 92. \\
&:= 3^2 + 3^4 + 4^3 + 5^2 + 5^2 + 11^2 = 32 + 34 + 43 + 52 + 52 + 112. \\
&:= 3^3 + 3^3 + 4^2 + 5^3 + 7^2 + 9^2 = 33 + 33 + 42 + 53 + 72 + 92. \\
&:= 4^2 + 4^3 + 4^3 + 4^3 + 6^2 + 9^2 = 42 + 43 + 43 + 43 + 62 + 92.
\end{aligned}$$

$$\begin{aligned}
327 &:= 2^2 + 2^3 + 2^6 + 3^2 + 11^2 + 11^2 = 22 + 23 + 26 + 32 + 112 + 112. \\
&:= 2^2 + 2^5 + 3^3 + 4^3 + 10^2 + 10^2 = 22 + 25 + 33 + 43 + 102 + 102. \\
&:= 2^2 + 2^5 + 3^4 + 5^2 + 8^2 + 11^2 = 22 + 25 + 34 + 52 + 82 + 112. \\
&:= 2^2 + 2^6 + 4^3 + 5^2 + 7^2 + 11^2 = 22 + 26 + 43 + 52 + 72 + 112. \\
&:= 2^2 + 2^7 + 4^2 + 7^2 + 7^2 + 9^2 = 22 + 27 + 42 + 72 + 72 + 92. \\
&:= 2^2 + 2^7 + 5^2 + 5^2 + 8^2 + 9^2 = 22 + 27 + 52 + 52 + 82 + 92. \\
&:= 2^3 + 2^5 + 5^3 + 7^2 + 7^2 + 8^2 = 23 + 25 + 53 + 72 + 72 + 82. \\
&:= 2^4 + 2^4 + 5^2 + 5^3 + 8^2 + 9^2 = 24 + 24 + 52 + 53 + 82 + 92. \\
&:= 2^4 + 3^3 + 3^3 + 4^3 + 7^2 + 12^2 = 24 + 33 + 33 + 43 + 72 + 122. \\
&:= 2^4 + 3^4 + 4^3 + 6^2 + 7^2 + 9^2 = 24 + 34 + 43 + 62 + 72 + 92. \\
&:= 2^5 + 3^2 + 3^4 + 5^2 + 6^2 + 12^2 = 25 + 32 + 34 + 52 + 62 + 122. \\
&:= 2^6 + 3^2 + 3^2 + 4^3 + 9^2 + 10^2 = 26 + 32 + 32 + 43 + 92 + 102. \\
&:= 2^7 + 3^2 + 3^2 + 6^2 + 8^2 + 9^2 = 27 + 32 + 32 + 62 + 82 + 92. \\
&:= 2^7 + 3^2 + 4^2 + 5^2 + 7^2 + 10^2 = 27 + 32 + 42 + 52 + 72 + 102.
\end{aligned}$$

$$\begin{aligned}
329 &:= 2^2 + 2^5 + 2^6 + 6^2 + 7^2 + 12^2 = 22 + 25 + 26 + 62 + 72 + 122. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 11^2 + 12^2 = 23 + 23 + 24 + 25 + 112 + 122. \\
&:= 2^3 + 2^4 + 2^6 + 4^2 + 9^2 + 12^2 = 23 + 24 + 26 + 42 + 92 + 122. \\
&:= 2^4 + 2^5 + 3^4 + 6^2 + 8^2 + 10^2 = 24 + 25 + 34 + 62 + 82 + 102. \\
&:= 2^4 + 2^6 + 4^3 + 6^2 + 7^2 + 10^2 = 24 + 26 + 43 + 62 + 72 + 102. \\
&:= 2^4 + 2^7 + 6^2 + 6^2 + 7^2 + 8^2 = 24 + 27 + 62 + 62 + 72 + 82. \\
&:= 2^5 + 2^5 + 4^2 + 4^3 + 8^2 + 11^2 = 25 + 25 + 42 + 43 + 82 + 112. \\
&:= 2^5 + 2^6 + 3^2 + 4^2 + 8^2 + 12^2 = 25 + 26 + 32 + 42 + 82 + 122. \\
331 &:= 2^4 + 2^5 + 2^6 + 7^2 + 7^2 + 11^2 = 24 + 25 + 26 + 72 + 72 + 112. \\
334 &:= 2^2 + 2^3 + 4^2 + 5^3 + 9^2 + 10^2 = 22 + 23 + 42 + 53 + 92 + 102. \\
&:= 2^2 + 3^2 + 4^3 + 4^3 + 7^2 + 12^2 = 22 + 32 + 43 + 43 + 72 + 122. \\
&:= 2^2 + 3^3 + 4^2 + 5^3 + 9^2 + 9^2 = 22 + 33 + 42 + 53 + 92 + 92. \\
&:= 2^3 + 4^2 + 4^2 + 5^2 + 5^3 + 12^2 = 23 + 42 + 42 + 52 + 53 + 122. \\
&:= 3^2 + 3^2 + 3^3 + 5^3 + 8^2 + 10^2 = 32 + 32 + 33 + 53 + 82 + 102. \\
&:= 3^2 + 3^3 + 4^2 + 5^3 + 6^2 + 11^2 = 32 + 33 + 42 + 53 + 62 + 112. \\
&:= 3^2 + 4^3 + 5^3 + 6^2 + 6^2 + 8^2 = 32 + 43 + 53 + 62 + 62 + 82. \\
&:= 4^2 + 4^2 + 4^3 + 5^3 + 7^2 + 8^2 = 42 + 42 + 43 + 53 + 72 + 82. \\
336 &:= 2^2 + 2^2 + 2^3 + 2^5 + 12^2 + 12^2 = 22 + 22 + 23 + 25 + 122 + 122. \\
&:= 2^2 + 2^3 + 2^4 + 4^3 + 10^2 + 12^2 = 22 + 23 + 24 + 43 + 102 + 122. \\
&:= 2^2 + 2^4 + 3^3 + 4^3 + 9^2 + 12^2 = 22 + 24 + 33 + 43 + 92 + 122. \\
&:= 2^3 + 2^4 + 5^2 + 5^3 + 9^2 + 9^2 = 23 + 24 + 52 + 53 + 92 + 92. \\
&:= 2^4 + 3^2 + 3^2 + 3^4 + 10^2 + 11^2 = 24 + 32 + 32 + 34 + 102 + 112. \\
&:= 2^5 + 3^2 + 5^2 + 5^3 + 8^2 + 9^2 = 25 + 32 + 52 + 53 + 82 + 92. \\
&:= 3^3 + 3^3 + 3^4 + 4^2 + 8^2 + 11^2 = 33 + 33 + 34 + 42 + 82 + 112. \\
&:= 3^3 + 3^4 + 4^3 + 6^2 + 8^2 + 8^2 = 33 + 34 + 43 + 62 + 82 + 82. \\
&:= 3^4 + 3^4 + 5^2 + 6^2 + 7^2 + 8^2 = 34 + 34 + 52 + 62 + 72 + 82. \\
338 &:= 2^3 + 2^3 + 2^6 + 4^2 + 11^2 + 11^2 = 23 + 23 + 26 + 42 + 112 + 112. \\
&:= 2^3 + 2^5 + 3^3 + 3^3 + 10^2 + 12^2 = 23 + 25 + 33 + 33 + 102 + 122. \\
&:= 2^3 + 2^5 + 3^4 + 6^2 + 9^2 + 10^2 = 23 + 25 + 34 + 62 + 92 + 102. \\
&:= 2^3 + 2^7 + 5^2 + 7^2 + 8^2 + 8^2 = 23 + 27 + 52 + 72 + 82 + 82. \\
&:= 2^3 + 2^7 + 6^2 + 6^2 + 7^2 + 9^2 = 23 + 27 + 62 + 62 + 72 + 92. \\
&:= 2^4 + 2^4 + 3^4 + 5^2 + 10^2 + 10^2 = 24 + 24 + 34 + 52 + 102 + 102. \\
&:= 2^5 + 3^3 + 3^3 + 3^3 + 9^2 + 12^2 = 25 + 33 + 33 + 33 + 92 + 122. \\
&:= 2^5 + 3^3 + 3^4 + 6^2 + 9^2 + 9^2 = 25 + 33 + 34 + 62 + 92 + 92. \\
&:= 2^5 + 3^3 + 3^4 + 7^2 + 7^2 + 10^2 = 25 + 33 + 34 + 72 + 72 + 102. \\
&:= 2^6 + 3^4 + 4^2 + 7^2 + 8^2 + 8^2 = 26 + 34 + 42 + 72 + 82 + 82. \\
&:= 2^7 + 3^3 + 6^2 + 7^2 + 7^2 + 7^2 = 27 + 33 + 62 + 72 + 72 + 72.
\end{aligned}$$

$$\begin{aligned}
340 &:= 2^3 + 2^5 + 2^6 + 6^2 + 10^2 + 10^2 = 23 + 25 + 26 + 62 + 102 + 102. \\
&:= 2^4 + 2^4 + 2^6 + 6^2 + 8^2 + 12^2 = 24 + 24 + 26 + 62 + 82 + 122. \\
&:= 2^4 + 2^5 + 2^5 + 4^2 + 10^2 + 12^2 = 24 + 25 + 25 + 42 + 102 + 122. \\
&:= 2^5 + 2^6 + 3^3 + 6^2 + 9^2 + 10^2 = 25 + 26 + 33 + 62 + 92 + 102. \\
&:= 2^6 + 2^6 + 5^2 + 5^2 + 9^2 + 9^2 = 26 + 26 + 52 + 52 + 92 + 92.
\end{aligned}$$

$$\begin{aligned}
343 &:= 2^2 + 2^2 + 5^2 + 5^3 + 8^2 + 11^2 = 22 + 22 + 52 + 53 + 82 + 112. \\
&:= 2^2 + 3^2 + 5^2 + 5^3 + 6^2 + 12^2 = 22 + 32 + 52 + 53 + 62 + 122.
\end{aligned}$$

$$\begin{aligned}
345 &:= 2^2 + 2^3 + 3^3 + 4^3 + 11^2 + 11^2 = 22 + 23 + 33 + 43 + 112 + 112. \\
&:= 2^2 + 2^4 + 5^3 + 6^2 + 8^2 + 10^2 = 22 + 24 + 53 + 62 + 82 + 102. \\
&:= 2^2 + 3^3 + 3^4 + 5^2 + 8^2 + 12^2 = 22 + 33 + 34 + 52 + 82 + 122. \\
&:= 2^3 + 3^2 + 4^3 + 4^3 + 10^2 + 10^2 = 23 + 32 + 43 + 43 + 102 + 102. \\
&:= 2^3 + 3^3 + 5^3 + 6^2 + 7^2 + 10^2 = 23 + 33 + 53 + 62 + 72 + 102. \\
&:= 2^3 + 4^2 + 4^3 + 4^3 + 7^2 + 12^2 = 23 + 42 + 43 + 43 + 72 + 122. \\
&:= 2^4 + 3^2 + 5^2 + 5^3 + 7^2 + 11^2 = 24 + 32 + 52 + 53 + 72 + 112. \\
&:= 3^2 + 3^3 + 4^3 + 4^3 + 9^2 + 10^2 = 32 + 33 + 43 + 43 + 92 + 102. \\
&:= 3^3 + 3^3 + 5^3 + 6^2 + 7^2 + 9^2 = 33 + 33 + 53 + 62 + 72 + 92. \\
&:= 4^3 + 4^3 + 4^3 + 5^2 + 8^2 + 8^2 = 43 + 43 + 43 + 52 + 82 + 82. \\
&:= 4^3 + 4^3 + 4^3 + 6^2 + 6^2 + 9^2 = 43 + 43 + 43 + 62 + 62 + 92.
\end{aligned}$$

$$\begin{aligned}
347 &:= 2^2 + 2^5 + 3^4 + 7^2 + 9^2 + 10^2 = 22 + 25 + 34 + 72 + 92 + 102. \\
&:= 2^2 + 2^7 + 6^2 + 7^2 + 7^2 + 9^2 = 22 + 27 + 62 + 72 + 72 + 92. \\
&:= 2^3 + 2^3 + 2^4 + 3^3 + 12^2 + 12^2 = 23 + 23 + 24 + 33 + 122 + 122. \\
&:= 2^3 + 2^4 + 3^4 + 7^2 + 7^2 + 12^2 = 23 + 24 + 34 + 72 + 72 + 122. \\
&:= 2^4 + 2^4 + 3^2 + 4^3 + 11^2 + 11^2 = 24 + 24 + 32 + 43 + 112 + 112. \\
&:= 2^5 + 3^2 + 3^4 + 5^2 + 10^2 + 10^2 = 25 + 32 + 34 + 52 + 102 + 102. \\
&:= 2^5 + 3^3 + 4^2 + 4^3 + 8^2 + 12^2 = 25 + 33 + 42 + 43 + 82 + 122. \\
&:= 2^5 + 3^4 + 4^2 + 4^2 + 9^2 + 11^2 = 25 + 34 + 42 + 42 + 92 + 112. \\
&:= 2^5 + 3^4 + 4^2 + 5^2 + 7^2 + 12^2 = 25 + 34 + 42 + 52 + 72 + 122. \\
&:= 2^5 + 4^3 + 4^3 + 5^2 + 9^2 + 9^2 = 25 + 43 + 43 + 52 + 92 + 92. \\
&:= 2^6 + 3^2 + 4^3 + 5^2 + 8^2 + 11^2 = 26 + 32 + 43 + 52 + 82 + 112. \\
&:= 2^6 + 4^3 + 5^2 + 5^2 + 5^2 + 12^2 = 26 + 43 + 52 + 52 + 52 + 122. \\
&:= 2^7 + 3^2 + 4^2 + 7^2 + 8^2 + 9^2 = 27 + 32 + 42 + 72 + 82 + 92. \\
&:= 2^7 + 3^2 + 5^2 + 6^2 + 7^2 + 10^2 = 27 + 32 + 52 + 62 + 72 + 102. \\
&:= 2^7 + 4^2 + 4^2 + 5^2 + 9^2 + 9^2 = 27 + 42 + 42 + 52 + 92 + 92.
\end{aligned}$$

$$\begin{aligned}
349 &:= 2^2 + 2^5 + 2^6 + 7^2 + 10^2 + 10^2 = 22 + 25 + 26 + 72 + 102 + 102. \\
&:= 2^2 + 2^5 + 2^6 + 8^2 + 8^2 + 11^2 = 22 + 25 + 26 + 82 + 82 + 112. \\
&:= 2^3 + 2^4 + 2^6 + 6^2 + 9^2 + 12^2 = 23 + 24 + 26 + 62 + 92 + 122. \\
&:= 2^4 + 2^6 + 3^3 + 7^2 + 7^2 + 12^2 = 24 + 26 + 33 + 72 + 72 + 122. \\
&:= 2^5 + 2^5 + 3^3 + 4^2 + 11^2 + 11^2 = 25 + 25 + 33 + 42 + 112 + 112. \\
&:= 2^5 + 2^5 + 4^3 + 6^2 + 8^2 + 11^2 = 25 + 25 + 43 + 62 + 82 + 112. \\
&:= 2^5 + 2^6 + 3^2 + 6^2 + 8^2 + 12^2 = 25 + 26 + 32 + 62 + 82 + 122. \\
&:= 2^5 + 2^6 + 4^2 + 4^2 + 10^2 + 11^2 = 25 + 26 + 42 + 42 + 102 + 112. \\
\\
354 &:= 2^2 + 2^3 + 5^3 + 6^2 + 9^2 + 10^2 = 22 + 23 + 53 + 62 + 92 + 102. \\
&:= 2^2 + 3^2 + 3^4 + 4^2 + 10^2 + 12^2 = 22 + 32 + 34 + 42 + 102 + 122. \\
&:= 2^2 + 3^3 + 5^3 + 6^2 + 9^2 + 9^2 = 22 + 33 + 53 + 62 + 92 + 92. \\
&:= 2^2 + 3^3 + 5^3 + 7^2 + 7^2 + 10^2 = 22 + 33 + 53 + 72 + 72 + 102. \\
&:= 2^3 + 4^2 + 5^2 + 5^3 + 6^2 + 12^2 = 23 + 42 + 52 + 53 + 62 + 122. \\
&:= 3^2 + 3^2 + 4^3 + 4^3 + 8^2 + 12^2 = 32 + 32 + 43 + 43 + 82 + 122. \\
&:= 3^2 + 3^3 + 5^3 + 6^2 + 6^2 + 11^2 = 32 + 33 + 53 + 62 + 62 + 112. \\
&:= 3^3 + 4^2 + 4^2 + 5^3 + 7^2 + 11^2 = 33 + 42 + 42 + 53 + 72 + 112. \\
&:= 4^2 + 4^3 + 5^3 + 6^2 + 7^2 + 8^2 = 42 + 43 + 53 + 62 + 72 + 82. \\
\\
356 &:= 2^4 + 3^2 + 3^4 + 5^2 + 9^2 + 12^2 = 24 + 32 + 34 + 52 + 92 + 122. \\
&:= 2^5 + 3^2 + 3^2 + 4^3 + 11^2 + 11^2 = 25 + 32 + 32 + 43 + 112 + 112. \\
&:= 2^5 + 5^2 + 5^2 + 5^3 + 7^2 + 10^2 = 25 + 52 + 52 + 53 + 72 + 102. \\
&:= 2^6 + 3^2 + 3^2 + 3^2 + 11^2 + 12^2 = 26 + 32 + 32 + 32 + 112 + 122. \\
&:= 3^3 + 3^3 + 3^4 + 6^2 + 8^2 + 11^2 = 33 + 33 + 34 + 62 + 82 + 112. \\
\\
358 &:= 2^2 + 2^4 + 2^6 + 7^2 + 9^2 + 12^2 = 22 + 24 + 26 + 72 + 92 + 122. \\
&:= 2^2 + 2^5 + 2^5 + 5^2 + 11^2 + 12^2 = 22 + 25 + 25 + 52 + 112 + 122. \\
&:= 2^3 + 2^3 + 2^6 + 6^2 + 11^2 + 11^2 = 23 + 23 + 26 + 62 + 112 + 112. \\
&:= 2^4 + 2^4 + 3^4 + 8^2 + 9^2 + 10^2 = 24 + 24 + 34 + 82 + 92 + 102. \\
&:= 2^4 + 2^5 + 4^3 + 5^2 + 10^2 + 11^2 = 24 + 25 + 43 + 52 + 102 + 112. \\
&:= 2^4 + 2^6 + 3^2 + 5^2 + 10^2 + 12^2 = 24 + 26 + 32 + 52 + 102 + 122. \\
&:= 2^6 + 3^4 + 6^2 + 7^2 + 8^2 + 8^2 = 26 + 34 + 62 + 72 + 82 + 82. \\
\\
360 &:= 2^4 + 2^4 + 2^6 + 8^2 + 10^2 + 10^2 = 24 + 24 + 26 + 82 + 102 + 102. \\
&:= 2^4 + 2^5 + 2^5 + 6^2 + 10^2 + 12^2 = 24 + 25 + 25 + 62 + 102 + 122. \\
\\
363 &:= 2^2 + 2^2 + 5^3 + 7^2 + 9^2 + 10^2 = 22 + 22 + 53 + 72 + 92 + 102. \\
&:= 2^2 + 3^2 + 5^2 + 5^3 + 10^2 + 10^2 = 22 + 32 + 52 + 53 + 102 + 102. \\
&:= 2^2 + 4^2 + 4^2 + 5^3 + 9^2 + 11^2 = 22 + 42 + 42 + 53 + 92 + 112. \\
&:= 2^2 + 4^2 + 5^2 + 5^3 + 7^2 + 12^2 = 22 + 42 + 52 + 53 + 72 + 122.
\end{aligned}$$

$$\begin{aligned}
365 &:= 2^2 + 2^3 + 3^4 + 8^2 + 8^2 + 12^2 = 22 + 23 + 34 + 82 + 82 + 122. \\
&:= 2^2 + 2^4 + 4^2 + 4^3 + 11^2 + 12^2 = 22 + 24 + 42 + 43 + 112 + 122. \\
&:= 2^3 + 3^2 + 3^4 + 5^2 + 11^2 + 11^2 = 23 + 32 + 34 + 52 + 112 + 112. \\
&:= 2^3 + 3^4 + 4^2 + 4^2 + 10^2 + 12^2 = 23 + 34 + 42 + 42 + 102 + 122. \\
&:= 2^3 + 4^3 + 4^3 + 6^2 + 7^2 + 12^2 = 23 + 43 + 43 + 62 + 72 + 122. \\
&:= 3^2 + 3^4 + 4^3 + 7^2 + 9^2 + 9^2 = 32 + 34 + 43 + 72 + 92 + 92. \\
&:= 3^3 + 3^4 + 4^2 + 4^2 + 9^2 + 12^2 = 33 + 34 + 42 + 42 + 92 + 122. \\
&:= 3^3 + 4^3 + 4^3 + 5^2 + 8^2 + 11^2 = 33 + 43 + 43 + 52 + 82 + 112. \\
&:= 3^4 + 4^3 + 5^2 + 5^2 + 7^2 + 11^2 = 34 + 43 + 52 + 52 + 72 + 112.
\end{aligned}$$

$$\begin{aligned}
367 &:= 2^2 + 2^3 + 2^6 + 7^2 + 11^2 + 11^2 = 22 + 23 + 26 + 72 + 112 + 112. \\
&:= 2^2 + 2^6 + 3^3 + 8^2 + 8^2 + 12^2 = 22 + 26 + 33 + 82 + 82 + 122. \\
&:= 2^3 + 2^4 + 3^4 + 9^2 + 9^2 + 10^2 = 23 + 24 + 34 + 92 + 92 + 102. \\
&:= 2^4 + 3^3 + 3^4 + 9^2 + 9^2 + 9^2 = 24 + 33 + 34 + 92 + 92 + 92. \\
&:= 2^5 + 3^2 + 3^4 + 8^2 + 9^2 + 10^2 = 25 + 32 + 34 + 82 + 92 + 102. \\
&:= 2^5 + 3^3 + 3^3 + 4^2 + 11^2 + 12^2 = 25 + 33 + 33 + 42 + 112 + 122. \\
&:= 2^5 + 3^3 + 4^3 + 6^2 + 8^2 + 12^2 = 25 + 33 + 43 + 62 + 82 + 122. \\
&:= 2^5 + 3^4 + 4^2 + 6^2 + 9^2 + 11^2 = 25 + 34 + 42 + 62 + 92 + 112. \\
&:= 2^5 + 3^4 + 5^2 + 6^2 + 7^2 + 12^2 = 25 + 34 + 52 + 62 + 72 + 122. \\
&:= 2^6 + 3^2 + 3^3 + 5^2 + 11^2 + 11^2 = 26 + 32 + 33 + 52 + 112 + 112. \\
&:= 2^6 + 3^2 + 4^3 + 7^2 + 9^2 + 10^2 = 26 + 32 + 43 + 72 + 92 + 102. \\
&:= 2^6 + 3^3 + 4^2 + 4^2 + 10^2 + 12^2 = 26 + 33 + 42 + 42 + 102 + 122. \\
&:= 2^7 + 3^2 + 6^2 + 7^2 + 8^2 + 9^2 = 27 + 32 + 62 + 72 + 82 + 92. \\
&:= 2^7 + 4^2 + 5^2 + 6^2 + 9^2 + 9^2 = 27 + 42 + 52 + 62 + 92 + 92. \\
&:= 2^7 + 4^2 + 5^2 + 7^2 + 7^2 + 10^2 = 27 + 42 + 52 + 72 + 72 + 102. \\
&:= 2^7 + 5^2 + 5^2 + 5^2 + 8^2 + 10^2 = 27 + 52 + 52 + 52 + 82 + 102.
\end{aligned}$$

$$\begin{aligned}
369 &:= 2^3 + 2^4 + 2^6 + 9^2 + 10^2 + 10^2 = 23 + 24 + 26 + 92 + 102 + 102. \\
&:= 2^4 + 2^6 + 3^3 + 9^2 + 9^2 + 10^2 = 24 + 26 + 33 + 92 + 92 + 102. \\
&:= 2^5 + 2^5 + 3^3 + 6^2 + 11^2 + 11^2 = 25 + 25 + 33 + 62 + 112 + 112. \\
&:= 2^5 + 2^6 + 3^2 + 8^2 + 10^2 + 10^2 = 25 + 26 + 32 + 82 + 102 + 102. \\
&:= 2^5 + 2^6 + 4^2 + 6^2 + 10^2 + 11^2 = 25 + 26 + 42 + 62 + 102 + 112. \\
&:= 2^5 + 2^6 + 4^2 + 7^2 + 8^2 + 12^2 = 25 + 26 + 42 + 72 + 82 + 122.
\end{aligned}$$

$$\begin{aligned}
374 &:= 2^2 + 2^2 + 3^4 + 8^2 + 10^2 + 11^2 = 22 + 22 + 34 + 82 + 102 + 112. \\
&:= 2^2 + 3^2 + 3^4 + 6^2 + 10^2 + 12^2 = 22 + 32 + 34 + 62 + 102 + 122. \\
&:= 2^2 + 4^3 + 4^3 + 7^2 + 7^2 + 12^2 = 22 + 43 + 43 + 72 + 72 + 122. \\
&:= 2^3 + 4^2 + 5^2 + 5^3 + 10^2 + 10^2 = 23 + 42 + 52 + 53 + 102 + 102. \\
&:= 2^3 + 5^2 + 5^3 + 6^2 + 6^2 + 12^2 = 23 + 52 + 53 + 62 + 62 + 122. \\
&:= 3^2 + 3^2 + 3^3 + 4^3 + 11^2 + 12^2 = 32 + 32 + 33 + 43 + 112 + 122. \\
&:= 3^2 + 3^3 + 5^3 + 7^2 + 8^2 + 10^2 = 32 + 33 + 53 + 72 + 82 + 102. \\
&:= 3^2 + 4^2 + 4^3 + 4^3 + 10^2 + 11^2 = 32 + 42 + 43 + 43 + 102 + 112. \\
&:= 3^3 + 4^2 + 5^2 + 5^3 + 9^2 + 10^2 = 33 + 42 + 52 + 53 + 92 + 102. \\
&:= 3^3 + 4^2 + 5^3 + 6^2 + 7^2 + 11^2 = 33 + 42 + 53 + 62 + 72 + 112. \\
&:= 4^3 + 5^3 + 6^2 + 6^2 + 7^2 + 8^2 = 43 + 53 + 62 + 62 + 72 + 82.
\end{aligned}$$

$$\begin{aligned}
376 &:= 2^2 + 2^5 + 3^3 + 5^2 + 12^2 + 12^2 = 22 + 25 + 33 + 52 + 122 + 122. \\
&:= 2^4 + 3^2 + 3^4 + 7^2 + 10^2 + 11^2 = 24 + 32 + 34 + 72 + 102 + 112. \\
&:= 2^4 + 3^3 + 4^3 + 5^2 + 10^2 + 12^2 = 24 + 33 + 43 + 52 + 102 + 122. \\
&:= 2^5 + 5^2 + 5^3 + 7^2 + 8^2 + 9^2 = 25 + 52 + 53 + 72 + 82 + 92.
\end{aligned}$$

$$\begin{aligned}
378 &:= 2^4 + 2^5 + 4^3 + 8^2 + 9^2 + 11^2 = 24 + 25 + 43 + 82 + 92 + 112. \\
&:= 2^4 + 2^6 + 3^2 + 8^2 + 9^2 + 12^2 = 24 + 26 + 32 + 82 + 92 + 122.
\end{aligned}$$

$$380 := 2^4 + 2^5 + 2^5 + 10^2 + 10^2 + 10^2 = 24 + 25 + 25 + 102 + 102 + 102.$$

$$\begin{aligned}
383 &:= 2^2 + 3^2 + 5^3 + 8^2 + 9^2 + 10^2 = 22 + 32 + 53 + 82 + 92 + 102. \\
&:= 2^2 + 4^2 + 5^3 + 6^2 + 9^2 + 11^2 = 22 + 42 + 53 + 62 + 92 + 112. \\
&:= 2^2 + 5^2 + 5^3 + 6^2 + 7^2 + 12^2 = 22 + 52 + 53 + 62 + 72 + 122. \\
&:= 3^2 + 4^2 + 5^2 + 5^3 + 8^2 + 12^2 = 32 + 42 + 52 + 53 + 82 + 122. \\
&:= 2^2 + 2^4 + 4^3 + 6^2 + 11^2 + 12^2 = 22 + 24 + 43 + 62 + 112 + 122. \\
&:= 2^3 + 3^4 + 4^2 + 6^2 + 10^2 + 12^2 = 23 + 34 + 42 + 62 + 102 + 122. \\
&:= 2^3 + 4^3 + 4^3 + 7^2 + 10^2 + 10^2 = 23 + 43 + 43 + 72 + 102 + 102. \\
&:= 2^3 + 4^3 + 4^3 + 8^2 + 8^2 + 11^2 = 23 + 43 + 43 + 82 + 82 + 112. \\
&:= 2^4 + 4^2 + 5^3 + 8^2 + 8^2 + 10^2 = 24 + 42 + 53 + 82 + 82 + 102. \\
&:= 2^4 + 5^2 + 5^3 + 7^2 + 7^2 + 11^2 = 24 + 52 + 53 + 72 + 72 + 112. \\
&:= 3^3 + 3^3 + 3^3 + 4^2 + 12^2 + 12^2 = 33 + 33 + 33 + 42 + 122 + 122. \\
&:= 3^3 + 3^3 + 4^3 + 5^2 + 11^2 + 11^2 = 33 + 33 + 43 + 52 + 112 + 112. \\
&:= 3^3 + 3^4 + 4^2 + 6^2 + 9^2 + 12^2 = 33 + 34 + 42 + 62 + 92 + 122. \\
&:= 3^3 + 4^3 + 4^3 + 7^2 + 9^2 + 10^2 = 33 + 43 + 43 + 72 + 92 + 102.
\end{aligned}$$

$$\begin{aligned}
387 &:= 2^3 + 2^5 + 4^3 + 9^2 + 9^2 + 11^2 = 23 + 25 + 43 + 92 + 92 + 112. \\
&:= 2^3 + 2^6 + 3^2 + 8^2 + 11^2 + 11^2 = 23 + 26 + 32 + 82 + 112 + 112. \\
&:= 2^3 + 2^6 + 3^2 + 9^2 + 9^2 + 12^2 = 23 + 26 + 32 + 92 + 92 + 122. \\
&:= 2^3 + 2^6 + 5^2 + 5^2 + 11^2 + 12^2 = 23 + 26 + 52 + 52 + 112 + 122. \\
&:= 2^4 + 2^4 + 4^3 + 7^2 + 11^2 + 11^2 = 24 + 24 + 43 + 72 + 112 + 112. \\
&:= 2^5 + 3^3 + 3^3 + 6^2 + 11^2 + 12^2 = 25 + 33 + 33 + 62 + 112 + 122. \\
&:= 2^5 + 3^3 + 4^3 + 8^2 + 10^2 + 10^2 = 25 + 33 + 43 + 82 + 102 + 102. \\
&:= 2^5 + 3^4 + 5^2 + 7^2 + 10^2 + 10^2 = 25 + 34 + 52 + 72 + 102 + 102. \\
&:= 2^5 + 3^4 + 5^2 + 8^2 + 8^2 + 11^2 = 25 + 34 + 52 + 82 + 82 + 112. \\
&:= 2^5 + 3^4 + 6^2 + 6^2 + 9^2 + 11^2 = 25 + 34 + 62 + 62 + 92 + 112. \\
&:= 2^6 + 3^3 + 4^2 + 6^2 + 10^2 + 12^2 = 26 + 33 + 42 + 62 + 102 + 122. \\
&:= 2^6 + 4^2 + 4^3 + 9^2 + 9^2 + 9^2 = 26 + 42 + 43 + 92 + 92 + 92. \\
&:= 2^6 + 4^3 + 5^2 + 7^2 + 8^2 + 11^2 = 26 + 43 + 52 + 72 + 82 + 112. \\
&:= 2^7 + 4^2 + 7^2 + 7^2 + 8^2 + 9^2 = 27 + 42 + 72 + 72 + 82 + 92. \\
&:= 2^7 + 5^2 + 5^2 + 8^2 + 8^2 + 9^2 = 27 + 52 + 52 + 82 + 82 + 92. \\
&:= 2^7 + 5^2 + 6^2 + 6^2 + 9^2 + 9^2 = 27 + 52 + 62 + 62 + 92 + 92. \\
&:= 2^7 + 5^2 + 6^2 + 7^2 + 7^2 + 10^2 = 27 + 52 + 62 + 72 + 72 + 102.
\end{aligned}$$

$$\begin{aligned}
389 &:= 2^4 + 2^4 + 2^5 + 9^2 + 10^2 + 12^2 = 24 + 24 + 25 + 92 + 102 + 122. \\
&:= 2^5 + 2^6 + 6^2 + 6^2 + 10^2 + 11^2 = 25 + 26 + 62 + 62 + 102 + 112. \\
&:= 2^5 + 2^6 + 6^2 + 7^2 + 8^2 + 12^2 = 25 + 26 + 62 + 72 + 82 + 122.
\end{aligned}$$

$$\begin{aligned}
394 &:= 2^2 + 3^2 + 3^4 + 10^2 + 10^2 + 10^2 = 22 + 32 + 34 + 102 + 102 + 102. \\
&:= 2^2 + 3^4 + 4^2 + 7^2 + 10^2 + 12^2 = 22 + 34 + 42 + 72 + 102 + 122. \\
&:= 2^2 + 4^3 + 4^3 + 9^2 + 9^2 + 10^2 = 22 + 43 + 43 + 92 + 92 + 102. \\
&:= 2^3 + 3^2 + 4^3 + 5^2 + 12^2 + 12^2 = 23 + 32 + 43 + 52 + 122 + 122. \\
&:= 2^3 + 4^2 + 5^3 + 8^2 + 9^2 + 10^2 = 23 + 42 + 53 + 82 + 92 + 102. \\
&:= 2^3 + 5^2 + 5^3 + 6^2 + 10^2 + 10^2 = 23 + 52 + 53 + 62 + 102 + 102. \\
&:= 3^2 + 4^3 + 4^3 + 6^2 + 10^2 + 11^2 = 32 + 43 + 43 + 62 + 102 + 112. \\
&:= 3^2 + 4^3 + 4^3 + 7^2 + 8^2 + 12^2 = 32 + 43 + 43 + 72 + 82 + 122. \\
&:= 3^3 + 4^2 + 5^3 + 8^2 + 9^2 + 9^2 = 33 + 42 + 53 + 82 + 92 + 92. \\
&:= 3^3 + 5^2 + 5^3 + 6^2 + 9^2 + 10^2 = 33 + 52 + 53 + 62 + 92 + 102. \\
&:= 3^3 + 5^3 + 6^2 + 6^2 + 7^2 + 11^2 = 33 + 53 + 62 + 62 + 72 + 112. \\
&:= 3^4 + 4^2 + 4^2 + 4^2 + 11^2 + 12^2 = 34 + 42 + 42 + 42 + 112 + 122. \\
&:= 4^2 + 4^3 + 4^3 + 5^2 + 9^2 + 12^2 = 42 + 43 + 43 + 52 + 92 + 122.
\end{aligned}$$

$$\begin{aligned}
396 &:= 2^2 + 2^3 + 2^5 + 8^2 + 12^2 + 12^2 = 22 + 23 + 25 + 82 + 122 + 122. \\
&:= 2^3 + 2^4 + 4^3 + 8^2 + 10^2 + 12^2 = 23 + 24 + 43 + 82 + 102 + 122. \\
&:= 2^4 + 3^3 + 4^3 + 8^2 + 9^2 + 12^2 = 24 + 33 + 43 + 82 + 92 + 122. \\
&:= 2^4 + 3^4 + 4^2 + 9^2 + 9^2 + 11^2 = 24 + 34 + 42 + 92 + 92 + 112. \\
&:= 2^4 + 3^4 + 5^2 + 7^2 + 9^2 + 12^2 = 24 + 34 + 52 + 72 + 92 + 122. \\
&:= 2^5 + 3^2 + 4^3 + 7^2 + 11^2 + 11^2 = 25 + 32 + 43 + 72 + 112 + 112. \\
&:= 2^6 + 3^2 + 3^2 + 7^2 + 11^2 + 12^2 = 26 + 32 + 32 + 72 + 112 + 122.
\end{aligned}$$

$$\begin{aligned}
398 &:= 2^3 + 2^4 + 2^5 + 10^2 + 11^2 + 11^2 = 23 + 24 + 25 + 102 + 112 + 112. \\
&:= 2^4 + 2^5 + 3^3 + 9^2 + 11^2 + 11^2 = 24 + 25 + 33 + 92 + 112 + 112. \\
&:= 2^4 + 2^6 + 4^2 + 9^2 + 10^2 + 11^2 = 24 + 26 + 42 + 92 + 102 + 112. \\
&:= 2^4 + 2^6 + 5^2 + 7^2 + 10^2 + 12^2 = 24 + 26 + 52 + 72 + 102 + 122. \\
&:= 2^5 + 2^5 + 3^2 + 9^2 + 10^2 + 12^2 = 25 + 25 + 32 + 92 + 102 + 122.
\end{aligned}$$

$$\begin{aligned}
403 &:= 2^2 + 5^2 + 5^3 + 7^2 + 10^2 + 10^2 = 22 + 52 + 53 + 72 + 102 + 102. \\
&:= 2^2 + 5^2 + 5^3 + 8^2 + 8^2 + 11^2 = 22 + 52 + 53 + 82 + 82 + 112. \\
&:= 2^2 + 5^3 + 6^2 + 6^2 + 9^2 + 11^2 = 22 + 53 + 62 + 62 + 92 + 112. \\
&:= 3^2 + 5^2 + 5^3 + 6^2 + 8^2 + 12^2 = 32 + 52 + 53 + 62 + 82 + 122. \\
&:= 4^2 + 4^2 + 5^2 + 5^3 + 10^2 + 11^2 = 42 + 42 + 52 + 53 + 102 + 112.
\end{aligned}$$

$$\begin{aligned}
405 &:= 2^2 + 2^2 + 2^5 + 10^2 + 11^2 + 12^2 = 22 + 22 + 25 + 102 + 112 + 122. \\
&:= 2^2 + 2^4 + 4^3 + 10^2 + 10^2 + 11^2 = 22 + 24 + 43 + 102 + 102 + 112. \\
&:= 2^3 + 2^3 + 4^3 + 9^2 + 10^2 + 12^2 = 23 + 23 + 43 + 92 + 102 + 122. \\
&:= 2^3 + 3^3 + 4^3 + 8^2 + 11^2 + 11^2 = 23 + 33 + 43 + 82 + 112 + 112. \\
&:= 2^3 + 3^3 + 4^3 + 9^2 + 9^2 + 12^2 = 23 + 33 + 43 + 92 + 92 + 122. \\
&:= 2^3 + 3^4 + 4^2 + 10^2 + 10^2 + 10^2 = 23 + 34 + 42 + 102 + 102 + 102. \\
&:= 2^3 + 3^4 + 5^2 + 7^2 + 11^2 + 11^2 = 23 + 34 + 52 + 72 + 112 + 112. \\
&:= 2^3 + 3^4 + 6^2 + 6^2 + 10^2 + 12^2 = 23 + 34 + 62 + 62 + 102 + 122. \\
&:= 2^4 + 5^3 + 6^2 + 8^2 + 8^2 + 10^2 = 24 + 53 + 62 + 82 + 82 + 102. \\
&:= 3^3 + 3^3 + 3^3 + 6^2 + 12^2 + 12^2 = 33 + 33 + 33 + 62 + 122 + 122. \\
&:= 3^3 + 3^4 + 4^2 + 9^2 + 10^2 + 10^2 = 33 + 34 + 42 + 92 + 102 + 102. \\
&:= 3^3 + 3^4 + 5^2 + 8^2 + 8^2 + 12^2 = 33 + 34 + 52 + 82 + 82 + 122. \\
&:= 3^3 + 3^4 + 6^2 + 6^2 + 9^2 + 12^2 = 33 + 34 + 62 + 62 + 92 + 122. \\
&:= 3^4 + 4^3 + 7^2 + 7^2 + 9^2 + 9^2 = 34 + 43 + 72 + 72 + 92 + 92.
\end{aligned}$$

$$\begin{aligned}
407 &:= 2^5 + 3^3 + 3^3 + 10^2 + 10^2 + 11^2 = 25 + 33 + 33 + 102 + 102 + 112. \\
&:= 2^5 + 3^4 + 7^2 + 8^2 + 9^2 + 10^2 = 25 + 34 + 72 + 82 + 92 + 102. \\
&:= 2^6 + 3^3 + 4^2 + 10^2 + 10^2 + 10^2 = 26 + 33 + 42 + 102 + 102 + 102. \\
&:= 2^6 + 3^3 + 5^2 + 7^2 + 11^2 + 11^2 = 26 + 33 + 52 + 72 + 112 + 112. \\
&:= 2^6 + 3^3 + 6^2 + 6^2 + 10^2 + 12^2 = 26 + 33 + 62 + 62 + 102 + 122. \\
&:= 2^6 + 4^3 + 6^2 + 9^2 + 9^2 + 9^2 = 26 + 43 + 62 + 92 + 92 + 92. \\
&:= 2^6 + 4^3 + 7^2 + 7^2 + 9^2 + 10^2 = 26 + 43 + 72 + 72 + 92 + 102. \\
&:= 2^7 + 6^2 + 7^2 + 7^2 + 8^2 + 9^2 = 27 + 62 + 72 + 72 + 82 + 92.
\end{aligned}$$

$$\begin{aligned}
409 &:= 2^5 + 2^6 + 7^2 + 8^2 + 10^2 + 10^2 = 25 + 26 + 72 + 82 + 102 + 102. \\
&:= 2^5 + 2^6 + 8^2 + 8^2 + 8^2 + 11^2 = 25 + 26 + 82 + 82 + 82 + 112.
\end{aligned}$$

$$\begin{aligned}
414 &:= 2^2 + 3^4 + 6^2 + 7^2 + 10^2 + 12^2 = 22 + 34 + 62 + 72 + 102 + 122. \\
&:= 2^3 + 5^3 + 6^2 + 8^2 + 9^2 + 10^2 = 23 + 53 + 62 + 82 + 92 + 102. \\
&:= 3^2 + 3^3 + 4^3 + 7^2 + 11^2 + 12^2 = 32 + 33 + 43 + 72 + 112 + 122. \\
&:= 3^2 + 3^4 + 4^2 + 8^2 + 10^2 + 12^2 = 32 + 34 + 42 + 82 + 102 + 122. \\
&:= 3^3 + 5^3 + 6^2 + 8^2 + 9^2 + 9^2 = 33 + 53 + 62 + 82 + 92 + 92. \\
&:= 3^3 + 5^3 + 7^2 + 7^2 + 8^2 + 10^2 = 33 + 53 + 72 + 72 + 82 + 102. \\
&:= 3^4 + 4^2 + 4^2 + 6^2 + 11^2 + 12^2 = 34 + 42 + 42 + 62 + 112 + 122. \\
&:= 4^2 + 4^3 + 4^3 + 7^2 + 10^2 + 11^2 = 42 + 43 + 43 + 72 + 102 + 112. \\
&:= 4^3 + 4^3 + 5^2 + 6^2 + 9^2 + 12^2 = 43 + 43 + 52 + 62 + 92 + 122.
\end{aligned}$$

$$\begin{aligned}
416 &:= 2^2 + 2^6 + 5^2 + 9^2 + 11^2 + 11^2 = 22 + 26 + 52 + 92 + 112 + 112. \\
&:= 2^3 + 2^4 + 3^3 + 10^2 + 11^2 + 12^2 = 23 + 24 + 33 + 102 + 112 + 122. \\
&:= 2^4 + 3^3 + 3^3 + 9^2 + 11^2 + 12^2 = 24 + 33 + 33 + 92 + 112 + 122. \\
&:= 2^4 + 3^4 + 6^2 + 9^2 + 9^2 + 11^2 = 24 + 34 + 62 + 92 + 92 + 112. \\
&:= 2^4 + 3^4 + 7^2 + 7^2 + 10^2 + 11^2 = 24 + 34 + 72 + 72 + 102 + 112.
\end{aligned}$$

$$\begin{aligned}
418 &:= 2^4 + 2^6 + 6^2 + 9^2 + 10^2 + 11^2 = 24 + 26 + 62 + 92 + 102 + 112. \\
&:= 2^4 + 2^6 + 7^2 + 8^2 + 9^2 + 12^2 = 24 + 26 + 72 + 82 + 92 + 122. \\
&:= 2^5 + 2^5 + 5^2 + 8^2 + 11^2 + 12^2 = 25 + 25 + 52 + 82 + 112 + 122.
\end{aligned}$$

$$\begin{aligned}
423 &:= 2^2 + 2^2 + 3^3 + 10^2 + 12^2 + 12^2 = 22 + 22 + 33 + 102 + 122 + 122. \\
&:= 2^2 + 3^2 + 4^3 + 9^2 + 11^2 + 12^2 = 22 + 32 + 43 + 92 + 112 + 122. \\
&:= 2^2 + 5^3 + 7^2 + 8^2 + 9^2 + 10^2 = 22 + 53 + 72 + 82 + 92 + 102. \\
&:= 3^2 + 5^2 + 5^3 + 8^2 + 10^2 + 10^2 = 32 + 52 + 53 + 82 + 102 + 102. \\
&:= 4^2 + 4^2 + 5^3 + 8^2 + 9^2 + 11^2 = 42 + 42 + 53 + 82 + 92 + 112. \\
&:= 4^2 + 5^2 + 5^3 + 6^2 + 10^2 + 11^2 = 42 + 52 + 53 + 62 + 102 + 112. \\
&:= 4^2 + 5^2 + 5^3 + 7^2 + 8^2 + 12^2 = 42 + 52 + 53 + 72 + 82 + 122.
\end{aligned}$$

$$\begin{aligned}
425 &:= 2^3 + 3^3 + 3^3 + 11^2 + 11^2 + 11^2 = 23 + 33 + 33 + 112 + 112 + 112. \\
&:= 2^3 + 3^4 + 6^2 + 10^2 + 10^2 + 10^2 = 23 + 34 + 62 + 102 + 102 + 102. \\
&:= 2^3 + 3^4 + 8^2 + 8^2 + 8^2 + 12^2 = 23 + 34 + 82 + 82 + 82 + 122. \\
&:= 2^4 + 4^2 + 4^3 + 8^2 + 11^2 + 12^2 = 24 + 42 + 43 + 82 + 112 + 122. \\
&:= 3^3 + 3^3 + 3^3 + 10^2 + 10^2 + 12^2 = 33 + 33 + 33 + 102 + 102 + 122. \\
&:= 3^3 + 3^4 + 6^2 + 9^2 + 10^2 + 10^2 = 33 + 34 + 62 + 92 + 102 + 102.
\end{aligned}$$

$$\begin{aligned}
427 &:= 2^3 + 2^6 + 7^2 + 8^2 + 11^2 + 11^2 = 23 + 26 + 72 + 82 + 112 + 112. \\
&:= 2^3 + 2^6 + 7^2 + 9^2 + 9^2 + 12^2 = 23 + 26 + 72 + 92 + 92 + 122. \\
&:= 2^4 + 2^5 + 4^2 + 11^2 + 11^2 + 11^2 = 24 + 25 + 42 + 112 + 112 + 112. \\
&:= 2^6 + 3^3 + 6^2 + 10^2 + 10^2 + 10^2 = 26 + 33 + 62 + 102 + 102 + 102. \\
&:= 2^6 + 3^3 + 8^2 + 8^2 + 8^2 + 12^2 = 26 + 33 + 82 + 82 + 82 + 122.
\end{aligned}$$

$$\begin{aligned}
434 &:= 2^2 + 3^4 + 7^2 + 10^2 + 10^2 + 10^2 = 22 + 34 + 72 + 102 + 102 + 102. \\
&:= 2^2 + 3^4 + 8^2 + 8^2 + 10^2 + 11^2 = 22 + 34 + 82 + 82 + 102 + 112. \\
&:= 2^3 + 2^3 + 3^2 + 11^2 + 12^2 + 12^2 = 23 + 23 + 32 + 112 + 122 + 122. \\
&:= 2^3 + 4^2 + 4^3 + 9^2 + 11^2 + 12^2 = 23 + 42 + 43 + 92 + 112 + 122. \\
&:= 2^3 + 4^3 + 5^2 + 7^2 + 12^2 + 12^2 = 23 + 43 + 52 + 72 + 122 + 122. \\
&:= 3^2 + 3^4 + 6^2 + 8^2 + 10^2 + 12^2 = 32 + 34 + 62 + 82 + 102 + 122. \\
&:= 3^4 + 4^2 + 4^2 + 10^2 + 10^2 + 11^2 = 34 + 42 + 42 + 102 + 102 + 112. \\
&:= 3^4 + 4^2 + 6^2 + 6^2 + 11^2 + 12^2 = 34 + 42 + 62 + 62 + 112 + 122. \\
&:= 4^3 + 4^3 + 5^2 + 9^2 + 10^2 + 10^2 = 43 + 43 + 52 + 92 + 102 + 102. \\
&:= 4^3 + 4^3 + 6^2 + 7^2 + 10^2 + 11^2 = 43 + 43 + 62 + 72 + 102 + 112. \\
&:= 4^3 + 4^3 + 7^2 + 7^2 + 8^2 + 12^2 = 43 + 43 + 72 + 72 + 82 + 122.
\end{aligned}$$

$$\begin{aligned}
436 &:= 2^4 + 2^4 + 4^2 + 10^2 + 12^2 + 12^2 = 24 + 24 + 42 + 102 + 122 + 122. \\
&:= 2^5 + 3^3 + 5^2 + 8^2 + 12^2 + 12^2 = 25 + 33 + 52 + 82 + 122 + 122. \\
&:= 2^5 + 4^3 + 7^2 + 7^2 + 11^2 + 11^2 = 25 + 43 + 72 + 72 + 112 + 112. \\
&:= 2^6 + 3^2 + 7^2 + 7^2 + 11^2 + 12^2 = 26 + 32 + 72 + 72 + 112 + 122.
\end{aligned}$$

$$438 := 2^5 + 2^5 + 7^2 + 9^2 + 10^2 + 12^2 = 25 + 25 + 72 + 92 + 102 + 122.$$

$$\begin{aligned}
443 &:= 3^2 + 5^3 + 8^2 + 8^2 + 9^2 + 10^2 = 32 + 53 + 82 + 82 + 92 + 102. \\
&:= 4^2 + 5^3 + 6^2 + 8^2 + 9^2 + 11^2 = 42 + 53 + 62 + 82 + 92 + 112. \\
&:= 5^2 + 5^3 + 6^2 + 6^2 + 10^2 + 11^2 = 52 + 53 + 62 + 62 + 102 + 112. \\
&:= 5^2 + 5^3 + 6^2 + 7^2 + 8^2 + 12^2 = 52 + 53 + 62 + 72 + 82 + 122.
\end{aligned}$$

$$\begin{aligned}
445 &:= 2^4 + 3^3 + 4^2 + 11^2 + 11^2 + 12^2 = 24 + 33 + 42 + 112 + 112 + 122. \\
&:= 2^4 + 4^3 + 6^2 + 8^2 + 11^2 + 12^2 = 24 + 43 + 62 + 82 + 112 + 122. \\
&:= 2^5 + 3^2 + 4^2 + 10^2 + 12^2 + 12^2 = 25 + 32 + 42 + 102 + 122 + 122.
\end{aligned}$$

$$447 := 2^4 + 2^5 + 6^2 + 11^2 + 11^2 + 11^2 = 24 + 25 + 62 + 112 + 112 + 112.$$

$$454 := 2^2 + 2^4 + 5^2 + 11^2 + 12^2 + 12^2 = 22 + 24 + 52 + 112 + 122 + 122.$$

$$:= 2^3 + 4^3 + 6^2 + 9^2 + 11^2 + 12^2 = 23 + 43 + 62 + 92 + 112 + 122.$$

$$:= 3^2 + 3^4 + 8^2 + 10^2 + 10^2 + 10^2 = 32 + 34 + 82 + 102 + 102 + 102.$$

$$:= 3^2 + 3^4 + 9^2 + 9^2 + 9^2 + 11^2 = 32 + 34 + 92 + 92 + 92 + 112.$$

$$:= 3^3 + 4^3 + 7^2 + 7^2 + 11^2 + 12^2 = 33 + 43 + 72 + 72 + 112 + 122.$$

$$:= 3^4 + 4^2 + 6^2 + 10^2 + 10^2 + 11^2 = 34 + 42 + 62 + 102 + 102 + 112.$$

$$:= 3^4 + 4^2 + 7^2 + 8^2 + 10^2 + 12^2 = 34 + 42 + 72 + 82 + 102 + 122.$$

$$:= 3^4 + 5^2 + 5^2 + 9^2 + 11^2 + 11^2 = 34 + 52 + 52 + 92 + 112 + 112.$$

$$:= 3^4 + 6^2 + 6^2 + 6^2 + 11^2 + 12^2 = 34 + 62 + 62 + 62 + 112 + 122.$$

$$:= 4^3 + 4^3 + 8^2 + 9^2 + 9^2 + 10^2 = 43 + 43 + 82 + 92 + 92 + 102.$$

$$456 := 2^3 + 2^5 + 8^2 + 8^2 + 12^2 + 12^2 = 23 + 25 + 82 + 82 + 122 + 122.$$

$$:= 2^4 + 2^4 + 6^2 + 10^2 + 12^2 + 12^2 = 24 + 24 + 62 + 102 + 122 + 122.$$

$$:= 2^6 + 3^2 + 9^2 + 9^2 + 10^2 + 11^2 = 26 + 32 + 92 + 92 + 102 + 112.$$

$$:= 2^6 + 5^2 + 5^2 + 10^2 + 11^2 + 11^2 = 26 + 52 + 52 + 102 + 112 + 112.$$

$$463 := 2^2 + 4^3 + 7^2 + 9^2 + 11^2 + 12^2 = 22 + 43 + 72 + 92 + 112 + 122.$$

$$:= 3^2 + 4^3 + 5^2 + 10^2 + 11^2 + 12^2 = 32 + 43 + 52 + 102 + 112 + 122.$$

$$:= 5^2 + 5^3 + 7^2 + 8^2 + 10^2 + 10^2 = 52 + 53 + 72 + 82 + 102 + 102.$$

$$:= 5^2 + 5^3 + 8^2 + 8^2 + 8^2 + 11^2 = 52 + 53 + 82 + 82 + 82 + 112.$$

$$:= 5^3 + 6^2 + 6^2 + 8^2 + 9^2 + 11^2 = 53 + 62 + 62 + 82 + 92 + 112.$$

$$465 := 2^2 + 2^5 + 8^2 + 10^2 + 11^2 + 12^2 = 22 + 25 + 82 + 102 + 112 + 122.$$

$$:= 2^4 + 3^3 + 6^2 + 11^2 + 11^2 + 12^2 = 24 + 33 + 62 + 112 + 112 + 122.$$

$$:= 2^4 + 4^3 + 8^2 + 10^2 + 10^2 + 11^2 = 24 + 43 + 82 + 102 + 102 + 112.$$

$$:= 2^5 + 3^2 + 6^2 + 10^2 + 12^2 + 12^2 = 25 + 32 + 62 + 102 + 122 + 122.$$

$$474 := 2^3 + 2^3 + 7^2 + 11^2 + 12^2 + 12^2 = 23 + 23 + 72 + 112 + 122 + 122.$$

$$:= 2^3 + 4^3 + 9^2 + 10^2 + 10^2 + 11^2 = 23 + 43 + 92 + 102 + 102 + 112.$$

$$:= 3^3 + 4^3 + 9^2 + 9^2 + 10^2 + 11^2 = 33 + 43 + 92 + 92 + 102 + 112.$$

$$:= 3^4 + 6^2 + 6^2 + 10^2 + 10^2 + 11^2 = 34 + 62 + 62 + 102 + 102 + 112.$$

$$:= 3^4 + 6^2 + 7^2 + 8^2 + 10^2 + 12^2 = 34 + 62 + 72 + 82 + 102 + 122.$$

$$476 := 2^4 + 2^4 + 10^2 + 10^2 + 10^2 + 12^2 = 24 + 24 + 102 + 102 + 102 + 122.$$

$$:= 2^4 + 2^4 + 9^2 + 11^2 + 11^2 + 11^2 = 24 + 24 + 92 + 112 + 112 + 112.$$

$$:= 2^6 + 5^2 + 8^2 + 9^2 + 11^2 + 11^2 = 26 + 52 + 82 + 92 + 112 + 112.$$

$$:= 2^6 + 5^2 + 9^2 + 9^2 + 9^2 + 12^2 = 26 + 52 + 92 + 92 + 92 + 122.$$

$$:= 2^6 + 7^2 + 7^2 + 7^2 + 11^2 + 12^2 = 26 + 72 + 72 + 72 + 112 + 122.$$

$$\begin{aligned}
483 &:= 2^2 + 3^3 + 8^2 + 10^2 + 12^2 + 12^2 = 22 + 33 + 82 + 102 + 122 + 122. \\
&:= 3^2 + 4^3 + 8^2 + 9^2 + 11^2 + 12^2 = 32 + 43 + 82 + 92 + 112 + 122. \\
&:= 4^3 + 5^2 + 5^2 + 9^2 + 12^2 + 12^2 = 43 + 52 + 52 + 92 + 122 + 122. \\
&:= 5^3 + 7^2 + 8^2 + 8^2 + 9^2 + 10^2 = 53 + 72 + 82 + 82 + 92 + 102.
\end{aligned}$$

$$\begin{aligned}
485 &:= 2^4 + 3^3 + 10^2 + 10^2 + 11^2 + 11^2 = 24 + 33 + 102 + 102 + 112 + 112. \\
&:= 2^5 + 3^2 + 10^2 + 10^2 + 10^2 + 12^2 = 25 + 32 + 102 + 102 + 102 + 122. \\
&:= 2^5 + 3^2 + 9^2 + 11^2 + 11^2 + 11^2 = 25 + 32 + 92 + 112 + 112 + 112. \\
&:= 2^5 + 4^2 + 7^2 + 10^2 + 12^2 + 12^2 = 25 + 42 + 72 + 102 + 122 + 122.
\end{aligned}$$

$$492 := 2^2 + 2^2 + 11^2 + 11^2 + 11^2 + 11^2 = 22 + 22 + 112 + 112 + 112 + 112.$$

$$\begin{aligned}
494 &:= 2^4 + 3^2 + 9^2 + 10^2 + 12^2 + 12^2 = 24 + 32 + 92 + 102 + 122 + 122. \\
&:= 3^4 + 7^2 + 8^2 + 10^2 + 10^2 + 10^2 = 34 + 72 + 82 + 102 + 102 + 102. \\
&:= 3^4 + 7^2 + 9^2 + 9^2 + 9^2 + 11^2 = 34 + 72 + 92 + 92 + 92 + 112. \\
&:= 3^4 + 8^2 + 8^2 + 8^2 + 10^2 + 11^2 = 34 + 82 + 82 + 82 + 102 + 112.
\end{aligned}$$

$$496 := 2^6 + 7^2 + 9^2 + 9^2 + 10^2 + 11^2 = 26 + 72 + 92 + 92 + 102 + 112.$$

$$\begin{aligned}
503 &:= 2^3 + 3^2 + 10^2 + 11^2 + 11^2 + 12^2 = 23 + 32 + 102 + 112 + 112 + 122. \\
&:= 3^2 + 3^3 + 9^2 + 11^2 + 11^2 + 12^2 = 32 + 33 + 92 + 112 + 112 + 122. \\
&:= 4^2 + 4^3 + 9^2 + 10^2 + 11^2 + 11^2 = 42 + 43 + 92 + 102 + 112 + 112. \\
&:= 4^3 + 5^2 + 7^2 + 10^2 + 11^2 + 12^2 = 43 + 52 + 72 + 102 + 112 + 122.
\end{aligned}$$

$$505 := 2^5 + 6^2 + 7^2 + 10^2 + 12^2 + 12^2 = 25 + 62 + 72 + 102 + 122 + 122.$$

$$514 := 2^4 + 5^2 + 8^2 + 11^2 + 12^2 + 12^2 = 24 + 52 + 82 + 112 + 122 + 122.$$

$$\begin{aligned}
523 &:= 2^3 + 5^2 + 9^2 + 11^2 + 12^2 + 12^2 = 23 + 52 + 92 + 112 + 122 + 122. \\
&:= 4^3 + 6^2 + 9^2 + 10^2 + 11^2 + 11^2 = 43 + 62 + 92 + 102 + 112 + 112. \\
&:= 4^3 + 7^2 + 8^2 + 9^2 + 11^2 + 12^2 = 43 + 72 + 82 + 92 + 112 + 122.
\end{aligned}$$

$$\begin{aligned}
525 &:= 2^5 + 7^2 + 10^2 + 10^2 + 10^2 + 12^2 = 25 + 72 + 102 + 102 + 102 + 122. \\
&:= 2^5 + 7^2 + 9^2 + 11^2 + 11^2 + 11^2 = 25 + 72 + 92 + 112 + 112 + 112. \\
&:= 2^5 + 8^2 + 8^2 + 10^2 + 11^2 + 12^2 = 25 + 82 + 82 + 102 + 112 + 122.
\end{aligned}$$

$$532 := 3^2 + 4^2 + 11^2 + 11^2 + 11^2 + 12^2 = 32 + 42 + 112 + 112 + 112 + 122.$$

$$534 := 2^4 + 7^2 + 9^2 + 10^2 + 12^2 + 12^2 = 24 + 72 + 92 + 102 + 122 + 122.$$

$$\begin{aligned}
543 &:= 2^3 + 7^2 + 10^2 + 11^2 + 11^2 + 12^2 = 23 + 72 + 102 + 112 + 112 + 122. \\
&:= 3^3 + 7^2 + 9^2 + 11^2 + 11^2 + 12^2 = 33 + 72 + 92 + 112 + 112 + 122. \\
&:= 3^3 + 8^2 + 8^2 + 10^2 + 12^2 + 12^2 = 33 + 82 + 82 + 102 + 122 + 122.
\end{aligned}$$

$$\begin{aligned}
552 &:= 2^2 + 8^2 + 11^2 + 11^2 + 11^2 + 11^2 = 22 + 82 + 112 + 112 + 112 + 112. \\
&:= 2^2 + 9^2 + 9^2 + 11^2 + 11^2 + 12^2 = 22 + 92 + 92 + 112 + 112 + 122. \\
&:= 3^2 + 6^2 + 11^2 + 11^2 + 11^2 + 12^2 = 32 + 62 + 112 + 112 + 112 + 122. \\
&:= 3^2 + 10^2 + 10^2 + 11^2 + 11^2 + 11^2 = 32 + 102 + 102 + 112 + 112 + 112. \\
&:= 4^2 + 7^2 + 11^2 + 11^2 + 11^2 + 12^2 = 42 + 72 + 112 + 112 + 112 + 122.
\end{aligned}$$

$$\begin{aligned}
592 &:= 5^2 + 9^2 + 10^2 + 11^2 + 11^2 + 12^2 = 52 + 92 + 102 + 112 + 112 + 122. \\
&:= 6^2 + 7^2 + 11^2 + 11^2 + 11^2 + 12^2 = 62 + 72 + 112 + 112 + 112 + 122.
\end{aligned}$$

$$\begin{aligned}
612 &:= 7^2 + 10^2 + 10^2 + 11^2 + 11^2 + 11^2 = 72 + 102 + 102 + 112 + 112 + 112. \\
&:= 8^2 + 8^2 + 11^2 + 11^2 + 11^2 + 11^2 = 82 + 82 + 112 + 112 + 112 + 112. \\
&:= 8^2 + 9^2 + 9^2 + 11^2 + 11^2 + 12^2 = 82 + 92 + 92 + 112 + 112 + 122. \\
&:= 9^2 + 9^2 + 9^2 + 9^2 + 12^2 + 12^2 = 92 + 92 + 92 + 92 + 122 + 122.
\end{aligned}$$

5 Seven Terms Equalities Expressions

This section deals with seven terms equality expressions, where we have considered only positive expressions with both powers and bases bigger than one.

$$168 := 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 = 22 + 22 + 24 + 24 + 25 + 25 + 26.$$

$$173 := 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 3^2 = 22 + 23 + 23 + 23 + 23 + 27 + 32.$$

$$177 := 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 = 22 + 22 + 25 + 25 + 25 + 26 + 32.$$

$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^2 = 23 + 23 + 23 + 24 + 26 + 26 + 32.$$

$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 3^4 = 23 + 23 + 24 + 24 + 24 + 25 + 34.$$

$$179 := 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^3 = 23 + 24 + 24 + 24 + 25 + 26 + 33.$$

$$180 := 2^2 + 2^2 + 2^2 + 2^2 + 2^7 + 3^2 + 3^3 = 22 + 22 + 22 + 22 + 27 + 32 + 33.$$

$$182 := 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 3^2 + 3^4 = 22 + 22 + 22 + 24 + 26 + 32 + 34.$$

$$184 := 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 4^3 = 22 + 22 + 23 + 23 + 25 + 26 + 43.$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 4^2 = 23 + 23 + 23 + 23 + 23 + 27 + 42.$$

$$186 := 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 3^2 + 3^4 = 23 + 23 + 24 + 25 + 25 + 32 + 34.$$

$$188 := 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 4^2 = 22 + 23 + 25 + 25 + 25 + 26 + 42.$$

$$:= 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 = 23 + 24 + 25 + 25 + 26 + 32 + 33.$$

$$191 := 2^2 + 2^2 + 2^2 + 2^3 + 2^7 + 3^3 + 4^2 = 22 + 22 + 22 + 23 + 27 + 33 + 42.$$

$$193 := 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^7 + 5^2 = 22 + 22 + 23 + 23 + 24 + 27 + 52.$$

$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 3^4 + 4^2 = 22 + 22 + 23 + 24 + 26 + 34 + 42.$$

$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^7 + 3^2 + 4^2 = 22 + 22 + 24 + 24 + 27 + 32 + 42.$$

$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 5^3 = 22 + 23 + 23 + 24 + 24 + 24 + 53.$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 3^4 + 4^3 = 23 + 23 + 23 + 23 + 24 + 34 + 43.$$

$$\begin{aligned}
195 &:= 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 3^3 + 4^2 = 22 + 22 + 24 + 26 + 26 + 33 + 42. \\
&:= 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 3^3 + 4^3 = 22 + 22 + 25 + 25 + 25 + 33 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 3^3 + 4^3 = 23 + 23 + 23 + 24 + 26 + 33 + 43. \\
197 &:= 2^2 + 2^3 + 2^4 + 2^4 + 2^6 + 2^6 + 5^2 = 22 + 23 + 24 + 24 + 26 + 26 + 52. \\
200 &:= 2^2 + 2^2 + 2^2 + 2^4 + 3^3 + 3^4 + 4^3 = 22 + 22 + 22 + 24 + 33 + 34 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 3^2 + 3^2 + 3^4 + 3^4 = 22 + 23 + 23 + 32 + 32 + 34 + 34. \\
201 &:= 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 5^2 = 24 + 25 + 25 + 25 + 25 + 25 + 52. \\
202 &:= 2^2 + 2^2 + 2^5 + 2^7 + 3^2 + 3^2 + 4^2 = 22 + 22 + 25 + 27 + 32 + 32 + 42. \\
&:= 2^2 + 2^2 + 2^5 + 3^3 + 3^3 + 3^3 + 3^4 = 22 + 22 + 25 + 33 + 33 + 33 + 34. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 3^2 + 5^3 = 22 + 23 + 23 + 24 + 25 + 32 + 53. \\
&:= 2^2 + 2^3 + 2^6 + 3^2 + 3^2 + 3^3 + 3^4 = 22 + 23 + 26 + 32 + 32 + 33 + 34. \\
&:= 2^2 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 = 22 + 24 + 27 + 32 + 32 + 32 + 33. \\
204 &:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 4^3 + 4^3 = 22 + 23 + 24 + 24 + 25 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^7 + 4^2 + 4^2 = 22 + 23 + 24 + 24 + 27 + 42 + 42. \\
&:= 2^2 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 = 22 + 26 + 26 + 32 + 32 + 33 + 33. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 6^2 = 23 + 23 + 23 + 23 + 23 + 27 + 62. \\
&:= 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 = 24 + 24 + 26 + 32 + 32 + 32 + 34. \\
206 &:= 2^2 + 2^3 + 2^5 + 2^6 + 2^6 + 3^2 + 5^2 = 22 + 23 + 25 + 26 + 26 + 32 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 3^4 + 5^2 = 22 + 24 + 24 + 25 + 25 + 34 + 52. \\
&:= 2^3 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 4^3 = 23 + 24 + 25 + 25 + 33 + 33 + 43. \\
208 &:= 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 6^2 = 22 + 23 + 25 + 25 + 25 + 26 + 62. \\
&:= 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 4^2 + 4^2 = 24 + 24 + 24 + 26 + 26 + 42 + 42. \\
&:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 4^2 + 4^3 = 24 + 24 + 25 + 25 + 25 + 42 + 43. \\
211 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^7 + 3^3 + 6^2 = 22 + 22 + 22 + 23 + 27 + 33 + 62. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 3^3 + 3^3 + 5^3 = 23 + 23 + 23 + 23 + 33 + 33 + 53. \\
&:= 2^3 + 2^3 + 2^3 + 3^2 + 3^4 + 3^4 + 4^2 = 23 + 23 + 23 + 32 + 34 + 34 + 42. \\
213 &:= 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 3^4 + 6^2 = 22 + 22 + 23 + 24 + 26 + 34 + 62. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^7 + 3^2 + 6^2 = 22 + 22 + 24 + 24 + 27 + 32 + 62. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 7^2 = 22 + 23 + 23 + 23 + 23 + 27 + 72. \\
&:= 2^2 + 2^3 + 2^5 + 2^5 + 3^2 + 4^3 + 4^3 = 22 + 23 + 25 + 25 + 32 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^5 + 2^7 + 3^2 + 4^2 + 4^2 = 22 + 23 + 25 + 27 + 32 + 42 + 42. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 3^4 + 4^2 + 4^3 = 22 + 24 + 24 + 24 + 34 + 42 + 43. \\
213 &:= 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 4^2 + 5^3 = 23 + 23 + 23 + 24 + 25 + 42 + 53. \\
&:= 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 3^3 + 5^2 = 23 + 23 + 23 + 27 + 32 + 33 + 52. \\
&:= 2^3 + 2^3 + 2^6 + 3^2 + 3^3 + 3^4 + 4^2 = 23 + 23 + 26 + 32 + 33 + 34 + 42. \\
&:= 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 = 23 + 24 + 27 + 32 + 32 + 33 + 42. \\
&:= 2^3 + 2^4 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 = 23 + 24 + 33 + 33 + 33 + 33 + 34. \\
&:= 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 = 25 + 26 + 32 + 32 + 32 + 32 + 34.
\end{aligned}$$

$$\begin{aligned}
215 &:= 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 3^3 + 6^2 = 22 + 22 + 24 + 26 + 26 + 33 + 62. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 5^2 = 22 + 25 + 25 + 25 + 32 + 34 + 52. \\
&:= 2^3 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 4^2 = 23 + 26 + 26 + 32 + 33 + 33 + 42. \\
&:= 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 3^4 + 4^2 = 24 + 24 + 25 + 33 + 33 + 34 + 42. \\
&:= 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 = 24 + 26 + 33 + 33 + 33 + 33 + 33.
\end{aligned}$$

$$\begin{aligned}
217 &:= 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 7^2 = 22 + 22 + 25 + 25 + 25 + 26 + 72. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 7^2 = 23 + 23 + 23 + 24 + 26 + 26 + 72. \\
&:= 2^3 + 2^3 + 2^5 + 2^6 + 2^6 + 4^2 + 5^2 = 23 + 23 + 25 + 26 + 26 + 42 + 52. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 4^3 + 5^2 = 24 + 24 + 24 + 24 + 26 + 43 + 52. \\
&:= 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 + 4^2 = 24 + 25 + 26 + 26 + 32 + 42 + 42. \\
&:= 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 4^2 + 4^3 = 25 + 25 + 25 + 25 + 32 + 42 + 43.
\end{aligned}$$

$$218 := 2^2 + 2^2 + 2^2 + 3^3 + 3^3 + 3^3 + 5^3 = 22 + 22 + 22 + 33 + 33 + 33 + 53.$$

$$\begin{aligned}
220 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^7 + 3^3 + 7^2 = 22 + 22 + 22 + 22 + 27 + 33 + 72. \\
&:= 2^2 + 2^2 + 2^2 + 2^6 + 4^2 + 4^3 + 4^3 = 22 + 22 + 22 + 26 + 42 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 3^2 + 3^4 + 3^4 + 5^2 = 22 + 22 + 24 + 32 + 34 + 34 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 23 + 23 + 43 + 43 + 43. \\
&:= 2^2 + 2^3 + 3^2 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 23 + 32 + 33 + 33 + 34 + 43.
\end{aligned}$$

$$\begin{aligned}
222 &:= 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 3^4 + 7^2 = 22 + 22 + 22 + 24 + 26 + 34 + 72. \\
&:= 2^2 + 2^2 + 2^2 + 2^5 + 2^7 + 5^2 + 5^2 = 22 + 22 + 22 + 25 + 27 + 52 + 52. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 5^2 + 5^3 = 22 + 22 + 24 + 24 + 25 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^5 + 2^7 + 3^2 + 3^2 + 6^2 = 22 + 22 + 25 + 27 + 32 + 32 + 62. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 3^4 + 4^3 + 5^2 = 22 + 23 + 23 + 25 + 34 + 43 + 52. \\
&:= 2^2 + 2^4 + 2^5 + 3^2 + 3^4 + 4^2 + 4^3 = 22 + 24 + 25 + 32 + 34 + 42 + 43. \\
&:= 2^2 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 = 22 + 26 + 32 + 33 + 33 + 33 + 43. \\
&:= 2^4 + 2^4 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 = 24 + 24 + 32 + 32 + 33 + 34 + 43.
\end{aligned}$$

$$\begin{aligned}
224 &:= 2^2 + 2^3 + 2^4 + 2^4 + 2^7 + 4^2 + 6^2 = 22 + 23 + 24 + 24 + 27 + 42 + 62. \\
&:= 2^2 + 2^3 + 2^5 + 2^6 + 3^3 + 4^3 + 5^2 = 22 + 23 + 25 + 26 + 33 + 43 + 52. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 4^2 + 4^3 + 4^3 = 23 + 23 + 25 + 25 + 42 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^5 + 2^7 + 4^2 + 4^2 + 4^2 = 23 + 23 + 25 + 27 + 42 + 42 + 42. \\
&:= 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 = 25 + 25 + 32 + 33 + 33 + 34 + 42.
\end{aligned}$$

$$\begin{aligned}
226 &:= 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 3^4 + 7^2 = 23 + 23 + 24 + 25 + 25 + 34 + 72. \\
&:= 2^3 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 5^2 = 23 + 25 + 25 + 25 + 34 + 42 + 52. \\
&:= 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 4^3 + 5^2 = 24 + 24 + 25 + 26 + 32 + 43 + 52.
\end{aligned}$$

$$\begin{aligned}
228 &:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 8^2 = 22 + 24 + 24 + 25 + 25 + 26 + 82. \\
&:= 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 7^2 = 23 + 24 + 25 + 25 + 26 + 33 + 72. \\
&:= 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 4^2 + 6^2 = 24 + 24 + 24 + 26 + 26 + 42 + 62. \\
&:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 4^3 + 6^2 = 24 + 24 + 25 + 25 + 25 + 43 + 62. \\
&:= 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 5^2 = 25 + 25 + 25 + 26 + 33 + 42 + 52.
\end{aligned}$$

$$229 := 2^2 + 2^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 22 + 33 + 34 + 34 + 42 + 42.$$

$$:= 2^2 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 5^3 = 22 + 26 + 32 + 32 + 32 + 32 + 53.$$

$$231 := 2^2 + 2^2 + 2^5 + 2^5 + 3^2 + 5^2 + 5^3 = 22 + 22 + 25 + 25 + 32 + 52 + 53.$$

$$:= 2^2 + 2^2 + 2^7 + 3^3 + 3^3 + 4^2 + 5^2 = 22 + 22 + 27 + 33 + 33 + 42 + 52.$$

$$:= 2^2 + 2^3 + 2^4 + 3^4 + 3^4 + 4^2 + 5^2 = 22 + 23 + 24 + 34 + 34 + 42 + 52.$$

$$:= 2^2 + 2^4 + 2^4 + 3^3 + 3^3 + 4^2 + 5^3 = 22 + 24 + 24 + 33 + 33 + 42 + 53.$$

$$:= 2^3 + 2^3 + 2^3 + 3^2 + 3^4 + 3^4 + 6^2 = 23 + 23 + 23 + 32 + 34 + 34 + 62.$$

$$:= 2^3 + 2^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 23 + 23 + 33 + 33 + 34 + 42 + 43.$$

$$:= 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 = 25 + 32 + 32 + 32 + 33 + 34 + 43.$$

$$233 := 2^2 + 2^2 + 2^4 + 2^4 + 2^7 + 4^2 + 7^2 = 22 + 22 + 24 + 24 + 27 + 42 + 72.$$

$$:= 2^2 + 2^3 + 2^4 + 2^7 + 3^3 + 5^2 + 5^2 = 22 + 23 + 24 + 27 + 33 + 52 + 52.$$

$$:= 2^2 + 2^3 + 2^5 + 2^7 + 3^2 + 4^2 + 6^2 = 22 + 23 + 25 + 27 + 32 + 42 + 62.$$

$$:= 2^2 + 2^4 + 2^4 + 2^4 + 3^4 + 4^3 + 6^2 = 22 + 24 + 24 + 24 + 34 + 43 + 62.$$

$$:= 2^2 + 2^4 + 2^6 + 3^3 + 3^4 + 4^2 + 5^2 = 22 + 24 + 26 + 33 + 34 + 42 + 52.$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 8^2 = 23 + 23 + 23 + 23 + 27 + 32 + 82.$$

$$233 := 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 5^3 + 6^2 = 23 + 23 + 23 + 24 + 25 + 53 + 62.$$

$$:= 2^3 + 2^3 + 2^6 + 3^2 + 3^3 + 3^4 + 6^2 = 23 + 23 + 26 + 32 + 33 + 34 + 62.$$

$$:= 2^3 + 2^4 + 2^4 + 2^4 + 3^3 + 5^2 + 5^3 = 23 + 24 + 24 + 24 + 33 + 52 + 53.$$

$$:= 2^3 + 2^4 + 2^5 + 3^4 + 4^2 + 4^2 + 4^3 = 23 + 24 + 25 + 34 + 42 + 42 + 43.$$

$$:= 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 6^2 = 23 + 24 + 27 + 32 + 32 + 33 + 62.$$

$$:= 2^3 + 2^6 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 = 23 + 26 + 33 + 33 + 33 + 42 + 43.$$

$$235 := 2^3 + 2^4 + 2^4 + 2^6 + 3^4 + 5^2 + 5^2 = 23 + 24 + 24 + 26 + 34 + 52 + 52.$$

$$:= 2^3 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 6^2 = 23 + 26 + 26 + 32 + 33 + 33 + 62.$$

$$:= 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 5^2 + 5^2 = 24 + 24 + 24 + 27 + 32 + 52 + 52.$$

$$:= 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 3^4 + 6^2 = 24 + 24 + 25 + 33 + 33 + 34 + 62.$$

$$:= 2^4 + 2^5 + 2^6 + 3^3 + 4^2 + 4^2 + 4^3 = 24 + 25 + 26 + 33 + 42 + 42 + 43.$$

$$:= 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 4^3 + 5^2 = 25 + 25 + 26 + 32 + 32 + 43 + 52.$$

$$237 := 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 8^2 = 22 + 25 + 25 + 25 + 26 + 32 + 82.$$

$$:= 2^3 + 2^3 + 2^5 + 2^6 + 2^6 + 5^2 + 6^2 = 23 + 23 + 25 + 26 + 26 + 52 + 62.$$

$$:= 2^4 + 2^4 + 2^6 + 2^6 + 3^3 + 5^2 + 5^2 = 24 + 24 + 26 + 26 + 33 + 52 + 52.$$

$$:= 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 + 6^2 = 24 + 25 + 26 + 26 + 32 + 42 + 62.$$

$$:= 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 4^3 + 6^2 = 25 + 25 + 25 + 25 + 32 + 43 + 62.$$

$$238 := 2^2 + 2^2 + 2^3 + 2^3 + 4^3 + 5^2 + 5^3 = 22 + 22 + 23 + 23 + 43 + 52 + 53.$$

$$:= 2^2 + 2^2 + 2^4 + 3^2 + 4^2 + 4^3 + 5^3 = 22 + 22 + 24 + 32 + 42 + 43 + 53.$$

$$\begin{aligned}
240 &:= 2^2 + 2^2 + 2^2 + 2^6 + 4^3 + 4^3 + 6^2 = 22 + 22 + 22 + 26 + 43 + 43 + 62. \\
&:= 2^2 + 2^2 + 2^2 + 2^7 + 3^2 + 3^3 + 8^2 = 22 + 22 + 22 + 27 + 32 + 33 + 82. \\
&:= 2^2 + 2^3 + 2^3 + 3^2 + 3^4 + 3^4 + 7^2 = 22 + 23 + 23 + 32 + 34 + 34 + 72. \\
&:= 2^2 + 2^5 + 3^2 + 3^3 + 3^3 + 4^2 + 5^3 = 22 + 25 + 32 + 33 + 33 + 42 + 53. \\
&:= 2^2 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 22 + 33 + 33 + 33 + 33 + 43 + 43. \\
&:= 2^3 + 2^6 + 3^2 + 3^2 + 3^2 + 4^2 + 5^3 = 23 + 26 + 32 + 32 + 32 + 42 + 53. \\
&:= 2^3 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 5^2 = 23 + 32 + 32 + 33 + 34 + 34 + 52. \\
&:= 2^4 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 5^3 = 24 + 32 + 32 + 33 + 33 + 33 + 53.
\end{aligned}$$

$$\begin{aligned}
242 &:= 2^2 + 2^2 + 2^4 + 2^6 + 3^2 + 3^4 + 8^2 = 22 + 22 + 24 + 26 + 32 + 34 + 82. \\
&:= 2^2 + 2^2 + 2^5 + 2^7 + 3^2 + 4^2 + 7^2 = 22 + 22 + 25 + 27 + 32 + 42 + 72. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 5^3 + 7^2 = 22 + 23 + 23 + 24 + 25 + 53 + 72. \\
&:= 2^2 + 2^3 + 2^5 + 2^5 + 4^2 + 5^2 + 5^3 = 22 + 23 + 25 + 25 + 42 + 52 + 53. \\
&:= 2^2 + 2^3 + 2^6 + 3^2 + 3^3 + 3^4 + 7^2 = 22 + 23 + 26 + 32 + 33 + 34 + 72. \\
&:= 2^2 + 2^4 + 2^5 + 3^2 + 3^4 + 4^3 + 6^2 = 22 + 24 + 25 + 32 + 34 + 43 + 62. \\
&:= 2^2 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 7^2 = 22 + 24 + 27 + 32 + 32 + 33 + 72. \\
&:= 2^3 + 2^3 + 2^6 + 3^2 + 4^3 + 4^3 + 5^2 = 23 + 23 + 26 + 32 + 43 + 43 + 52. \\
&:= 2^3 + 2^4 + 2^5 + 3^2 + 3^3 + 5^2 + 5^3 = 23 + 24 + 25 + 32 + 33 + 52 + 53. \\
&:= 2^4 + 2^4 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 24 + 24 + 34 + 34 + 42 + 42 + 42. \\
&:= 2^4 + 2^6 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 = 24 + 26 + 32 + 32 + 42 + 43 + 43. \\
&:= 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 5^2 = 26 + 32 + 32 + 33 + 33 + 34 + 52.
\end{aligned}$$

$$\begin{aligned}
244 &:= 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 4^3 + 8^2 = 22 + 23 + 23 + 25 + 26 + 43 + 82. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^7 + 6^2 + 6^2 = 22 + 23 + 24 + 24 + 27 + 62 + 62. \\
&:= 2^2 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 7^2 = 22 + 26 + 26 + 32 + 33 + 33 + 72. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 4^3 + 4^3 + 6^2 = 23 + 23 + 25 + 25 + 43 + 43 + 62. \\
&:= 2^3 + 2^3 + 2^5 + 2^7 + 4^2 + 4^2 + 6^2 = 23 + 23 + 25 + 27 + 42 + 42 + 62. \\
&:= 2^3 + 2^5 + 2^6 + 3^2 + 3^4 + 5^2 + 5^2 = 23 + 25 + 26 + 32 + 34 + 52 + 52. \\
&:= 2^4 + 2^4 + 2^5 + 3^3 + 4^3 + 4^3 + 5^2 = 24 + 24 + 25 + 33 + 43 + 43 + 52. \\
&:= 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 7^2 = 24 + 24 + 26 + 32 + 32 + 34 + 72. \\
&:= 2^4 + 2^4 + 2^7 + 3^3 + 4^2 + 4^2 + 5^2 = 24 + 24 + 27 + 33 + 42 + 42 + 52. \\
&:= 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 5^2 + 5^2 = 24 + 25 + 27 + 32 + 32 + 52 + 52. \\
&:= 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^4 + 6^2 = 25 + 25 + 32 + 33 + 33 + 34 + 62.
\end{aligned}$$

$$\begin{aligned}
246 &:= 2^2 + 2^3 + 2^5 + 2^6 + 2^6 + 5^2 + 7^2 = 22 + 23 + 25 + 26 + 26 + 52 + 72. \\
&:= 2^3 + 2^5 + 2^5 + 2^5 + 3^4 + 5^2 + 6^2 = 23 + 25 + 25 + 25 + 34 + 52 + 62. \\
&:= 2^5 + 2^6 + 2^6 + 3^2 + 3^3 + 5^2 + 5^2 = 25 + 26 + 26 + 32 + 33 + 52 + 52.
\end{aligned}$$

$$247 := 2^2 + 3^2 + 3^2 + 3^2 + 3^3 + 4^3 + 5^3 = 22 + 32 + 32 + 32 + 33 + 43 + 53.$$

$$\begin{aligned}
248 &:= 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 4^2 + 8^2 = 23 + 25 + 25 + 25 + 26 + 42 + 82. \\
&:= 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 6^2 + 6^2 = 24 + 24 + 24 + 26 + 26 + 62 + 62. \\
&:= 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 5^2 + 6^2 = 25 + 25 + 25 + 26 + 33 + 52 + 62.
\end{aligned}$$

$$\begin{aligned}
249 &:= 2^2 + 2^2 + 3^3 + 3^4 + 3^4 + 4^2 + 6^2 = 22 + 22 + 33 + 34 + 34 + 42 + 62. \\
&:= 2^2 + 2^3 + 2^4 + 4^2 + 4^2 + 4^3 + 5^3 = 22 + 23 + 24 + 42 + 42 + 43 + 53. \\
251 &:= 2^2 + 2^2 + 2^3 + 2^7 + 3^3 + 4^2 + 8^2 = 22 + 22 + 23 + 27 + 33 + 42 + 82. \\
&:= 2^2 + 2^2 + 2^7 + 3^3 + 3^3 + 5^2 + 6^2 = 22 + 22 + 27 + 33 + 33 + 52 + 62. \\
&:= 2^2 + 2^3 + 2^4 + 3^4 + 3^4 + 5^2 + 6^2 = 22 + 23 + 24 + 34 + 34 + 52 + 62. \\
&:= 2^2 + 2^4 + 2^4 + 3^3 + 3^3 + 5^3 + 6^2 = 22 + 24 + 24 + 33 + 33 + 53 + 62. \\
&:= 2^3 + 2^3 + 2^3 + 3^4 + 3^4 + 4^2 + 7^2 = 23 + 23 + 23 + 34 + 34 + 42 + 72. \\
&:= 2^3 + 2^3 + 3^3 + 3^3 + 3^4 + 4^3 + 6^2 = 23 + 23 + 33 + 33 + 34 + 43 + 62. \\
&:= 2^3 + 2^5 + 3^3 + 3^3 + 4^2 + 4^2 + 5^3 = 23 + 25 + 33 + 33 + 42 + 42 + 53. \\
&:= 2^5 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 25 + 32 + 34 + 34 + 42 + 42 + 42. \\
253 &:= 2^2 + 2^2 + 2^4 + 2^4 + 2^7 + 6^2 + 7^2 = 22 + 22 + 24 + 24 + 27 + 62 + 72. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^7 + 5^2 + 8^2 = 22 + 23 + 23 + 24 + 27 + 52 + 82. \\
&:= 2^2 + 2^3 + 2^4 + 2^6 + 3^4 + 4^2 + 8^2 = 22 + 23 + 24 + 26 + 34 + 42 + 82. \\
&:= 2^2 + 2^3 + 2^5 + 2^5 + 4^3 + 4^3 + 7^2 = 22 + 23 + 25 + 25 + 43 + 43 + 72. \\
&:= 2^2 + 2^3 + 2^5 + 2^7 + 3^2 + 6^2 + 6^2 = 22 + 23 + 25 + 27 + 32 + 62 + 62. \\
&:= 2^2 + 2^3 + 2^5 + 2^7 + 4^2 + 4^2 + 7^2 = 22 + 23 + 25 + 27 + 42 + 42 + 72. \\
&:= 2^2 + 2^4 + 2^4 + 2^7 + 3^2 + 4^2 + 8^2 = 22 + 24 + 24 + 27 + 32 + 42 + 82. \\
&:= 2^2 + 2^4 + 2^6 + 3^3 + 3^4 + 5^2 + 6^2 = 22 + 24 + 26 + 33 + 34 + 52 + 62. \\
&:= 2^2 + 2^6 + 2^6 + 4^2 + 4^2 + 4^3 + 5^2 = 22 + 26 + 26 + 42 + 42 + 43 + 52. \\
&:= 2^3 + 2^3 + 2^3 + 2^7 + 3^3 + 5^2 + 7^2 = 23 + 23 + 23 + 27 + 33 + 52 + 72. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 5^3 + 8^2 = 23 + 23 + 24 + 24 + 24 + 53 + 82. \\
&:= 2^3 + 2^3 + 2^6 + 3^3 + 3^4 + 4^2 + 7^2 = 23 + 23 + 26 + 33 + 34 + 42 + 72. \\
&:= 2^3 + 2^4 + 2^5 + 3^4 + 4^2 + 4^3 + 6^2 = 23 + 24 + 25 + 34 + 42 + 43 + 62. \\
&:= 2^3 + 2^4 + 2^7 + 3^2 + 3^3 + 4^2 + 7^2 = 23 + 24 + 27 + 32 + 33 + 42 + 72. \\
&:= 2^3 + 2^6 + 3^3 + 3^3 + 3^3 + 4^3 + 6^2 = 23 + 26 + 33 + 33 + 33 + 43 + 62. \\
&:= 2^4 + 2^5 + 2^5 + 4^2 + 4^2 + 4^2 + 5^3 = 24 + 25 + 25 + 42 + 42 + 42 + 53. \\
&:= 2^5 + 2^5 + 3^2 + 3^3 + 4^3 + 4^3 + 5^2 = 25 + 25 + 32 + 33 + 43 + 43 + 52. \\
&:= 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 + 7^2 = 25 + 26 + 32 + 32 + 32 + 34 + 72. \\
&:= 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 5^2 = 25 + 27 + 32 + 33 + 42 + 42 + 52. \\
255 &:= 2^2 + 2^4 + 2^6 + 2^6 + 3^3 + 4^2 + 8^2 = 22 + 24 + 26 + 26 + 33 + 42 + 82. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 3^3 + 4^3 + 8^2 = 22 + 25 + 25 + 25 + 33 + 43 + 82. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 3^4 + 5^2 + 7^2 = 22 + 25 + 25 + 25 + 34 + 52 + 72. \\
&:= 2^3 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 + 7^2 = 23 + 26 + 26 + 33 + 33 + 42 + 72. \\
&:= 2^4 + 2^5 + 2^6 + 3^3 + 4^2 + 4^3 + 6^2 = 24 + 25 + 26 + 33 + 42 + 43 + 62. \\
257 &:= 2^3 + 2^4 + 2^4 + 2^6 + 2^6 + 5^2 + 8^2 = 23 + 24 + 24 + 26 + 26 + 52 + 82. \\
&:= 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 6^2 + 6^2 = 24 + 25 + 26 + 26 + 32 + 62 + 62. \\
&:= 2^4 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 7^2 = 24 + 25 + 26 + 26 + 42 + 42 + 72. \\
&:= 2^5 + 2^5 + 2^5 + 2^5 + 4^2 + 4^3 + 7^2 = 25 + 25 + 25 + 25 + 42 + 43 + 72. \\
258 &:= 2^2 + 2^2 + 2^4 + 3^2 + 4^3 + 5^3 + 6^2 = 22 + 22 + 24 + 32 + 43 + 53 + 62. \\
&:= 2^2 + 2^2 + 3^4 + 4^2 + 4^3 + 4^3 + 5^2 = 22 + 22 + 34 + 42 + 43 + 43 + 52. \\
&:= 2^3 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 + 5^3 = 23 + 32 + 32 + 33 + 42 + 43 + 53.
\end{aligned}$$

$$\begin{aligned}
260 &:= 2^2 + 2^2 + 2^4 + 3^3 + 3^4 + 4^3 + 8^2 = 22 + 22 + 24 + 33 + 34 + 43 + 82. \\
&:= 2^2 + 2^2 + 2^4 + 3^4 + 3^4 + 5^2 + 7^2 = 22 + 22 + 24 + 34 + 34 + 52 + 72. \\
&:= 2^2 + 2^3 + 2^6 + 3^2 + 5^2 + 5^2 + 5^3 = 22 + 23 + 26 + 32 + 52 + 52 + 53. \\
&:= 2^2 + 2^3 + 3^3 + 3^3 + 3^4 + 4^3 + 7^2 = 22 + 23 + 33 + 33 + 34 + 43 + 72. \\
&:= 2^2 + 2^5 + 3^2 + 3^3 + 3^3 + 5^3 + 6^2 = 22 + 25 + 32 + 33 + 33 + 53 + 62. \\
&:= 2^2 + 2^5 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 25 + 42 + 42 + 43 + 43 + 43. \\
&:= 2^2 + 2^7 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 27 + 42 + 42 + 42 + 42 + 43. \\
&:= 2^3 + 2^3 + 3^2 + 3^2 + 3^4 + 3^4 + 8^2 = 23 + 23 + 32 + 32 + 34 + 34 + 82. \\
&:= 2^3 + 2^3 + 3^3 + 4^3 + 4^3 + 4^3 + 5^2 = 23 + 23 + 33 + 43 + 43 + 43 + 52. \\
&:= 2^3 + 2^6 + 3^2 + 3^2 + 3^2 + 5^3 + 6^2 = 23 + 26 + 32 + 32 + 32 + 53 + 62. \\
&:= 2^4 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 24 + 32 + 33 + 42 + 43 + 43 + 43. \\
&:= 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 4^3 + 5^2 = 27 + 32 + 32 + 32 + 42 + 43 + 52. \\
&:= 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 + 5^2 = 32 + 33 + 33 + 33 + 34 + 43 + 52.
\end{aligned}$$

$$\begin{aligned}
262 &:= 2^2 + 2^2 + 2^5 + 2^7 + 3^2 + 6^2 + 7^2 = 22 + 22 + 25 + 27 + 32 + 62 + 72. \\
&:= 2^2 + 2^3 + 2^5 + 2^5 + 5^2 + 5^3 + 6^2 = 22 + 23 + 25 + 25 + 52 + 53 + 62. \\
&:= 2^2 + 2^4 + 2^5 + 3^4 + 4^2 + 4^3 + 7^2 = 22 + 24 + 25 + 34 + 42 + 43 + 72. \\
&:= 2^2 + 2^4 + 2^6 + 4^3 + 4^3 + 5^2 + 5^2 = 22 + 24 + 26 + 43 + 43 + 52 + 52. \\
&:= 2^2 + 2^5 + 2^7 + 3^2 + 3^2 + 4^2 + 8^2 = 22 + 25 + 27 + 32 + 32 + 42 + 82. \\
&:= 2^2 + 2^5 + 3^3 + 3^3 + 3^3 + 3^4 + 8^2 = 22 + 25 + 33 + 33 + 33 + 34 + 82. \\
&:= 2^2 + 2^6 + 3^3 + 3^3 + 3^3 + 4^3 + 7^2 = 22 + 26 + 33 + 33 + 33 + 43 + 72. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 3^2 + 5^3 + 8^2 = 23 + 23 + 24 + 25 + 32 + 53 + 82. \\
&:= 2^3 + 2^5 + 3^3 + 3^4 + 4^3 + 5^2 + 5^2 = 23 + 25 + 33 + 34 + 43 + 52 + 52. \\
&:= 2^3 + 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 8^2 = 23 + 26 + 32 + 32 + 33 + 34 + 82. \\
&:= 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 4^3 + 7^2 = 24 + 24 + 32 + 33 + 34 + 43 + 72. \\
&:= 2^4 + 2^4 + 3^4 + 3^4 + 4^2 + 4^2 + 6^2 = 24 + 24 + 34 + 34 + 42 + 42 + 62. \\
&:= 2^4 + 2^6 + 3^2 + 3^2 + 4^3 + 4^3 + 6^2 = 24 + 26 + 32 + 32 + 43 + 43 + 62. \\
&:= 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 8^2 = 24 + 27 + 32 + 32 + 32 + 33 + 82.
\end{aligned}$$

$$\begin{aligned}
264 &:= 2^3 + 2^3 + 2^5 + 2^7 + 4^2 + 6^2 + 6^2 = 23 + 23 + 25 + 27 + 42 + 62 + 62. \\
&:= 2^3 + 2^4 + 2^4 + 2^5 + 4^3 + 4^3 + 8^2 = 23 + 24 + 24 + 25 + 43 + 43 + 82. \\
&:= 2^3 + 2^4 + 2^4 + 2^7 + 4^2 + 4^2 + 8^2 = 23 + 24 + 24 + 27 + 42 + 42 + 82. \\
&:= 2^4 + 2^4 + 2^7 + 3^3 + 4^2 + 5^2 + 6^2 = 24 + 24 + 27 + 33 + 42 + 52 + 62. \\
&:= 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 4^2 + 7^2 = 25 + 25 + 33 + 33 + 34 + 42 + 72. \\
&:= 2^5 + 2^6 + 3^3 + 3^3 + 4^3 + 5^2 + 5^2 = 25 + 26 + 33 + 33 + 43 + 52 + 52. \\
&:= 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 8^2 = 26 + 26 + 32 + 32 + 33 + 33 + 82.
\end{aligned}$$

$$\begin{aligned}
266 &:= 2^3 + 2^5 + 2^6 + 2^6 + 3^2 + 5^2 + 8^2 = 23 + 25 + 26 + 26 + 32 + 52 + 82. \\
&:= 2^4 + 2^4 + 2^5 + 2^5 + 3^4 + 5^2 + 8^2 = 24 + 24 + 25 + 25 + 34 + 52 + 82. \\
&:= 2^4 + 2^4 + 2^5 + 2^6 + 4^3 + 5^2 + 7^2 = 24 + 24 + 25 + 26 + 43 + 52 + 72.
\end{aligned}$$

$$\begin{aligned}
267 &:= 2^2 + 3^2 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 = 22 + 32 + 34 + 42 + 42 + 42 + 53. \\
&:= 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 5^2 + 5^3 = 32 + 32 + 32 + 32 + 34 + 52 + 53.
\end{aligned}$$

$$268 := 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 6^2 + 8^2 = 23 + 25 + 25 + 25 + 26 + 62 + 82.$$

$$\begin{aligned} 269 &:= 2^2 + 2^2 + 3^3 + 3^4 + 3^4 + 6^2 + 6^2 = 22 + 22 + 33 + 34 + 34 + 62 + 62. \\ &:= 2^2 + 2^3 + 2^4 + 4^2 + 4^3 + 5^3 + 6^2 = 22 + 23 + 24 + 42 + 43 + 53 + 62. \\ &:= 2^2 + 2^6 + 3^2 + 3^2 + 3^2 + 5^3 + 7^2 = 22 + 26 + 32 + 32 + 32 + 53 + 72. \end{aligned}$$

$$\begin{aligned} 271 &:= 2^2 + 2^2 + 2^3 + 2^7 + 3^3 + 6^2 + 8^2 = 22 + 22 + 23 + 27 + 33 + 62 + 82. \\ &:= 2^2 + 2^2 + 2^5 + 2^5 + 5^2 + 5^3 + 7^2 = 22 + 22 + 25 + 25 + 52 + 53 + 72. \\ &:= 2^3 + 2^3 + 2^3 + 3^4 + 3^4 + 6^2 + 7^2 = 23 + 23 + 23 + 34 + 34 + 62 + 72. \\ &:= 2^3 + 2^3 + 2^6 + 4^2 + 5^2 + 5^2 + 5^3 = 23 + 23 + 26 + 42 + 52 + 52 + 53. \\ &:= 2^3 + 2^5 + 3^3 + 3^3 + 4^2 + 5^3 + 6^2 = 23 + 25 + 33 + 33 + 42 + 53 + 62. \\ &:= 2^4 + 2^6 + 3^2 + 4^2 + 4^2 + 5^2 + 5^3 = 24 + 26 + 32 + 42 + 42 + 52 + 53. \\ &:= 2^4 + 3^3 + 3^4 + 3^4 + 4^2 + 5^2 + 5^2 = 24 + 33 + 34 + 34 + 42 + 52 + 52. \\ &:= 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 + 7^2 = 25 + 32 + 32 + 33 + 34 + 43 + 72. \\ &:= 2^5 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 6^2 = 25 + 32 + 34 + 34 + 42 + 42 + 62. \end{aligned}$$

$$\begin{aligned} 273 &:= 2^2 + 2^3 + 2^4 + 2^6 + 3^4 + 6^2 + 8^2 = 22 + 23 + 24 + 26 + 34 + 62 + 82. \\ &:= 2^2 + 2^3 + 2^5 + 2^7 + 4^2 + 6^2 + 7^2 = 22 + 23 + 25 + 27 + 42 + 62 + 72. \\ &:= 2^2 + 2^4 + 2^4 + 2^7 + 3^2 + 6^2 + 8^2 = 22 + 24 + 24 + 27 + 32 + 62 + 82. \\ &:= 2^2 + 2^6 + 2^6 + 4^2 + 4^3 + 5^2 + 6^2 = 22 + 26 + 26 + 42 + 43 + 52 + 62. \\ &:= 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 7^2 + 8^2 = 23 + 23 + 23 + 23 + 27 + 72 + 82. \\ &:= 2^3 + 2^3 + 2^6 + 3^3 + 3^4 + 6^2 + 7^2 = 23 + 23 + 26 + 33 + 34 + 62 + 72. \\ &:= 2^3 + 2^4 + 2^5 + 3^4 + 4^3 + 6^2 + 6^2 = 23 + 24 + 25 + 34 + 43 + 62 + 62. \\ &:= 2^3 + 2^4 + 2^7 + 3^2 + 3^3 + 6^2 + 7^2 = 23 + 24 + 27 + 32 + 33 + 62 + 72. \\ &:= 2^3 + 2^5 + 2^5 + 3^2 + 4^3 + 4^3 + 8^2 = 23 + 25 + 25 + 32 + 43 + 43 + 82. \\ &:= 2^3 + 2^5 + 2^7 + 3^2 + 4^2 + 4^2 + 8^2 = 23 + 25 + 27 + 32 + 42 + 42 + 82. \\ &:= 2^4 + 2^4 + 2^4 + 3^4 + 4^2 + 4^3 + 8^2 = 24 + 24 + 24 + 34 + 42 + 43 + 82. \\ &:= 2^4 + 2^5 + 2^5 + 4^2 + 4^2 + 5^3 + 6^2 = 24 + 25 + 25 + 42 + 42 + 53 + 62. \\ &:= 2^4 + 2^7 + 3^3 + 3^3 + 5^2 + 5^2 + 5^2 = 24 + 27 + 33 + 33 + 52 + 52 + 52. \\ &:= 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 5^2 + 6^2 = 25 + 27 + 32 + 33 + 42 + 52 + 62. \end{aligned}$$

$$\begin{aligned} 275 &:= 2^2 + 2^4 + 2^6 + 2^6 + 3^3 + 6^2 + 8^2 = 22 + 24 + 26 + 26 + 33 + 62 + 82. \\ &:= 2^3 + 2^6 + 2^6 + 3^3 + 3^3 + 6^2 + 7^2 = 23 + 26 + 26 + 33 + 33 + 62 + 72. \\ &:= 2^4 + 2^4 + 2^4 + 2^7 + 5^2 + 5^2 + 7^2 = 24 + 24 + 24 + 27 + 52 + 52 + 72. \\ &:= 2^4 + 2^5 + 2^6 + 3^3 + 4^3 + 6^2 + 6^2 = 24 + 25 + 26 + 33 + 43 + 62 + 62. \\ &:= 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 5^2 + 8^2 = 25 + 25 + 25 + 32 + 34 + 52 + 82. \\ &:= 2^5 + 2^5 + 2^6 + 3^2 + 4^3 + 5^2 + 7^2 = 25 + 25 + 26 + 32 + 43 + 52 + 72. \end{aligned}$$

$$\begin{aligned} 277 &:= 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 7^2 + 8^2 = 22 + 25 + 25 + 25 + 26 + 72 + 82. \\ &:= 2^4 + 2^5 + 2^6 + 2^6 + 4^2 + 6^2 + 7^2 = 24 + 25 + 26 + 26 + 42 + 62 + 72. \\ &:= 2^5 + 2^5 + 2^5 + 2^5 + 4^3 + 6^2 + 7^2 = 25 + 25 + 25 + 25 + 43 + 62 + 72. \end{aligned}$$

$$\begin{aligned}
278 &:= 2^2 + 2^2 + 2^4 + 4^2 + 4^3 + 5^3 + 7^2 = 22 + 22 + 24 + 42 + 43 + 53 + 72. \\
&:= 2^2 + 2^2 + 3^3 + 3^3 + 3^3 + 5^3 + 8^2 = 22 + 22 + 33 + 33 + 33 + 53 + 82. \\
&:= 2^2 + 2^2 + 3^4 + 4^3 + 4^3 + 5^2 + 6^2 = 22 + 22 + 34 + 43 + 43 + 52 + 62. \\
&:= 2^2 + 2^3 + 3^3 + 4^3 + 5^2 + 5^2 + 5^3 = 22 + 23 + 33 + 43 + 52 + 52 + 53. \\
&:= 2^3 + 3^2 + 3^2 + 3^3 + 4^3 + 5^3 + 6^2 = 23 + 32 + 32 + 33 + 43 + 53 + 62. \\
&:= 2^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 5^3 = 23 + 34 + 42 + 42 + 42 + 42 + 53.
\end{aligned}$$

$$\begin{aligned}
280 &:= 2^2 + 2^2 + 2^2 + 2^7 + 3^3 + 7^2 + 8^2 = 22 + 22 + 22 + 27 + 33 + 72 + 82. \\
&:= 2^2 + 2^2 + 2^6 + 4^2 + 4^3 + 4^3 + 8^2 = 22 + 22 + 26 + 42 + 43 + 43 + 82. \\
&:= 2^2 + 2^3 + 2^3 + 3^4 + 3^4 + 7^2 + 7^2 = 22 + 23 + 23 + 34 + 34 + 72 + 72. \\
&:= 2^2 + 2^4 + 3^2 + 3^4 + 3^4 + 5^2 + 8^2 = 22 + 24 + 32 + 34 + 34 + 52 + 82. \\
&:= 2^2 + 2^5 + 3^3 + 3^3 + 4^2 + 5^3 + 7^2 = 22 + 25 + 33 + 33 + 42 + 53 + 72. \\
&:= 2^2 + 2^5 + 4^2 + 4^3 + 4^3 + 4^3 + 6^2 = 22 + 25 + 42 + 43 + 43 + 43 + 62. \\
&:= 2^2 + 2^7 + 3^2 + 4^3 + 5^2 + 5^2 + 5^2 = 22 + 27 + 32 + 43 + 52 + 52 + 52. \\
&:= 2^2 + 2^7 + 4^2 + 4^2 + 4^2 + 4^3 + 6^2 = 22 + 27 + 42 + 42 + 42 + 43 + 62. \\
&:= 2^3 + 2^3 + 2^3 + 4^3 + 4^3 + 4^3 + 8^2 = 23 + 23 + 23 + 43 + 43 + 43 + 82. \\
&:= 2^3 + 2^6 + 3^2 + 3^2 + 4^2 + 5^3 + 7^2 = 23 + 26 + 32 + 32 + 42 + 53 + 72. \\
&:= 2^3 + 3^2 + 3^3 + 3^3 + 3^4 + 4^3 + 8^2 = 23 + 32 + 33 + 33 + 34 + 43 + 82. \\
&:= 2^3 + 3^2 + 3^3 + 3^4 + 3^4 + 5^2 + 7^2 = 23 + 32 + 33 + 34 + 34 + 52 + 72. \\
&:= 2^4 + 2^4 + 3^2 + 4^3 + 5^2 + 5^2 + 5^3 = 24 + 24 + 32 + 43 + 52 + 52 + 53. \\
&:= 2^4 + 3^2 + 3^3 + 3^3 + 3^3 + 5^3 + 7^2 = 24 + 32 + 33 + 33 + 33 + 53 + 72. \\
&:= 2^4 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 + 6^2 = 24 + 32 + 33 + 43 + 43 + 43 + 62. \\
&:= 2^6 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 + 5^3 = 26 + 33 + 42 + 42 + 42 + 42 + 53. \\
&:= 2^7 + 3^2 + 3^2 + 3^2 + 4^3 + 5^2 + 6^2 = 27 + 32 + 32 + 32 + 43 + 52 + 62.
\end{aligned}$$

$$\begin{aligned}
282 &:= 2^2 + 2^2 + 2^4 + 2^6 + 3^4 + 7^2 + 8^2 = 22 + 22 + 24 + 26 + 34 + 72 + 82. \\
&:= 2^2 + 2^2 + 2^5 + 2^7 + 4^2 + 7^2 + 7^2 = 22 + 22 + 25 + 27 + 42 + 72 + 72. \\
&:= 2^2 + 2^2 + 2^5 + 2^7 + 5^2 + 5^2 + 8^2 = 22 + 22 + 25 + 27 + 52 + 52 + 82. \\
&:= 2^2 + 2^3 + 2^6 + 3^3 + 3^4 + 7^2 + 7^2 = 22 + 23 + 26 + 33 + 34 + 72 + 72. \\
&:= 2^2 + 2^4 + 2^4 + 2^5 + 5^2 + 5^3 + 8^2 = 22 + 24 + 24 + 25 + 52 + 53 + 82. \\
&:= 2^2 + 2^4 + 2^5 + 3^4 + 4^3 + 6^2 + 7^2 = 22 + 24 + 25 + 34 + 43 + 62 + 72. \\
&:= 2^2 + 2^4 + 2^7 + 3^2 + 3^3 + 7^2 + 7^2 = 22 + 24 + 27 + 32 + 33 + 72 + 72. \\
&:= 2^2 + 2^5 + 2^7 + 3^2 + 3^2 + 6^2 + 8^2 = 22 + 25 + 27 + 32 + 32 + 62 + 82. \\
&:= 2^3 + 2^3 + 2^5 + 3^4 + 4^3 + 5^2 + 8^2 = 23 + 23 + 25 + 34 + 43 + 52 + 82. \\
&:= 2^3 + 2^3 + 2^6 + 4^3 + 4^3 + 5^2 + 7^2 = 23 + 23 + 26 + 43 + 43 + 52 + 72. \\
&:= 2^3 + 2^4 + 2^5 + 3^3 + 5^2 + 5^3 + 7^2 = 23 + 24 + 25 + 33 + 52 + 53 + 72. \\
&:= 2^4 + 2^4 + 3^4 + 3^4 + 4^2 + 6^2 + 6^2 = 24 + 24 + 34 + 34 + 42 + 62 + 62. \\
&:= 2^4 + 2^5 + 3^2 + 3^4 + 4^2 + 4^3 + 8^2 = 24 + 25 + 32 + 34 + 42 + 43 + 82. \\
&:= 2^4 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 + 7^2 = 24 + 26 + 32 + 42 + 43 + 43 + 72. \\
&:= 2^5 + 2^5 + 3^3 + 4^2 + 5^2 + 5^2 + 5^3 = 25 + 25 + 33 + 42 + 52 + 52 + 53. \\
&:= 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 + 8^2 = 26 + 32 + 33 + 33 + 33 + 43 + 82. \\
&:= 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 5^2 + 7^2 = 26 + 32 + 33 + 33 + 34 + 52 + 72.
\end{aligned}$$

$$\begin{aligned}
284 &:= 2^2 + 2^6 + 2^6 + 3^3 + 3^3 + 7^2 + 7^2 = 22 + 26 + 26 + 33 + 33 + 72 + 72. \\
&:= 2^3 + 2^3 + 2^5 + 2^7 + 6^2 + 6^2 + 6^2 = 23 + 23 + 25 + 27 + 62 + 62 + 62. \\
&:= 2^3 + 2^4 + 2^4 + 2^7 + 4^2 + 6^2 + 8^2 = 23 + 24 + 24 + 27 + 42 + 62 + 82. \\
&:= 2^3 + 2^5 + 2^6 + 3^3 + 4^3 + 5^2 + 8^2 = 23 + 25 + 26 + 33 + 43 + 52 + 82. \\
&:= 2^3 + 2^5 + 2^6 + 3^4 + 5^2 + 5^2 + 7^2 = 23 + 25 + 26 + 34 + 52 + 52 + 72. \\
&:= 2^4 + 2^4 + 2^6 + 3^2 + 3^4 + 7^2 + 7^2 = 24 + 24 + 26 + 32 + 34 + 72 + 72. \\
&:= 2^4 + 2^4 + 2^7 + 3^3 + 5^2 + 6^2 + 6^2 = 24 + 24 + 27 + 33 + 52 + 62 + 62. \\
&:= 2^4 + 2^5 + 2^7 + 3^2 + 5^2 + 5^2 + 7^2 = 24 + 25 + 27 + 32 + 52 + 52 + 72. \\
&:= 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 6^2 + 7^2 = 25 + 25 + 33 + 33 + 34 + 62 + 72.
\end{aligned}$$

$$286 := 2^5 + 2^6 + 2^6 + 3^3 + 5^2 + 5^2 + 7^2 = 25 + 26 + 26 + 33 + 52 + 52 + 72.$$

$$\begin{aligned}
287 &:= 2^2 + 3^2 + 3^2 + 3^3 + 4^3 + 5^3 + 7^2 = 22 + 32 + 32 + 33 + 43 + 53 + 72. \\
&:= 2^2 + 3^2 + 3^4 + 4^2 + 4^2 + 5^3 + 6^2 = 22 + 32 + 34 + 42 + 42 + 53 + 62.
\end{aligned}$$

$$288 := 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 8^2 + 8^2 = 24 + 24 + 25 + 25 + 26 + 82 + 82.$$

$$\begin{aligned}
289 &:= 2^2 + 2^3 + 2^4 + 4^3 + 5^3 + 6^2 + 6^2 = 22 + 23 + 24 + 43 + 53 + 62 + 62. \\
&:= 2^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 8^2 = 22 + 33 + 34 + 34 + 42 + 42 + 82. \\
&:= 2^4 + 3^3 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 = 24 + 33 + 42 + 42 + 43 + 52 + 53. \\
&:= 2^5 + 3^2 + 3^2 + 4^3 + 5^2 + 5^2 + 5^3 = 25 + 32 + 32 + 43 + 52 + 52 + 53. \\
&:= 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 5^3 + 8^2 = 26 + 32 + 32 + 32 + 32 + 53 + 82.
\end{aligned}$$

$$\begin{aligned}
291 &:= 2^2 + 2^5 + 2^5 + 3^2 + 5^2 + 5^3 + 8^2 = 22 + 25 + 25 + 32 + 52 + 53 + 82. \\
&:= 2^2 + 2^7 + 3^3 + 3^3 + 4^2 + 5^2 + 8^2 = 22 + 27 + 33 + 33 + 42 + 52 + 82. \\
&:= 2^3 + 2^3 + 2^6 + 5^2 + 5^2 + 5^3 + 6^2 = 23 + 23 + 26 + 52 + 52 + 53 + 62. \\
&:= 2^3 + 2^4 + 3^4 + 3^4 + 4^2 + 5^2 + 8^2 = 23 + 24 + 34 + 34 + 42 + 52 + 82. \\
&:= 2^3 + 2^5 + 3^3 + 3^3 + 5^3 + 6^2 + 6^2 = 23 + 25 + 33 + 33 + 53 + 62 + 62. \\
&:= 2^3 + 2^7 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 = 23 + 27 + 42 + 43 + 52 + 52 + 52. \\
&:= 2^4 + 2^4 + 3^3 + 3^3 + 4^2 + 5^3 + 8^2 = 24 + 24 + 33 + 33 + 42 + 53 + 82. \\
&:= 2^4 + 2^6 + 3^2 + 4^2 + 5^2 + 5^3 + 6^2 = 24 + 26 + 32 + 42 + 52 + 53 + 62. \\
&:= 2^4 + 3^3 + 3^4 + 3^4 + 5^2 + 5^2 + 6^2 = 24 + 33 + 34 + 34 + 52 + 52 + 62. \\
&:= 2^5 + 3^2 + 3^4 + 3^4 + 4^2 + 6^2 + 6^2 = 25 + 32 + 34 + 34 + 42 + 62 + 62. \\
&:= 2^5 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 7^2 = 25 + 34 + 34 + 42 + 42 + 42 + 72. \\
&:= 2^6 + 3^4 + 4^2 + 4^2 + 4^3 + 5^2 + 5^2 = 26 + 34 + 42 + 42 + 43 + 52 + 52.
\end{aligned}$$

$$\begin{aligned}
293 &:= 2^2 + 2^3 + 2^5 + 2^7 + 6^2 + 6^2 + 7^2 = 22 + 23 + 25 + 27 + 62 + 62 + 72. \\
&:= 2^2 + 2^4 + 2^4 + 2^7 + 4^2 + 7^2 + 8^2 = 22 + 24 + 24 + 27 + 42 + 72 + 82. \\
&:= 2^2 + 2^6 + 2^6 + 4^3 + 5^2 + 6^2 + 6^2 = 22 + 26 + 26 + 43 + 52 + 62 + 62. \\
&:= 2^3 + 2^4 + 2^7 + 3^3 + 4^2 + 7^2 + 7^2 = 23 + 24 + 27 + 33 + 42 + 72 + 72. \\
&:= 2^3 + 2^4 + 2^7 + 3^3 + 5^2 + 5^2 + 8^2 = 23 + 24 + 27 + 33 + 52 + 52 + 82. \\
&:= 2^3 + 2^5 + 2^7 + 3^2 + 4^2 + 6^2 + 8^2 = 23 + 25 + 27 + 32 + 42 + 62 + 82. \\
&:= 2^4 + 2^4 + 2^4 + 3^4 + 4^3 + 6^2 + 8^2 = 24 + 24 + 24 + 34 + 43 + 62 + 82. \\
&:= 2^4 + 2^5 + 2^5 + 4^2 + 5^3 + 6^2 + 6^2 = 24 + 25 + 25 + 42 + 53 + 62 + 62. \\
&:= 2^4 + 2^6 + 3^3 + 3^4 + 4^2 + 5^2 + 8^2 = 24 + 26 + 33 + 34 + 42 + 52 + 82. \\
&:= 2^5 + 2^5 + 3^3 + 4^3 + 4^3 + 5^2 + 7^2 = 25 + 25 + 33 + 43 + 43 + 52 + 72. \\
&:= 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 7^2 + 7^2 = 25 + 26 + 32 + 32 + 34 + 72 + 72. \\
&:= 2^5 + 2^7 + 3^2 + 3^3 + 5^2 + 6^2 + 6^2 = 25 + 27 + 32 + 33 + 52 + 62 + 62. \\
&:= 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 5^2 + 7^2 = 25 + 27 + 33 + 42 + 42 + 52 + 72. \\
\\
297 &:= 2^4 + 2^5 + 2^6 + 2^6 + 6^2 + 6^2 + 7^2 = 24 + 25 + 26 + 26 + 62 + 62 + 72. \\
&:= 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 8^2 + 8^2 = 25 + 25 + 25 + 26 + 32 + 82 + 82. \\
\\
298 &:= 2^2 + 2^2 + 2^4 + 4^3 + 5^3 + 6^2 + 7^2 = 22 + 22 + 24 + 43 + 53 + 62 + 72. \\
&:= 2^2 + 2^3 + 2^3 + 4^3 + 5^2 + 5^3 + 8^2 = 22 + 23 + 23 + 43 + 52 + 53 + 82. \\
&:= 2^2 + 2^4 + 3^2 + 4^2 + 4^3 + 5^3 + 8^2 = 22 + 24 + 32 + 42 + 43 + 53 + 82. \\
&:= 2^3 + 3^2 + 3^3 + 4^2 + 4^3 + 5^3 + 7^2 = 23 + 32 + 33 + 42 + 43 + 53 + 72. \\
&:= 2^3 + 3^2 + 3^4 + 5^2 + 5^2 + 5^2 + 5^3 = 23 + 32 + 34 + 52 + 52 + 52 + 53. \\
&:= 2^3 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 + 6^2 = 23 + 34 + 42 + 42 + 42 + 53 + 62. \\
\\
300 &:= 2^2 + 2^2 + 2^6 + 4^3 + 4^3 + 6^2 + 8^2 = 22 + 22 + 26 + 43 + 43 + 62 + 82. \\
&:= 2^2 + 2^2 + 2^7 + 3^2 + 3^3 + 8^2 + 8^2 = 22 + 22 + 27 + 32 + 33 + 82 + 82. \\
&:= 2^2 + 2^3 + 2^6 + 5^2 + 5^2 + 5^3 + 7^2 = 22 + 23 + 26 + 52 + 52 + 53 + 72. \\
&:= 2^2 + 2^5 + 3^3 + 3^3 + 5^3 + 6^2 + 7^2 = 22 + 25 + 33 + 33 + 53 + 62 + 72. \\
&:= 2^2 + 2^5 + 4^3 + 4^3 + 4^3 + 6^2 + 6^2 = 22 + 25 + 43 + 43 + 43 + 62 + 62. \\
&:= 2^2 + 2^7 + 4^2 + 4^2 + 4^3 + 6^2 + 6^2 = 22 + 27 + 42 + 42 + 43 + 62 + 62. \\
&:= 2^3 + 2^3 + 3^2 + 3^4 + 3^4 + 7^2 + 8^2 = 23 + 23 + 32 + 34 + 34 + 72 + 82. \\
&:= 2^3 + 2^6 + 3^2 + 3^2 + 5^3 + 6^2 + 7^2 = 23 + 26 + 32 + 32 + 53 + 62 + 72. \\
&:= 2^4 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 7^2 = 24 + 33 + 42 + 43 + 43 + 43 + 72. \\
&:= 2^4 + 3^4 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 = 24 + 34 + 43 + 43 + 52 + 52 + 52. \\
&:= 2^5 + 3^2 + 3^3 + 3^3 + 4^2 + 5^3 + 8^2 = 25 + 32 + 33 + 33 + 42 + 53 + 82. \\
&:= 2^6 + 3^2 + 3^3 + 5^2 + 5^2 + 5^2 + 5^3 = 26 + 32 + 33 + 52 + 52 + 52 + 53. \\
&:= 2^6 + 3^3 + 4^2 + 4^2 + 4^2 + 5^3 + 6^2 = 26 + 33 + 42 + 42 + 42 + 53 + 62. \\
&:= 2^7 + 3^2 + 3^2 + 4^2 + 4^3 + 5^2 + 7^2 = 27 + 32 + 32 + 42 + 43 + 52 + 72. \\
&:= 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 + 8^2 = 33 + 33 + 33 + 33 + 43 + 43 + 82. \\
&:= 3^3 + 3^3 + 3^3 + 3^4 + 4^3 + 5^2 + 7^2 = 33 + 33 + 33 + 34 + 43 + 52 + 72.
\end{aligned}$$

$$\begin{aligned}
302 &:= 2^2 + 2^2 + 2^5 + 2^7 + 6^2 + 7^2 + 7^2 = 22 + 22 + 25 + 27 + 62 + 72 + 72. \\
&:= 2^2 + 2^4 + 2^6 + 3^2 + 3^4 + 8^2 + 8^2 = 22 + 24 + 26 + 32 + 34 + 82 + 82. \\
&:= 2^2 + 2^5 + 2^7 + 3^2 + 4^2 + 7^2 + 8^2 = 22 + 25 + 27 + 32 + 42 + 72 + 82. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 5^3 + 7^2 + 8^2 = 23 + 23 + 24 + 25 + 53 + 72 + 82. \\
&:= 2^3 + 2^5 + 2^5 + 4^2 + 5^2 + 5^3 + 8^2 = 23 + 25 + 25 + 42 + 52 + 53 + 82. \\
&:= 2^3 + 2^6 + 3^2 + 3^3 + 3^4 + 7^2 + 8^2 = 23 + 26 + 32 + 33 + 34 + 72 + 82. \\
&:= 2^4 + 2^4 + 3^3 + 3^4 + 4^3 + 7^2 + 7^2 = 24 + 24 + 33 + 34 + 43 + 72 + 72. \\
&:= 2^4 + 2^4 + 3^4 + 3^4 + 6^2 + 6^2 + 6^2 = 24 + 24 + 34 + 34 + 62 + 62 + 62. \\
&:= 2^4 + 2^5 + 3^2 + 3^4 + 4^3 + 6^2 + 8^2 = 24 + 25 + 32 + 34 + 43 + 62 + 82. \\
&:= 2^4 + 2^6 + 3^2 + 4^3 + 4^3 + 6^2 + 7^2 = 24 + 26 + 32 + 43 + 43 + 62 + 72. \\
&:= 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 7^2 + 8^2 = 24 + 27 + 32 + 32 + 33 + 72 + 82. \\
&:= 2^5 + 2^5 + 3^3 + 5^2 + 5^2 + 5^3 + 6^2 = 25 + 25 + 33 + 52 + 52 + 53 + 62. \\
\\
304 &:= 2^3 + 2^3 + 2^5 + 2^6 + 4^3 + 8^2 + 8^2 = 23 + 23 + 25 + 26 + 43 + 82 + 82. \\
&:= 2^3 + 2^4 + 2^4 + 2^7 + 6^2 + 6^2 + 8^2 = 23 + 24 + 24 + 27 + 62 + 62 + 82. \\
&:= 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 7^2 + 8^2 = 26 + 26 + 32 + 33 + 33 + 72 + 82. \\
\\
305 &:= 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 6^3 = 32 + 42 + 42 + 42 + 42 + 42 + 63. \\
306 &:= 2^3 + 2^5 + 2^6 + 2^6 + 5^2 + 7^2 + 8^2 = 23 + 25 + 26 + 26 + 52 + 72 + 82. \\
\\
307 &:= 2^2 + 3^2 + 3^4 + 4^2 + 5^3 + 6^2 + 6^2 = 22 + 32 + 34 + 42 + 53 + 62 + 62. \\
&:= 2^2 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 + 7^2 = 22 + 34 + 42 + 42 + 42 + 53 + 72. \\
&:= 3^2 + 3^2 + 3^2 + 3^3 + 4^3 + 5^3 + 8^2 = 32 + 32 + 32 + 33 + 43 + 53 + 82. \\
&:= 3^2 + 3^2 + 3^2 + 3^4 + 5^2 + 5^3 + 7^2 = 32 + 32 + 32 + 34 + 52 + 53 + 72. \\
\\
309 &:= 2^2 + 2^6 + 3^2 + 3^2 + 5^3 + 7^2 + 7^2 = 22 + 26 + 32 + 32 + 53 + 72 + 72. \\
&:= 2^2 + 3^3 + 3^4 + 3^4 + 4^2 + 6^2 + 8^2 = 22 + 33 + 34 + 34 + 42 + 62 + 82. \\
&:= 2^3 + 2^4 + 4^2 + 4^2 + 4^3 + 5^3 + 8^2 = 23 + 24 + 42 + 42 + 43 + 53 + 82. \\
&:= 2^4 + 3^3 + 4^2 + 4^3 + 5^2 + 5^3 + 6^2 = 24 + 33 + 42 + 43 + 52 + 53 + 62. \\
\\
311 &:= 2^2 + 2^3 + 2^7 + 3^3 + 4^2 + 8^2 + 8^2 = 22 + 23 + 27 + 33 + 42 + 82 + 82. \\
&:= 2^2 + 2^7 + 3^3 + 3^3 + 5^2 + 6^2 + 8^2 = 22 + 27 + 33 + 33 + 52 + 62 + 82. \\
&:= 2^3 + 2^4 + 3^4 + 3^4 + 5^2 + 6^2 + 8^2 = 23 + 24 + 34 + 34 + 52 + 62 + 82. \\
&:= 2^3 + 2^7 + 4^3 + 5^2 + 5^2 + 5^2 + 6^2 = 23 + 27 + 43 + 52 + 52 + 52 + 62. \\
&:= 2^4 + 2^4 + 3^3 + 3^3 + 5^3 + 6^2 + 8^2 = 24 + 24 + 33 + 33 + 53 + 62 + 82. \\
&:= 2^4 + 2^6 + 3^2 + 5^2 + 5^3 + 6^2 + 6^2 = 24 + 26 + 32 + 52 + 53 + 62 + 62. \\
&:= 2^4 + 2^6 + 4^2 + 4^2 + 5^2 + 5^3 + 7^2 = 24 + 26 + 42 + 42 + 52 + 53 + 72. \\
&:= 2^5 + 3^2 + 3^3 + 3^4 + 4^3 + 7^2 + 7^2 = 25 + 32 + 33 + 34 + 43 + 72 + 72. \\
&:= 2^5 + 3^2 + 3^4 + 3^4 + 6^2 + 6^2 + 6^2 = 25 + 32 + 34 + 34 + 62 + 62 + 62. \\
&:= 2^5 + 3^4 + 3^4 + 4^2 + 4^2 + 6^2 + 7^2 = 25 + 34 + 34 + 42 + 42 + 62 + 72. \\
&:= 2^6 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 + 6^2 = 26 + 34 + 42 + 43 + 52 + 52 + 62.
\end{aligned}$$

$$\begin{aligned}
313 &:= 2^2 + 2^4 + 2^4 + 2^7 + 6^2 + 7^2 + 8^2 = 22 + 24 + 24 + 27 + 62 + 72 + 82. \\
&:= 2^3 + 2^3 + 2^4 + 2^7 + 5^2 + 8^2 + 8^2 = 23 + 23 + 24 + 27 + 52 + 82 + 82. \\
&:= 2^3 + 2^4 + 2^6 + 3^4 + 4^2 + 8^2 + 8^2 = 23 + 24 + 26 + 34 + 42 + 82 + 82. \\
&:= 2^3 + 2^4 + 2^7 + 3^3 + 6^2 + 7^2 + 7^2 = 23 + 24 + 27 + 33 + 62 + 72 + 72. \\
&:= 2^3 + 2^5 + 2^5 + 4^3 + 4^3 + 7^2 + 8^2 = 23 + 25 + 25 + 43 + 43 + 72 + 82. \\
&:= 2^3 + 2^5 + 2^7 + 3^2 + 6^2 + 6^2 + 8^2 = 23 + 25 + 27 + 32 + 62 + 62 + 82. \\
&:= 2^3 + 2^5 + 2^7 + 4^2 + 4^2 + 7^2 + 8^2 = 23 + 25 + 27 + 42 + 42 + 72 + 82. \\
&:= 2^4 + 2^4 + 2^7 + 3^2 + 4^2 + 8^2 + 8^2 = 24 + 24 + 27 + 32 + 42 + 82 + 82. \\
&:= 2^4 + 2^5 + 2^5 + 5^3 + 6^2 + 6^2 + 6^2 = 24 + 25 + 25 + 53 + 62 + 62 + 62. \\
&:= 2^4 + 2^6 + 3^3 + 3^4 + 5^2 + 6^2 + 8^2 = 24 + 26 + 33 + 34 + 52 + 62 + 82. \\
&:= 2^5 + 2^7 + 3^3 + 4^2 + 5^2 + 6^2 + 7^2 = 25 + 27 + 33 + 42 + 52 + 62 + 72. \\
&:= 2^6 + 2^6 + 4^2 + 4^2 + 4^3 + 5^2 + 8^2 = 26 + 26 + 42 + 42 + 43 + 52 + 82.
\end{aligned}$$

$$\begin{aligned}
315 &:= 2^4 + 2^6 + 2^6 + 3^3 + 4^2 + 8^2 + 8^2 = 24 + 26 + 26 + 33 + 42 + 82 + 82. \\
&:= 2^5 + 2^5 + 2^5 + 3^3 + 4^3 + 8^2 + 8^2 = 25 + 25 + 25 + 33 + 43 + 82 + 82. \\
&:= 2^5 + 2^5 + 2^5 + 3^4 + 5^2 + 7^2 + 8^2 = 25 + 25 + 25 + 34 + 52 + 72 + 82. \\
&:= 2^5 + 2^5 + 2^6 + 4^3 + 5^2 + 7^2 + 7^2 = 25 + 25 + 26 + 43 + 52 + 72 + 72.
\end{aligned}$$

$$\begin{aligned}
318 &:= 2^2 + 2^4 + 3^2 + 4^3 + 5^3 + 6^2 + 8^2 = 22 + 24 + 32 + 43 + 53 + 62 + 82. \\
&:= 2^2 + 3^4 + 4^2 + 4^3 + 4^3 + 5^2 + 8^2 = 22 + 34 + 42 + 43 + 43 + 52 + 82. \\
&:= 2^3 + 3^2 + 3^3 + 4^3 + 5^3 + 6^2 + 7^2 = 23 + 32 + 33 + 43 + 53 + 62 + 72. \\
&:= 2^3 + 3^4 + 4^2 + 4^2 + 5^3 + 6^2 + 6^2 = 23 + 34 + 42 + 42 + 53 + 62 + 62. \\
&:= 3^3 + 3^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 = 33 + 33 + 43 + 52 + 52 + 52 + 53.
\end{aligned}$$

$$\begin{aligned}
320 &:= 2^2 + 2^4 + 3^3 + 3^4 + 4^3 + 8^2 + 8^2 = 22 + 24 + 33 + 34 + 43 + 82 + 82. \\
&:= 2^2 + 2^4 + 3^4 + 3^4 + 5^2 + 7^2 + 8^2 = 22 + 24 + 34 + 34 + 52 + 72 + 82. \\
&:= 2^2 + 2^7 + 4^2 + 4^3 + 6^2 + 6^2 + 6^2 = 22 + 27 + 42 + 43 + 62 + 62 + 62. \\
&:= 2^2 + 2^7 + 4^3 + 5^2 + 5^2 + 5^2 + 7^2 = 22 + 27 + 43 + 52 + 52 + 52 + 72. \\
&:= 2^3 + 2^6 + 3^2 + 4^2 + 5^3 + 7^2 + 7^2 = 23 + 26 + 32 + 42 + 53 + 72 + 72. \\
&:= 2^3 + 2^6 + 3^2 + 5^2 + 5^2 + 5^3 + 8^2 = 23 + 26 + 32 + 52 + 52 + 53 + 82. \\
&:= 2^3 + 3^3 + 3^3 + 3^4 + 4^3 + 7^2 + 8^2 = 23 + 33 + 33 + 34 + 43 + 72 + 82. \\
&:= 2^3 + 3^3 + 3^4 + 3^4 + 5^2 + 7^2 + 7^2 = 23 + 33 + 34 + 34 + 52 + 72 + 72. \\
&:= 2^4 + 2^4 + 4^3 + 5^2 + 5^2 + 5^3 + 7^2 = 24 + 24 + 43 + 52 + 52 + 53 + 72. \\
&:= 2^4 + 3^3 + 3^3 + 3^3 + 5^3 + 7^2 + 7^2 = 24 + 33 + 33 + 33 + 53 + 72 + 72. \\
&:= 2^4 + 3^3 + 4^3 + 4^3 + 4^3 + 6^2 + 7^2 = 24 + 33 + 43 + 43 + 43 + 62 + 72. \\
&:= 2^5 + 3^2 + 3^3 + 3^3 + 5^3 + 6^2 + 8^2 = 25 + 32 + 33 + 33 + 53 + 62 + 82. \\
&:= 2^5 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 8^2 = 25 + 42 + 42 + 43 + 43 + 43 + 82. \\
&:= 2^6 + 3^3 + 4^2 + 4^2 + 5^3 + 6^2 + 6^2 = 26 + 33 + 42 + 42 + 53 + 62 + 62. \\
&:= 2^7 + 3^2 + 3^2 + 4^3 + 5^2 + 6^2 + 7^2 = 27 + 32 + 32 + 43 + 52 + 62 + 72. \\
&:= 2^7 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 8^2 = 27 + 42 + 42 + 42 + 42 + 43 + 82.
\end{aligned}$$

$$\begin{aligned}
322 &:= 2^2 + 2^4 + 2^7 + 3^3 + 7^2 + 7^2 + 7^2 = 22 + 24 + 27 + 33 + 72 + 72 + 72. \\
&:= 2^2 + 2^5 + 2^7 + 3^2 + 6^2 + 7^2 + 8^2 = 22 + 25 + 27 + 32 + 62 + 72 + 82. \\
&:= 2^3 + 2^5 + 2^5 + 5^2 + 5^3 + 6^2 + 8^2 = 23 + 25 + 25 + 52 + 53 + 62 + 82. \\
&:= 2^4 + 2^5 + 3^4 + 4^2 + 4^3 + 7^2 + 8^2 = 24 + 25 + 34 + 42 + 43 + 72 + 82. \\
&:= 2^4 + 2^6 + 4^2 + 4^3 + 4^3 + 7^2 + 7^2 = 24 + 26 + 42 + 43 + 43 + 72 + 72. \\
&:= 2^4 + 2^6 + 4^3 + 4^3 + 5^2 + 5^2 + 8^2 = 24 + 26 + 43 + 43 + 52 + 52 + 82. \\
&:= 2^5 + 2^7 + 3^2 + 3^2 + 4^2 + 8^2 + 8^2 = 25 + 27 + 32 + 32 + 42 + 82 + 82. \\
&:= 2^5 + 3^3 + 3^3 + 3^3 + 3^4 + 8^2 + 8^2 = 25 + 33 + 33 + 33 + 34 + 82 + 82. \\
&:= 2^6 + 3^3 + 3^3 + 3^3 + 4^3 + 7^2 + 8^2 = 26 + 33 + 33 + 33 + 43 + 72 + 82. \\
&:= 2^6 + 3^3 + 3^3 + 3^4 + 5^2 + 7^2 + 7^2 = 26 + 33 + 33 + 34 + 52 + 72 + 72.
\end{aligned}$$

$$\begin{aligned}
324 &:= 2^4 + 2^4 + 2^6 + 3^4 + 7^2 + 7^2 + 7^2 = 24 + 24 + 26 + 34 + 72 + 72 + 72. \\
&:= 2^4 + 2^5 + 2^7 + 5^2 + 5^2 + 7^2 + 7^2 = 24 + 25 + 27 + 52 + 52 + 72 + 72.
\end{aligned}$$

$$\begin{aligned}
325 &:= 3^2 + 3^2 + 4^2 + 5^2 + 5^2 + 5^2 + 6^3 = 32 + 32 + 42 + 52 + 52 + 52 + 63. \\
&:= 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 6^2 + 6^3 = 32 + 42 + 42 + 42 + 42 + 62 + 63.
\end{aligned}$$

$$\begin{aligned}
327 &:= 2^2 + 3^2 + 3^3 + 4^3 + 5^3 + 7^2 + 7^2 = 22 + 32 + 33 + 43 + 53 + 72 + 72. \\
&:= 2^2 + 3^2 + 3^4 + 5^3 + 6^2 + 6^2 + 6^2 = 22 + 32 + 34 + 53 + 62 + 62 + 62. \\
&:= 2^2 + 3^4 + 4^2 + 4^2 + 5^3 + 6^2 + 7^2 = 22 + 34 + 42 + 42 + 53 + 62 + 72. \\
&:= 3^2 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 + 8^2 = 32 + 34 + 42 + 42 + 42 + 53 + 82.
\end{aligned}$$

$$\begin{aligned}
329 &:= 2^2 + 3^3 + 3^4 + 3^4 + 6^2 + 6^2 + 8^2 = 22 + 33 + 34 + 34 + 62 + 62 + 82. \\
&:= 2^3 + 2^4 + 4^2 + 4^3 + 5^3 + 6^2 + 8^2 = 23 + 24 + 42 + 43 + 53 + 62 + 82. \\
&:= 2^4 + 3^3 + 4^3 + 5^2 + 5^3 + 6^2 + 6^2 = 24 + 33 + 43 + 52 + 53 + 62 + 62. \\
&:= 2^5 + 3^2 + 4^3 + 5^2 + 5^2 + 5^3 + 7^2 = 25 + 32 + 43 + 52 + 52 + 53 + 72. \\
&:= 2^6 + 3^2 + 3^2 + 3^2 + 5^3 + 7^2 + 8^2 = 26 + 32 + 32 + 32 + 53 + 72 + 82.
\end{aligned}$$

$$\begin{aligned}
331 &:= 2^2 + 2^3 + 2^7 + 3^3 + 6^2 + 8^2 + 8^2 = 22 + 23 + 27 + 33 + 62 + 82 + 82. \\
&:= 2^2 + 2^5 + 2^5 + 5^2 + 5^3 + 7^2 + 8^2 = 22 + 25 + 25 + 52 + 53 + 72 + 82. \\
&:= 2^4 + 2^6 + 4^2 + 5^2 + 5^3 + 6^2 + 7^2 = 24 + 26 + 42 + 52 + 53 + 62 + 72. \\
&:= 2^5 + 3^4 + 3^4 + 4^2 + 6^2 + 6^2 + 7^2 = 25 + 34 + 34 + 42 + 62 + 62 + 72. \\
&:= 2^6 + 3^4 + 4^3 + 5^2 + 5^2 + 6^2 + 6^2 = 26 + 34 + 43 + 52 + 52 + 62 + 62.
\end{aligned}$$

$$\begin{aligned}
333 &:= 2^3 + 2^4 + 2^6 + 3^4 + 6^2 + 8^2 + 8^2 = 23 + 24 + 26 + 34 + 62 + 82 + 82. \\
&:= 2^3 + 2^5 + 2^7 + 4^2 + 6^2 + 7^2 + 8^2 = 23 + 25 + 27 + 42 + 62 + 72 + 82. \\
&:= 2^4 + 2^4 + 2^7 + 3^2 + 6^2 + 8^2 + 8^2 = 24 + 24 + 27 + 32 + 62 + 82 + 82. \\
&:= 2^5 + 2^6 + 3^2 + 3^4 + 7^2 + 7^2 + 7^2 = 25 + 26 + 32 + 34 + 72 + 72 + 72. \\
&:= 2^5 + 2^7 + 3^3 + 5^2 + 6^2 + 6^2 + 7^2 = 25 + 27 + 33 + 52 + 62 + 62 + 72. \\
&:= 2^6 + 2^6 + 4^2 + 4^3 + 5^2 + 6^2 + 8^2 = 26 + 26 + 42 + 43 + 52 + 62 + 82.
\end{aligned}$$

$$\begin{aligned}
335 &:= 2^4 + 2^6 + 2^6 + 3^3 + 6^2 + 8^2 + 8^2 = 24 + 26 + 26 + 33 + 62 + 82 + 82. \\
337 &:= 2^5 + 2^5 + 2^5 + 2^6 + 7^2 + 8^2 + 8^2 = 25 + 25 + 25 + 26 + 72 + 82 + 82.
\end{aligned}$$

$$\begin{aligned}
338 &:= 2^2 + 2^4 + 4^2 + 4^3 + 5^3 + 7^2 + 8^2 = 22 + 24 + 42 + 43 + 53 + 72 + 82. \\
&:= 2^2 + 3^3 + 3^3 + 3^3 + 5^3 + 8^2 + 8^2 = 22 + 33 + 33 + 33 + 53 + 82 + 82. \\
&:= 2^2 + 3^4 + 4^3 + 4^3 + 5^2 + 6^2 + 8^2 = 22 + 34 + 43 + 43 + 52 + 62 + 82. \\
&:= 2^3 + 3^3 + 4^2 + 4^3 + 5^3 + 7^2 + 7^2 = 23 + 33 + 42 + 43 + 53 + 72 + 72. \\
&:= 2^3 + 3^3 + 4^3 + 5^2 + 5^2 + 5^3 + 8^2 = 23 + 33 + 43 + 52 + 52 + 53 + 82. \\
&:= 2^3 + 3^4 + 4^2 + 5^3 + 6^2 + 6^2 + 6^2 = 23 + 34 + 42 + 53 + 62 + 62 + 62.
\end{aligned}$$

$$338 := 2^3 + 3^4 + 5^2 + 5^2 + 5^2 + 5^3 + 7^2 = 23 + 34 + 52 + 52 + 52 + 53 + 72.$$

$$\begin{aligned}
340 &:= 2^2 + 2^2 + 2^7 + 3^3 + 7^2 + 8^2 + 8^2 = 22 + 22 + 27 + 33 + 72 + 82 + 82. \\
&:= 2^2 + 2^6 + 4^2 + 4^3 + 4^3 + 8^2 + 8^2 = 22 + 26 + 42 + 43 + 43 + 82 + 82. \\
&:= 2^2 + 2^7 + 4^3 + 6^2 + 6^2 + 6^2 + 6^2 = 22 + 27 + 43 + 62 + 62 + 62 + 62. \\
&:= 2^3 + 2^3 + 3^4 + 3^4 + 7^2 + 7^2 + 8^2 = 23 + 23 + 34 + 34 + 72 + 72 + 82. \\
&:= 2^3 + 2^6 + 3^2 + 5^3 + 6^2 + 7^2 + 7^2 = 23 + 26 + 32 + 53 + 62 + 72 + 72. \\
&:= 2^4 + 3^2 + 3^4 + 3^4 + 5^2 + 8^2 + 8^2 = 24 + 32 + 34 + 34 + 52 + 82 + 82. \\
&:= 2^5 + 3^3 + 3^3 + 4^2 + 5^3 + 7^2 + 8^2 = 25 + 33 + 33 + 42 + 53 + 72 + 82. \\
&:= 2^5 + 4^2 + 4^3 + 4^3 + 4^3 + 6^2 + 8^2 = 25 + 42 + 43 + 43 + 43 + 62 + 82. \\
&:= 2^6 + 3^3 + 4^2 + 5^3 + 6^2 + 6^2 + 6^2 = 26 + 33 + 42 + 53 + 62 + 62 + 62. \\
&:= 2^6 + 3^3 + 5^2 + 5^2 + 5^2 + 5^3 + 7^2 = 26 + 33 + 52 + 52 + 52 + 53 + 72. \\
&:= 2^7 + 3^2 + 4^2 + 4^3 + 5^2 + 7^2 + 7^2 = 27 + 32 + 42 + 43 + 52 + 72 + 72. \\
&:= 2^7 + 3^2 + 4^3 + 5^2 + 5^2 + 5^2 + 8^2 = 27 + 32 + 43 + 52 + 52 + 52 + 82. \\
&:= 2^7 + 4^2 + 4^2 + 4^2 + 4^3 + 6^2 + 8^2 = 27 + 42 + 42 + 42 + 43 + 62 + 82.
\end{aligned}$$

$$\begin{aligned}
342 &:= 2^2 + 2^4 + 2^6 + 3^4 + 7^2 + 8^2 + 8^2 = 22 + 24 + 26 + 34 + 72 + 82 + 82. \\
&:= 2^2 + 2^5 + 2^7 + 4^2 + 7^2 + 7^2 + 8^2 = 22 + 25 + 27 + 42 + 72 + 72 + 82. \\
&:= 2^2 + 2^5 + 2^7 + 5^2 + 5^2 + 8^2 + 8^2 = 22 + 25 + 27 + 52 + 52 + 82 + 82. \\
&:= 2^3 + 2^6 + 3^3 + 3^4 + 7^2 + 7^2 + 8^2 = 23 + 26 + 33 + 34 + 72 + 72 + 82. \\
&:= 2^4 + 2^4 + 2^5 + 5^2 + 5^3 + 8^2 + 8^2 = 24 + 24 + 25 + 52 + 53 + 82 + 82. \\
&:= 2^4 + 2^5 + 3^4 + 4^3 + 6^2 + 7^2 + 8^2 = 24 + 25 + 34 + 43 + 62 + 72 + 82. \\
&:= 2^4 + 2^6 + 4^3 + 4^3 + 6^2 + 7^2 + 7^2 = 24 + 26 + 43 + 43 + 62 + 72 + 72. \\
&:= 2^4 + 2^7 + 3^2 + 3^3 + 7^2 + 7^2 + 8^2 = 24 + 27 + 32 + 33 + 72 + 72 + 82. \\
&:= 2^5 + 2^7 + 3^2 + 3^2 + 6^2 + 8^2 + 8^2 = 25 + 27 + 32 + 32 + 62 + 82 + 82.
\end{aligned}$$

$$344 := 2^6 + 2^6 + 3^3 + 3^3 + 7^2 + 7^2 + 8^2 = 26 + 26 + 33 + 33 + 72 + 72 + 82.$$

$$\begin{aligned}
345 &:= 2^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 6^3 = 22 + 52 + 52 + 52 + 52 + 52 + 63. \\
&:= 3^2 + 3^2 + 5^2 + 5^2 + 5^2 + 6^2 + 6^3 = 32 + 32 + 52 + 52 + 52 + 62 + 63. \\
&:= 3^2 + 4^2 + 4^2 + 4^2 + 6^2 + 6^2 + 6^3 = 32 + 42 + 42 + 42 + 62 + 62 + 63. \\
&:= 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 6^3 + 7^2 = 42 + 42 + 42 + 42 + 42 + 63 + 72.
\end{aligned}$$

$$\begin{aligned}
347 &:= 2^2 + 3^4 + 4^2 + 5^3 + 6^2 + 6^2 + 7^2 = 22 + 34 + 42 + 53 + 62 + 62 + 72. \\
&:= 3^2 + 3^2 + 3^3 + 4^3 + 5^3 + 7^2 + 8^2 = 32 + 32 + 33 + 43 + 53 + 72 + 82. \\
&:= 3^2 + 3^2 + 3^4 + 5^2 + 5^3 + 7^2 + 7^2 = 32 + 32 + 34 + 52 + 53 + 72 + 72. \\
&:= 3^2 + 3^4 + 4^2 + 4^2 + 5^3 + 6^2 + 8^2 = 32 + 34 + 42 + 42 + 53 + 62 + 82.
\end{aligned}$$

$$\begin{aligned}
349 &:= 2^2 + 2^6 + 3^2 + 5^3 + 7^2 + 7^2 + 7^2 = 22 + 26 + 32 + 53 + 72 + 72 + 72. \\
&:= 2^3 + 2^4 + 4^3 + 5^3 + 6^2 + 6^2 + 8^2 = 23 + 24 + 43 + 53 + 62 + 62 + 82. \\
&:= 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 8^2 + 8^2 = 33 + 34 + 34 + 42 + 42 + 82 + 82.
\end{aligned}$$

$$\begin{aligned}
351 &:= 2^4 + 2^6 + 5^2 + 5^3 + 6^2 + 6^2 + 7^2 = 24 + 26 + 52 + 53 + 62 + 62 + 72. \\
&:= 2^5 + 2^5 + 3^2 + 5^2 + 5^3 + 8^2 + 8^2 = 25 + 25 + 32 + 52 + 53 + 82 + 82. \\
&:= 2^5 + 3^3 + 3^4 + 4^3 + 7^2 + 7^2 + 7^2 = 25 + 33 + 34 + 43 + 72 + 72 + 72. \\
&:= 2^5 + 3^4 + 3^4 + 6^2 + 6^2 + 6^2 + 7^2 = 25 + 34 + 34 + 62 + 62 + 62 + 72. \\
&:= 2^7 + 3^3 + 3^3 + 4^2 + 5^2 + 8^2 + 8^2 = 27 + 33 + 33 + 42 + 52 + 82 + 82.
\end{aligned}$$

$$\begin{aligned}
353 &:= 2^3 + 2^5 + 2^7 + 6^2 + 6^2 + 7^2 + 8^2 = 23 + 25 + 27 + 62 + 62 + 72 + 82. \\
&:= 2^4 + 2^4 + 2^7 + 4^2 + 7^2 + 8^2 + 8^2 = 24 + 24 + 27 + 42 + 72 + 82 + 82. \\
&:= 2^6 + 2^6 + 4^3 + 5^2 + 6^2 + 6^2 + 8^2 = 26 + 26 + 43 + 52 + 62 + 62 + 82.
\end{aligned}$$

$$\begin{aligned}
358 &:= 2^2 + 2^4 + 4^3 + 5^3 + 6^2 + 7^2 + 8^2 = 22 + 24 + 43 + 53 + 62 + 72 + 82. \\
&:= 2^3 + 2^3 + 4^3 + 5^2 + 5^3 + 8^2 + 8^2 = 23 + 23 + 43 + 52 + 53 + 82 + 82. \\
&:= 2^3 + 3^3 + 4^3 + 5^3 + 6^2 + 7^2 + 7^2 = 23 + 33 + 43 + 53 + 62 + 72 + 72. \\
&:= 2^3 + 3^4 + 5^3 + 6^2 + 6^2 + 6^2 + 6^2 = 23 + 34 + 53 + 62 + 62 + 62 + 62. \\
&:= 2^4 + 3^2 + 4^2 + 4^3 + 5^3 + 8^2 + 8^2 = 24 + 32 + 42 + 43 + 53 + 82 + 82.
\end{aligned}$$

$$\begin{aligned}
360 &:= 2^2 + 2^6 + 4^3 + 4^3 + 6^2 + 8^2 + 8^2 = 22 + 26 + 43 + 43 + 62 + 82 + 82. \\
&:= 2^2 + 2^7 + 3^2 + 3^3 + 8^2 + 8^2 + 8^2 = 22 + 27 + 32 + 33 + 82 + 82 + 82. \\
&:= 2^3 + 2^6 + 4^2 + 5^3 + 7^2 + 7^2 + 7^2 = 23 + 26 + 42 + 53 + 72 + 72 + 72. \\
&:= 2^3 + 2^6 + 5^2 + 5^2 + 5^3 + 7^2 + 8^2 = 23 + 26 + 52 + 52 + 53 + 72 + 82. \\
&:= 2^5 + 3^3 + 3^3 + 5^3 + 6^2 + 7^2 + 8^2 = 25 + 33 + 33 + 53 + 62 + 72 + 82. \\
&:= 2^5 + 4^3 + 4^3 + 4^3 + 6^2 + 6^2 + 8^2 = 25 + 43 + 43 + 43 + 62 + 62 + 82. \\
&:= 2^6 + 3^3 + 5^3 + 6^2 + 6^2 + 6^2 + 6^2 = 26 + 33 + 53 + 62 + 62 + 62 + 62. \\
&:= 2^7 + 3^2 + 4^3 + 5^2 + 6^2 + 7^2 + 7^2 = 27 + 32 + 43 + 52 + 62 + 72 + 72. \\
&:= 2^7 + 4^2 + 4^2 + 4^3 + 6^2 + 6^2 + 8^2 = 27 + 42 + 42 + 43 + 62 + 62 + 82.
\end{aligned}$$

$$\begin{aligned}
362 &:= 2^2 + 2^5 + 2^7 + 6^2 + 7^2 + 7^2 + 8^2 = 22 + 25 + 27 + 62 + 72 + 72 + 82. \\
&:= 2^4 + 2^6 + 3^2 + 3^4 + 8^2 + 8^2 + 8^2 = 24 + 26 + 32 + 34 + 82 + 82 + 82. \\
&:= 2^5 + 2^7 + 3^2 + 4^2 + 7^2 + 8^2 + 8^2 = 25 + 27 + 32 + 42 + 72 + 82 + 82.
\end{aligned}$$

$$\begin{aligned}
365 &:= 3^2 + 4^2 + 4^2 + 6^2 + 6^2 + 6^2 + 6^3 = 32 + 42 + 42 + 62 + 62 + 62 + 63. \\
5 &:= 3^2 + 4^2 + 5^2 + 5^2 + 5^2 + 6^3 + 7^2 = 32 + 42 + 52 + 52 + 52 + 63 + 72. \\
&:= 4^2 + 4^2 + 4^2 + 4^2 + 6^2 + 6^3 + 7^2 = 42 + 42 + 42 + 42 + 62 + 63 + 72.
\end{aligned}$$

$$\begin{aligned}
367 &:= 2^2 + 3^3 + 4^3 + 5^3 + 7^2 + 7^2 + 7^2 = 22 + 33 + 43 + 53 + 72 + 72 + 72. \\
&:= 2^2 + 3^4 + 5^3 + 6^2 + 6^2 + 6^2 + 7^2 = 22 + 34 + 53 + 62 + 62 + 62 + 72. \\
&:= 3^2 + 3^4 + 4^2 + 5^3 + 6^2 + 6^2 + 8^2 = 32 + 34 + 42 + 53 + 62 + 62 + 82. \\
&:= 3^4 + 4^2 + 4^2 + 4^2 + 5^3 + 7^2 + 8^2 = 34 + 42 + 42 + 42 + 53 + 72 + 82.
\end{aligned}$$

$$\begin{aligned}
369 &:= 2^5 + 4^3 + 5^2 + 5^2 + 5^3 + 7^2 + 7^2 = 25 + 43 + 52 + 52 + 53 + 72 + 72. \\
&:= 2^6 + 3^2 + 3^2 + 5^3 + 7^2 + 7^2 + 8^2 = 26 + 32 + 32 + 53 + 72 + 72 + 82. \\
&:= 3^3 + 3^4 + 3^4 + 4^2 + 6^2 + 8^2 + 8^2 = 33 + 34 + 34 + 42 + 62 + 82 + 82.
\end{aligned}$$

$$\begin{aligned}
371 &:= 2^3 + 2^7 + 3^3 + 4^2 + 8^2 + 8^2 + 8^2 = 23 + 27 + 33 + 42 + 82 + 82 + 82. \\
&:= 2^7 + 3^3 + 3^3 + 5^2 + 6^2 + 8^2 + 8^2 = 27 + 33 + 33 + 52 + 62 + 82 + 82. \\
373 &:= 2^4 + 2^4 + 2^7 + 6^2 + 7^2 + 8^2 + 8^2 = 24 + 24 + 27 + 62 + 72 + 82 + 82. \\
&:= 2^5 + 2^6 + 3^4 + 7^2 + 7^2 + 7^2 + 7^2 = 25 + 26 + 34 + 72 + 72 + 72 + 72. \\
378 &:= 2^4 + 3^2 + 4^3 + 5^3 + 6^2 + 8^2 + 8^2 = 24 + 32 + 43 + 53 + 62 + 82 + 82. \\
&:= 3^4 + 4^2 + 4^3 + 4^3 + 5^2 + 8^2 + 8^2 = 34 + 42 + 43 + 43 + 52 + 82 + 82. \\
380 &:= 2^3 + 2^6 + 5^3 + 6^2 + 7^2 + 7^2 + 7^2 = 23 + 26 + 53 + 62 + 72 + 72 + 72. \\
&:= 2^4 + 3^3 + 3^4 + 4^3 + 8^2 + 8^2 + 8^2 = 24 + 33 + 34 + 43 + 82 + 82 + 82. \\
&:= 2^4 + 3^4 + 3^4 + 5^2 + 7^2 + 8^2 + 8^2 = 24 + 34 + 34 + 52 + 72 + 82 + 82. \\
&:= 2^7 + 4^2 + 4^3 + 5^2 + 7^2 + 7^2 + 7^2 = 27 + 42 + 43 + 52 + 72 + 72 + 72. \\
&:= 2^7 + 4^2 + 4^3 + 6^2 + 6^2 + 6^2 + 8^2 = 27 + 42 + 43 + 62 + 62 + 62 + 82. \\
&:= 2^7 + 4^3 + 5^2 + 5^2 + 5^2 + 7^2 + 8^2 = 27 + 43 + 52 + 52 + 52 + 72 + 82. \\
382 &:= 2^4 + 2^7 + 3^3 + 7^2 + 7^2 + 7^2 + 8^2 = 24 + 27 + 33 + 72 + 72 + 72 + 82. \\
&:= 2^5 + 2^7 + 3^2 + 6^2 + 7^2 + 8^2 + 8^2 = 25 + 27 + 32 + 62 + 72 + 82 + 82. \\
385 &:= 3^2 + 4^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^3 = 32 + 42 + 62 + 62 + 62 + 62 + 63. \\
&:= 3^2 + 5^2 + 5^2 + 5^2 + 6^2 + 6^3 + 7^2 = 32 + 52 + 52 + 52 + 62 + 63 + 72. \\
&:= 4^2 + 4^2 + 4^2 + 6^2 + 6^2 + 6^3 + 7^2 = 42 + 42 + 42 + 62 + 62 + 63 + 72. \\
387 &:= 3^2 + 3^3 + 4^3 + 5^3 + 7^2 + 7^2 + 8^2 = 32 + 33 + 43 + 53 + 72 + 72 + 82. \\
&:= 3^2 + 3^4 + 5^2 + 5^3 + 7^2 + 7^2 + 7^2 = 32 + 34 + 52 + 53 + 72 + 72 + 72. \\
&:= 3^2 + 3^4 + 5^3 + 6^2 + 6^2 + 6^2 + 8^2 = 32 + 34 + 53 + 62 + 62 + 62 + 82. \\
&:= 3^4 + 4^2 + 4^2 + 5^3 + 6^2 + 7^2 + 8^2 = 34 + 42 + 42 + 53 + 62 + 72 + 82. \\
389 &:= 2^2 + 2^6 + 5^3 + 7^2 + 7^2 + 7^2 + 7^2 = 22 + 26 + 53 + 72 + 72 + 72 + 72. \\
&:= 3^3 + 3^4 + 3^4 + 6^2 + 6^2 + 8^2 + 8^2 = 33 + 34 + 34 + 62 + 62 + 82 + 82. \\
391 &:= 2^3 + 2^7 + 3^3 + 6^2 + 8^2 + 8^2 + 8^2 = 23 + 27 + 33 + 62 + 82 + 82 + 82. \\
&:= 2^5 + 2^5 + 5^2 + 5^3 + 7^2 + 8^2 + 8^2 = 25 + 25 + 52 + 53 + 72 + 82 + 82. \\
398 &:= 2^4 + 4^2 + 4^3 + 5^3 + 7^2 + 8^2 + 8^2 = 24 + 42 + 43 + 53 + 72 + 82 + 82. \\
&:= 3^3 + 3^3 + 3^3 + 5^3 + 8^2 + 8^2 + 8^2 = 33 + 33 + 33 + 53 + 82 + 82 + 82. \\
&:= 3^4 + 4^3 + 4^3 + 5^2 + 6^2 + 8^2 + 8^2 = 34 + 43 + 43 + 52 + 62 + 82 + 82. \\
400 &:= 2^2 + 2^7 + 3^3 + 7^2 + 8^2 + 8^2 + 8^2 = 22 + 27 + 33 + 72 + 82 + 82 + 82. \\
&:= 2^6 + 4^2 + 4^3 + 4^3 + 8^2 + 8^2 + 8^2 = 26 + 42 + 43 + 43 + 82 + 82 + 82. \\
&:= 2^7 + 4^3 + 5^2 + 6^2 + 7^2 + 7^2 + 7^2 = 27 + 43 + 52 + 62 + 72 + 72 + 72. \\
&:= 2^7 + 4^3 + 6^2 + 6^2 + 6^2 + 6^2 + 8^2 = 27 + 43 + 62 + 62 + 62 + 62 + 82. \\
402 &:= 2^4 + 2^6 + 3^4 + 7^2 + 8^2 + 8^2 + 8^2 = 24 + 26 + 34 + 72 + 82 + 82 + 82. \\
&:= 2^5 + 2^7 + 4^2 + 7^2 + 7^2 + 8^2 + 8^2 = 25 + 27 + 42 + 72 + 72 + 82 + 82. \\
&:= 2^5 + 2^7 + 5^2 + 5^2 + 8^2 + 8^2 + 8^2 = 25 + 27 + 52 + 52 + 82 + 82 + 82.
\end{aligned}$$

$$\begin{aligned}
405 &:= 3^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^3 = 32 + 62 + 62 + 62 + 62 + 62 + 63. \\
&:= 4^2 + 4^2 + 6^2 + 6^2 + 6^2 + 6^3 + 7^2 = 42 + 42 + 62 + 62 + 62 + 63 + 72. \\
&:= 4^2 + 5^2 + 5^2 + 5^2 + 5^2 + 6^3 + 7^2 + 7^2 = 42 + 52 + 52 + 52 + 63 + 72 + 72. \\
&:= 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 6^3 + 8^2 = 52 + 52 + 52 + 52 + 52 + 63 + 82.
\end{aligned}$$

$$\begin{aligned}
407 &:= 3^4 + 4^2 + 5^3 + 6^2 + 6^2 + 7^2 + 8^2 = 34 + 42 + 53 + 62 + 62 + 72 + 82. \\
409 &:= 2^6 + 3^2 + 5^3 + 7^2 + 7^2 + 7^2 + 8^2 = 26 + 32 + 53 + 72 + 72 + 72 + 82. \\
418 &:= 2^4 + 4^3 + 5^3 + 6^2 + 7^2 + 8^2 + 8^2 = 24 + 43 + 53 + 62 + 72 + 82 + 82.
\end{aligned}$$

$$\begin{aligned}
420 &:= 2^6 + 4^3 + 4^3 + 6^2 + 8^2 + 8^2 + 8^2 = 26 + 43 + 43 + 62 + 82 + 82 + 82. \\
&:= 2^7 + 3^2 + 3^3 + 8^2 + 8^2 + 8^2 + 8^2 = 27 + 32 + 33 + 82 + 82 + 82 + 82.
\end{aligned}$$

$$422 := 2^5 + 2^7 + 6^2 + 7^2 + 7^2 + 8^2 + 8^2 = 25 + 27 + 62 + 72 + 72 + 82 + 82.$$

$$\begin{aligned}
425 &:= 4^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^3 + 7^2 = 42 + 62 + 62 + 62 + 62 + 63 + 72. \\
&:= 5^2 + 5^2 + 5^2 + 6^2 + 6^3 + 7^2 + 7^2 = 52 + 52 + 52 + 62 + 63 + 72 + 72.
\end{aligned}$$

$$\begin{aligned}
427 &:= 3^3 + 4^3 + 5^3 + 7^2 + 7^2 + 7^2 + 8^2 = 33 + 43 + 53 + 72 + 72 + 72 + 82. \\
&:= 3^4 + 5^2 + 5^3 + 7^2 + 7^2 + 7^2 + 7^2 = 34 + 52 + 53 + 72 + 72 + 72 + 72. \\
&:= 3^4 + 5^3 + 6^2 + 6^2 + 6^2 + 7^2 + 8^2 = 34 + 53 + 62 + 62 + 62 + 72 + 82.
\end{aligned}$$

$$\begin{aligned}
445 &:= 6^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^3 + 7^2 = 62 + 62 + 62 + 62 + 62 + 63 + 72. \\
449 &:= 2^6 + 5^3 + 7^2 + 7^2 + 7^2 + 7^2 + 8^2 = 26 + 53 + 72 + 72 + 72 + 72 + 82. \\
460 &:= 2^7 + 3^3 + 7^2 + 8^2 + 8^2 + 8^2 + 8^2 = 27 + 33 + 72 + 82 + 82 + 82 + 82.
\end{aligned}$$

6 Eight Terms Equalities Expressions

This section deals with eight terms equality expressions, where we have considered only positive expressions with both powers and bases bigger than one.

$$184 := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^7 = 22 + 22 + 22 + 22 + 22 + 22 + 25 + 27.$$

$$188 := 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^7 = 22 + 23 + 23 + 23 + 23 + 23 + 24 + 27.$$

$$192 := 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 = 22 + 22 + 23 + 24 + 25 + 25 + 25 + 26.$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 2^6 = 23 + 23 + 23 + 23 + 24 + 24 + 26 + 26.$$

$$195 := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^7 + 3^3 = 22 + 22 + 22 + 22 + 23 + 24 + 27 + 33.$$

$$197 := 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^6 + 3^4 = 22 + 22 + 22 + 23 + 24 + 24 + 26 + 34.$$

$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 = 22 + 22 + 22 + 24 + 24 + 24 + 27 + 32.$$

$$199 := 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 2^6 + 3^3 = 22 + 22 + 22 + 24 + 24 + 26 + 26 + 33.$$

$$201 := 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 2^6 + 3^2 = 23 + 23 + 23 + 23 + 25 + 26 + 26 + 32.$$

$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 3^4 = 23 + 23 + 23 + 24 + 24 + 25 + 25 + 34.$$

$$203 := 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 3^3 = 23 + 23 + 24 + 24 + 25 + 25 + 26 + 33.$$

$$206 := 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 3^2 + 3^4 = 22 + 22 + 22 + 23 + 25 + 26 + 32 + 34.$$

$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 = 22 + 22 + 22 + 24 + 25 + 27 + 32 + 32.$$

$$208 := 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 = 22 + 22 + 22 + 25 + 26 + 26 + 32 + 33.$$

$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^7 + 4^2 = 22 + 22 + 23 + 24 + 24 + 24 + 27 + 42.$$

$$210 := 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 = 23 + 23 + 23 + 25 + 25 + 25 + 32 + 34.$$

$$212 := 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 4^2 = 22 + 24 + 24 + 24 + 24 + 26 + 26 + 42.$$

$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 4^3 = 22 + 24 + 24 + 24 + 25 + 25 + 25 + 43.$$

$$:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 = 23 + 23 + 25 + 25 + 25 + 26 + 32 + 33.$$

$$214 := 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 = 24 + 24 + 25 + 25 + 25 + 25 + 33 + 33.$$

$$215 := 2^2 + 2^2 + 2^3 + 2^3 + 2^7 + 3^2 + 3^3 + 3^3 = 22 + 22 + 23 + 23 + 27 + 32 + 33 + 33.$$

$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 3^2 + 3^4 + 3^4 = 22 + 23 + 23 + 23 + 24 + 32 + 34 + 34.$$

$$217 := 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^7 + 5^2 = 22 + 22 + 23 + 23 + 23 + 25 + 27 + 52.$$

$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 3^4 + 4^2 = 22 + 22 + 23 + 23 + 25 + 26 + 34 + 42.$$

$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^7 + 3^2 + 4^2 = 22 + 22 + 23 + 24 + 25 + 27 + 32 + 42.$$

$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 3^4 + 4^3 = 22 + 22 + 24 + 24 + 24 + 24 + 34 + 43.$$

$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 5^3 = 22 + 23 + 23 + 23 + 24 + 24 + 25 + 53.$$

$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 3^2 + 3^3 + 3^4 = 22 + 23 + 23 + 24 + 26 + 32 + 33 + 34.$$

$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 = 22 + 23 + 24 + 24 + 27 + 32 + 32 + 33.$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 3^4 + 4^3 = 23 + 23 + 23 + 23 + 23 + 25 + 34 + 43.$$

$$219 := 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 2^6 + 3^3 + 4^2 = 22 + 22 + 23 + 25 + 26 + 26 + 33 + 42.$$

$$:= 2^2 + 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 = 22 + 23 + 24 + 26 + 26 + 32 + 33 + 33.$$

$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 3^4 = 22 + 24 + 24 + 24 + 25 + 33 + 33 + 34.$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 3^3 + 4^3 = 23 + 23 + 23 + 23 + 25 + 26 + 33 + 43.$$

$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^4 = 23 + 24 + 24 + 24 + 26 + 32 + 32 + 34.$$

$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 = 24 + 24 + 24 + 24 + 27 + 32 + 32 + 32.$$

$$221 := 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 2^6 + 5^2 = 22 + 23 + 23 + 24 + 25 + 26 + 26 + 52.$$

$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 = 22 + 24 + 24 + 25 + 26 + 26 + 32 + 42.$$

$$:= 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 4^3 = 22 + 24 + 25 + 25 + 25 + 25 + 32 + 43.$$

$$:= 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 = 24 + 24 + 24 + 26 + 26 + 32 + 32 + 33.$$

$$222 := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 3^2 + 5^3 = 22 + 22 + 22 + 22 + 23 + 26 + 32 + 53.$$

$$223 := 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 = 25 + 25 + 25 + 25 + 25 + 32 + 33 + 33.$$

$$224 := 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 4^3 + 4^3 = 22 + 22 + 22 + 22 + 24 + 26 + 43 + 43.$$

$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 3^3 + 3^4 + 4^3 = 22 + 22 + 22 + 23 + 25 + 33 + 34 + 43.$$

$$225 := 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 5^2 = 23 + 25 + 25 + 25 + 25 + 25 + 25 + 52.$$

$$\begin{aligned} 226 &:= 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 3^3 + 3^3 + 4^3 = 22 + 22 + 22 + 25 + 26 + 33 + 33 + 43. \\ &:= 2^2 + 2^2 + 2^3 + 2^6 + 2^6 + 3^2 + 3^2 + 4^3 = 22 + 22 + 23 + 26 + 26 + 32 + 32 + 43. \\ &:= 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 3^2 + 3^4 + 4^3 = 22 + 22 + 24 + 24 + 25 + 32 + 34 + 43. \\ &:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 3^2 + 5^3 = 22 + 23 + 23 + 23 + 25 + 25 + 32 + 53. \\ &:= 2^2 + 2^3 + 2^3 + 2^3 + 2^7 + 3^3 + 3^3 + 4^2 = 22 + 23 + 23 + 23 + 27 + 33 + 33 + 42. \\ &:= 2^2 + 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 = 22 + 23 + 25 + 27 + 32 + 32 + 32 + 33. \\ &:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 3^4 + 3^4 + 4^2 = 23 + 23 + 23 + 23 + 24 + 34 + 34 + 42. \end{aligned}$$

$$\begin{aligned} 228 &:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^7 + 6^2 = 22 + 22 + 23 + 24 + 24 + 24 + 27 + 62. \\ &:= 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 3^3 + 3^4 + 4^2 = 22 + 22 + 25 + 25 + 25 + 33 + 34 + 42. \\ &:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 4^3 + 4^3 = 22 + 23 + 23 + 24 + 25 + 25 + 43 + 43. \\ &:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^7 + 4^2 + 4^2 = 22 + 23 + 23 + 24 + 25 + 27 + 42 + 42. \\ &:= 2^2 + 2^4 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^4 = 22 + 24 + 25 + 25 + 32 + 33 + 33 + 34. \\ &:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^7 + 3^3 + 5^2 = 23 + 23 + 23 + 23 + 24 + 27 + 33 + 52. \\ &:= 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 3^3 + 3^4 + 4^2 = 23 + 23 + 23 + 24 + 26 + 33 + 34 + 42. \\ &:= 2^3 + 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 + 4^2 = 23 + 23 + 24 + 24 + 27 + 32 + 33 + 42. \\ &:= 2^3 + 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 = 23 + 24 + 25 + 26 + 32 + 32 + 32 + 34. \\ &:= 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 = 24 + 24 + 25 + 27 + 32 + 32 + 32 + 32. \end{aligned}$$

$$\begin{aligned} 230 &:= 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 3^4 + 5^2 = 22 + 23 + 24 + 25 + 25 + 25 + 34 + 52. \\ &:= 2^2 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 4^2 = 22 + 25 + 25 + 26 + 26 + 32 + 32 + 42. \\ &:= 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 = 23 + 23 + 24 + 26 + 26 + 33 + 33 + 42. \\ &:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 4^3 = 23 + 23 + 25 + 25 + 25 + 33 + 33 + 43. \\ &:= 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 = 24 + 25 + 26 + 26 + 32 + 32 + 32 + 33. \end{aligned}$$

$$\begin{aligned} 232 &:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 6^2 = 22 + 24 + 24 + 24 + 24 + 26 + 26 + 62. \\ &:= 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 5^2 = 22 + 24 + 25 + 25 + 25 + 26 + 33 + 52. \\ &:= 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 = 23 + 24 + 24 + 25 + 26 + 26 + 42 + 42. \\ &:= 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 4^2 + 4^3 = 23 + 24 + 25 + 25 + 25 + 25 + 42 + 43. \end{aligned}$$

$$\begin{aligned} 233 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^6 + 4^2 + 5^3 = 22 + 22 + 22 + 23 + 23 + 26 + 42 + 53. \\ &:= 2^2 + 2^2 + 2^2 + 2^4 + 3^3 + 3^4 + 3^4 + 4^2 = 22 + 22 + 22 + 24 + 33 + 34 + 34 + 42. \\ &:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 4^3 + 5^3 = 22 + 23 + 23 + 23 + 23 + 23 + 43 + 53. \end{aligned}$$

$$\begin{aligned} 235 &:= 2^2 + 2^2 + 2^2 + 2^4 + 2^7 + 3^3 + 3^3 + 5^2 = 22 + 22 + 22 + 24 + 27 + 33 + 33 + 52. \\ &:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 3^4 + 3^4 + 5^2 = 22 + 22 + 23 + 24 + 24 + 34 + 34 + 52. \\ &:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 3^3 + 3^3 + 5^3 = 22 + 22 + 24 + 24 + 24 + 33 + 33 + 53. \\ &:= 2^2 + 2^2 + 2^5 + 2^5 + 3^2 + 3^2 + 3^4 + 4^3 = 22 + 22 + 25 + 25 + 32 + 32 + 34 + 43. \\ &:= 2^2 + 2^3 + 2^3 + 2^4 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 23 + 23 + 24 + 33 + 33 + 34 + 43. \end{aligned}$$

$$\begin{aligned}
237 &:= 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 3^4 + 6^2 = 22 + 22 + 23 + 23 + 25 + 26 + 34 + 62. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^7 + 3^2 + 6^2 = 22 + 22 + 23 + 24 + 25 + 27 + 32 + 62. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 3^3 + 3^4 + 5^2 = 22 + 22 + 24 + 24 + 26 + 33 + 34 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 4^2 + 4^3 = 22 + 23 + 23 + 26 + 26 + 32 + 42 + 43. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 3^4 + 4^2 + 4^3 = 22 + 23 + 24 + 24 + 25 + 34 + 42 + 43. \\
&:= 2^2 + 2^3 + 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 4^3 = 22 + 23 + 24 + 26 + 33 + 33 + 33 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 4^2 + 5^3 = 23 + 23 + 23 + 23 + 25 + 25 + 42 + 53. \\
&:= 2^3 + 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 = 23 + 23 + 25 + 27 + 32 + 32 + 33 + 42. \\
&:= 2^3 + 2^3 + 2^5 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 = 23 + 23 + 25 + 33 + 33 + 33 + 33 + 34. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 4^3 = 23 + 24 + 24 + 24 + 32 + 33 + 34 + 43. \\
&:= 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 = 25 + 25 + 27 + 32 + 32 + 32 + 32 + 32. \\
239 &:= 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 2^6 + 3^3 + 6^2 = 22 + 22 + 23 + 25 + 26 + 26 + 33 + 62. \\
&:= 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 4^2 + 4^3 = 22 + 24 + 24 + 25 + 26 + 33 + 42 + 43. \\
&:= 2^3 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 4^2 = 23 + 24 + 25 + 25 + 33 + 33 + 34 + 42. \\
&:= 2^3 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 = 23 + 25 + 26 + 33 + 33 + 33 + 33 + 33. \\
&:= 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^3 + 3^3 + 4^3 = 24 + 24 + 24 + 26 + 32 + 33 + 33 + 43. \\
240 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 3^3 + 4^3 + 5^3 = 22 + 22 + 22 + 22 + 23 + 33 + 43 + 53. \\
241 &:= 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 6^2 = 22 + 24 + 24 + 25 + 26 + 26 + 32 + 62. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 4^3 + 5^2 = 23 + 24 + 24 + 24 + 25 + 26 + 43 + 52. \\
&:= 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 + 4^2 = 23 + 25 + 25 + 26 + 26 + 32 + 42 + 42. \\
&:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 4^2 = 24 + 24 + 25 + 25 + 25 + 34 + 42 + 42. \\
&:= 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 4^2 = 24 + 25 + 25 + 26 + 33 + 33 + 33 + 42. \\
242 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^7 + 3^2 + 4^3 + 5^2 = 22 + 22 + 22 + 22 + 27 + 32 + 43 + 52. \\
&:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 3^2 + 4^3 + 5^3 = 22 + 22 + 22 + 24 + 24 + 32 + 43 + 53. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 3^2 + 3^4 + 4^3 + 4^3 = 22 + 22 + 23 + 23 + 32 + 34 + 43 + 43. \\
&:= 2^2 + 2^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 3^4 = 22 + 22 + 32 + 32 + 33 + 33 + 34 + 34. \\
244 &:= 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 3^3 + 4^2 + 5^3 = 22 + 22 + 22 + 25 + 25 + 33 + 42 + 53. \\
&:= 2^2 + 2^2 + 2^3 + 2^5 + 3^2 + 3^4 + 3^4 + 5^2 = 22 + 22 + 23 + 25 + 32 + 34 + 34 + 52. \\
&:= 2^2 + 2^2 + 2^3 + 2^6 + 3^2 + 3^3 + 4^3 + 4^3 = 22 + 22 + 23 + 26 + 32 + 33 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 2^5 + 3^2 + 3^3 + 3^3 + 5^3 = 22 + 22 + 24 + 25 + 32 + 33 + 33 + 53. \\
&:= 2^2 + 2^3 + 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 5^3 = 22 + 23 + 24 + 26 + 32 + 32 + 32 + 53. \\
&:= 2^3 + 2^3 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 4^3 = 23 + 23 + 27 + 32 + 32 + 32 + 32 + 43. \\
246 &:= 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 5^2 + 5^3 = 22 + 22 + 23 + 24 + 25 + 25 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^5 + 2^6 + 3^2 + 3^3 + 3^4 + 5^2 = 22 + 22 + 25 + 26 + 32 + 33 + 34 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^7 + 3^3 + 3^3 + 6^2 = 22 + 23 + 23 + 23 + 27 + 33 + 33 + 62. \\
&:= 2^2 + 2^3 + 2^5 + 2^5 + 3^2 + 3^4 + 4^2 + 4^3 = 22 + 23 + 25 + 25 + 32 + 34 + 42 + 43. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 24 + 24 + 24 + 34 + 34 + 42 + 42. \\
&:= 2^2 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 4^3 + 4^3 = 22 + 24 + 24 + 26 + 32 + 32 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 3^4 + 3^4 + 6^2 = 23 + 23 + 23 + 23 + 24 + 34 + 34 + 62. \\
&:= 2^3 + 2^4 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 = 23 + 24 + 25 + 32 + 32 + 33 + 34 + 43.
\end{aligned}$$

$$\begin{aligned}
248 &:= 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 3^3 + 3^4 + 6^2 = 22 + 22 + 25 + 25 + 25 + 33 + 34 + 62. \\
&:= 2^2 + 2^2 + 2^6 + 2^6 + 2^6 + 4^2 + 4^2 + 4^2 = 22 + 22 + 26 + 26 + 26 + 42 + 42 + 42. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^7 + 4^2 + 6^2 = 22 + 23 + 23 + 24 + 25 + 27 + 42 + 62. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^7 + 3^3 + 4^2 + 5^2 = 22 + 24 + 24 + 24 + 27 + 33 + 42 + 52. \\
&:= 2^2 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 4^2 + 4^3 = 22 + 25 + 25 + 26 + 32 + 33 + 42 + 43. \\
&:= 2^2 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 5^2 = 22 + 26 + 26 + 26 + 32 + 32 + 32 + 52. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 3^3 + 3^4 + 6^2 = 23 + 23 + 23 + 24 + 26 + 33 + 34 + 62. \\
&:= 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 4^2 + 4^2 + 4^3 = 23 + 23 + 23 + 26 + 26 + 42 + 42 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 + 6^2 = 23 + 23 + 24 + 24 + 27 + 32 + 33 + 62. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^3 + 4^2 + 5^3 = 24 + 24 + 24 + 24 + 24 + 33 + 42 + 53. \\
&:= 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 = 24 + 25 + 26 + 32 + 32 + 33 + 33 + 43.
\end{aligned}$$

$$\begin{aligned}
250 &:= 2^2 + 2^2 + 2^5 + 2^5 + 2^6 + 2^6 + 5^2 + 5^2 = 22 + 22 + 25 + 25 + 26 + 26 + 52 + 52. \\
&:= 2^2 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 6^2 = 22 + 25 + 25 + 26 + 26 + 32 + 32 + 62. \\
&:= 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 + 6^2 = 23 + 23 + 24 + 26 + 26 + 33 + 33 + 62. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 5^2 + 5^2 = 23 + 24 + 24 + 24 + 24 + 27 + 52 + 52. \\
&:= 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 4^3 + 5^2 = 23 + 24 + 25 + 25 + 26 + 32 + 43 + 52. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^4 + 4^2 + 5^2 = 24 + 24 + 24 + 24 + 26 + 34 + 42 + 52. \\
&:= 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 4^2 + 4^2 = 25 + 25 + 25 + 25 + 32 + 34 + 42 + 42.
\end{aligned}$$

$$251 := 2^2 + 2^2 + 2^2 + 2^5 + 3^2 + 3^2 + 4^3 + 5^3 = 22 + 22 + 22 + 25 + 32 + 32 + 43 + 53.$$

$$\begin{aligned}
252 &:= 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 4^2 + 6^2 = 23 + 24 + 24 + 25 + 26 + 26 + 42 + 62. \\
&:= 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 4^3 + 6^2 = 23 + 24 + 25 + 25 + 25 + 25 + 43 + 62.
\end{aligned}$$

$$\begin{aligned}
253 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^6 + 5^3 + 6^2 = 22 + 22 + 22 + 23 + 23 + 26 + 53 + 62. \\
&:= 2^2 + 2^2 + 2^2 + 2^3 + 2^7 + 4^2 + 4^3 + 5^2 = 22 + 22 + 22 + 23 + 27 + 42 + 43 + 52. \\
&:= 2^2 + 2^2 + 2^2 + 2^4 + 3^3 + 3^4 + 3^4 + 6^2 = 22 + 22 + 22 + 24 + 33 + 34 + 34 + 62. \\
&:= 2^2 + 2^2 + 2^2 + 2^6 + 3^4 + 4^2 + 4^2 + 4^3 = 22 + 22 + 22 + 26 + 34 + 42 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 4^2 + 4^3 + 5^3 = 22 + 22 + 23 + 24 + 24 + 42 + 43 + 53. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 23 + 23 + 23 + 34 + 42 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 3^3 + 3^3 + 3^3 + 3^3 + 5^3 = 22 + 23 + 23 + 33 + 33 + 33 + 33 + 53. \\
&:= 2^2 + 2^3 + 3^2 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 = 22 + 23 + 32 + 33 + 33 + 34 + 34 + 42.
\end{aligned}$$

$$\begin{aligned}
255 &:= 2^2 + 2^3 + 2^3 + 2^5 + 3^4 + 3^4 + 4^2 + 5^2 = 22 + 23 + 23 + 25 + 34 + 34 + 42 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^6 + 3^3 + 4^2 + 4^3 + 4^3 = 22 + 23 + 23 + 26 + 33 + 42 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^4 + 2^5 + 3^3 + 3^3 + 4^2 + 5^3 = 22 + 23 + 24 + 25 + 33 + 33 + 42 + 53. \\
&:= 2^2 + 2^3 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 5^2 = 22 + 23 + 27 + 32 + 33 + 33 + 33 + 52. \\
&:= 2^2 + 2^4 + 2^5 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 24 + 25 + 32 + 34 + 34 + 42 + 42. \\
&:= 2^2 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 = 22 + 25 + 26 + 32 + 32 + 32 + 43 + 43. \\
&:= 2^2 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 = 22 + 26 + 27 + 32 + 32 + 32 + 42 + 42. \\
&:= 2^2 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 = 22 + 26 + 32 + 33 + 33 + 33 + 34 + 42.
\end{aligned}$$

$$\begin{aligned}
255 &:= 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 5^2 + 5^3 = 23 + 23 + 23 + 23 + 26 + 32 + 52 + 53. \\
&:= 2^3 + 2^3 + 2^4 + 2^6 + 3^2 + 3^2 + 4^2 + 5^3 = 23 + 23 + 24 + 26 + 32 + 32 + 42 + 53. \\
&:= 2^3 + 2^3 + 2^4 + 3^2 + 3^3 + 3^4 + 3^4 + 5^2 = 23 + 23 + 24 + 32 + 33 + 34 + 34 + 52. \\
&:= 2^3 + 2^4 + 2^4 + 3^2 + 3^3 + 3^3 + 3^3 + 5^3 = 23 + 24 + 24 + 32 + 33 + 33 + 33 + 53. \\
&:= 2^4 + 2^4 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 = 24 + 24 + 32 + 32 + 33 + 34 + 34 + 42.
\end{aligned}$$

$$\begin{aligned}
257 &:= 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 4^2 + 4^3 + 5^2 = 22 + 22 + 24 + 26 + 26 + 42 + 43 + 52. \\
&:= 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 4^3 + 4^3 + 5^2 = 22 + 22 + 25 + 25 + 25 + 43 + 43 + 52. \\
&:= 2^2 + 2^2 + 2^5 + 2^5 + 2^7 + 4^2 + 4^2 + 5^2 = 22 + 22 + 25 + 25 + 27 + 42 + 42 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 2^7 + 3^3 + 5^2 + 5^2 = 22 + 23 + 23 + 25 + 27 + 33 + 52 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 4^3 + 6^2 = 22 + 23 + 23 + 26 + 26 + 32 + 43 + 62. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 3^4 + 4^3 + 6^2 = 22 + 23 + 24 + 24 + 25 + 34 + 43 + 62. \\
&:= 2^2 + 2^3 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 5^2 = 22 + 23 + 25 + 26 + 33 + 34 + 42 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 4^2 + 4^2 + 5^3 = 22 + 24 + 24 + 25 + 25 + 42 + 42 + 53. \\
&:= 2^2 + 2^4 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 5^2 = 22 + 24 + 25 + 27 + 32 + 33 + 42 + 52. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 5^3 + 6^2 = 23 + 23 + 23 + 23 + 25 + 25 + 53 + 62. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 4^3 + 4^3 + 5^2 = 23 + 23 + 23 + 24 + 26 + 43 + 43 + 52. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 3^3 + 5^2 + 5^3 = 23 + 23 + 24 + 24 + 25 + 33 + 52 + 53. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 3^4 + 4^2 + 4^2 + 4^3 = 23 + 23 + 25 + 25 + 34 + 42 + 42 + 43. \\
&:= 2^3 + 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 6^2 = 23 + 23 + 25 + 27 + 32 + 32 + 33 + 62. \\
&:= 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 = 23 + 24 + 24 + 26 + 32 + 42 + 43 + 43. \\
&:= 2^3 + 2^4 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 5^2 = 23 + 24 + 26 + 32 + 33 + 33 + 34 + 52. \\
&:= 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^3 + 4^2 + 5^3 = 24 + 24 + 24 + 25 + 32 + 33 + 42 + 53. \\
&:= 2^4 + 2^4 + 2^4 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 24 + 24 + 24 + 33 + 33 + 33 + 43 + 43. \\
&:= 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 5^2 = 24 + 24 + 27 + 32 + 32 + 33 + 33 + 52.
\end{aligned}$$

$$\begin{aligned}
259 &:= 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 4^3 + 6^2 = 22 + 24 + 24 + 25 + 26 + 33 + 43 + 62. \\
&:= 2^2 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 + 5^2 = 22 + 25 + 26 + 26 + 33 + 33 + 42 + 52. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 3^4 + 5^2 + 5^2 = 23 + 23 + 24 + 25 + 26 + 34 + 52 + 52. \\
&:= 2^3 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 5^2 + 5^2 = 23 + 24 + 24 + 25 + 27 + 32 + 52 + 52. \\
&:= 2^3 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 6^2 = 23 + 24 + 25 + 25 + 33 + 33 + 34 + 62. \\
&:= 2^3 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 4^2 + 4^3 = 23 + 25 + 25 + 26 + 33 + 42 + 42 + 43. \\
&:= 2^3 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 4^2 + 5^2 = 23 + 26 + 26 + 26 + 32 + 32 + 42 + 52. \\
&:= 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^4 + 4^2 + 5^2 = 24 + 24 + 25 + 26 + 32 + 34 + 42 + 52. \\
&:= 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 5^2 = 24 + 26 + 26 + 32 + 33 + 33 + 33 + 52.
\end{aligned}$$

$$260 := 2^2 + 2^2 + 2^2 + 2^3 + 3^2 + 3^4 + 5^2 + 5^3 = 22 + 22 + 22 + 23 + 32 + 34 + 52 + 53.$$

$$\begin{aligned}
261 &:= 2^3 + 2^4 + 2^5 + 2^6 + 2^6 + 3^3 + 5^2 + 5^2 = 23 + 24 + 25 + 26 + 26 + 33 + 52 + 52. \\
&:= 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 + 6^2 = 23 + 25 + 25 + 26 + 26 + 32 + 42 + 62. \\
&:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 6^2 = 24 + 24 + 25 + 25 + 25 + 34 + 42 + 62. \\
&:= 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 6^2 = 24 + 25 + 25 + 26 + 33 + 33 + 33 + 62.
\end{aligned}$$

$$\begin{aligned}
262 &:= 2^2 + 2^2 + 2^2 + 2^4 + 3^4 + 4^3 + 4^3 + 5^2 = 22 + 22 + 22 + 24 + 34 + 43 + 43 + 52. \\
&:= 2^2 + 2^2 + 2^2 + 2^6 + 3^2 + 3^3 + 5^2 + 5^3 = 22 + 22 + 22 + 26 + 32 + 33 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^3 + 2^5 + 3^2 + 4^2 + 4^3 + 5^3 = 22 + 22 + 23 + 25 + 32 + 42 + 43 + 53. \\
&:= 2^2 + 2^2 + 2^3 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 22 + 23 + 33 + 33 + 43 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^4 + 3^2 + 3^2 + 3^3 + 4^3 + 5^3 = 22 + 23 + 24 + 32 + 32 + 33 + 43 + 53.
\end{aligned}$$

$$\begin{aligned}
264 &:= 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 3^3 + 5^3 + 6^2 = 22 + 22 + 22 + 25 + 25 + 33 + 53 + 62. \\
&:= 2^2 + 2^2 + 2^4 + 2^5 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 22 + 24 + 25 + 42 + 43 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 2^7 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 22 + 24 + 27 + 42 + 42 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^5 + 3^3 + 3^3 + 3^4 + 4^3 + 5^2 = 22 + 22 + 25 + 33 + 33 + 34 + 43 + 52. \\
&:= 2^2 + 2^3 + 2^6 + 3^2 + 3^2 + 3^4 + 4^3 + 5^2 = 22 + 23 + 26 + 32 + 32 + 34 + 43 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 24 + 24 + 32 + 33 + 43 + 43 + 43. \\
&:= 2^2 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 4^3 + 5^2 = 22 + 24 + 27 + 32 + 32 + 32 + 43 + 52. \\
&:= 2^3 + 2^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 = 23 + 23 + 33 + 33 + 34 + 34 + 42 + 42. \\
&:= 2^3 + 2^5 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 5^3 = 23 + 25 + 32 + 32 + 33 + 33 + 33 + 53. \\
&:= 2^4 + 2^4 + 2^4 + 3^2 + 3^2 + 3^2 + 4^3 + 5^3 = 24 + 24 + 24 + 32 + 32 + 32 + 43 + 53. \\
&:= 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 = 25 + 32 + 32 + 32 + 33 + 34 + 34 + 42.
\end{aligned}$$

$$\begin{aligned}
266 &:= 2^2 + 2^3 + 2^5 + 2^5 + 3^2 + 3^4 + 4^3 + 6^2 = 22 + 23 + 25 + 25 + 32 + 34 + 43 + 62. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 3^4 + 3^4 + 4^2 + 6^2 = 22 + 24 + 24 + 24 + 34 + 34 + 42 + 62. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 3^2 + 4^2 + 4^2 + 5^3 = 22 + 25 + 25 + 25 + 32 + 42 + 42 + 53. \\
&:= 2^2 + 2^5 + 2^5 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 = 22 + 25 + 25 + 33 + 33 + 42 + 43 + 43. \\
&:= 2^2 + 2^5 + 2^7 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 = 22 + 25 + 27 + 33 + 33 + 42 + 42 + 42. \\
&:= 2^2 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 4^3 + 5^2 = 22 + 26 + 26 + 32 + 32 + 33 + 43 + 52. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 3^2 + 3^3 + 5^2 + 5^3 = 23 + 23 + 25 + 25 + 32 + 33 + 52 + 53. \\
&:= 2^3 + 2^3 + 2^7 + 3^3 + 3^3 + 3^3 + 4^2 + 5^2 = 23 + 23 + 27 + 33 + 33 + 33 + 42 + 52. \\
&:= 2^3 + 2^4 + 2^5 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 23 + 24 + 25 + 34 + 34 + 42 + 42 + 42. \\
&:= 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 = 23 + 25 + 26 + 32 + 32 + 42 + 43 + 43. \\
&:= 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 = 23 + 26 + 27 + 32 + 32 + 42 + 42 + 42. \\
&:= 2^3 + 2^6 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 = 23 + 26 + 33 + 33 + 33 + 34 + 42 + 42. \\
&:= 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 4^2 + 5^3 = 24 + 25 + 25 + 32 + 32 + 33 + 42 + 53. \\
&:= 2^4 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 24 + 25 + 32 + 33 + 33 + 33 + 43 + 43. \\
&:= 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 = 24 + 27 + 32 + 33 + 33 + 33 + 42 + 42. \\
&:= 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 5^2 = 25 + 27 + 32 + 32 + 32 + 33 + 33 + 52.
\end{aligned}$$

$$\begin{aligned}
268 &:= 2^2 + 2^2 + 2^6 + 2^6 + 2^6 + 4^2 + 4^2 + 6^2 = 22 + 22 + 26 + 26 + 26 + 42 + 42 + 62. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^7 + 6^2 + 6^2 = 22 + 23 + 23 + 24 + 25 + 27 + 62 + 62. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^7 + 3^3 + 5^2 + 6^2 = 22 + 24 + 24 + 24 + 27 + 33 + 52 + 62. \\
&:= 2^2 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 4^3 + 6^2 = 22 + 25 + 25 + 26 + 32 + 33 + 43 + 62. \\
&:= 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 4^2 + 4^3 + 6^2 = 23 + 23 + 23 + 26 + 26 + 42 + 43 + 62. \\
&:= 2^3 + 2^4 + 2^5 + 2^5 + 3^3 + 4^3 + 4^3 + 5^2 = 23 + 24 + 25 + 25 + 33 + 43 + 43 + 52. \\
&:= 2^3 + 2^4 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 5^2 = 23 + 24 + 25 + 27 + 33 + 42 + 42 + 52.
\end{aligned}$$

$$\begin{aligned}
268 &:= 2^3 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 5^2 + 5^2 = 23 + 25 + 25 + 27 + 32 + 32 + 52 + 52. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^3 + 5^3 + 6^2 = 24 + 24 + 24 + 24 + 24 + 33 + 53 + 62. \\
&:= 2^4 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 = 24 + 25 + 26 + 33 + 34 + 42 + 42 + 42. \\
&:= 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 + 5^2 = 25 + 25 + 26 + 32 + 32 + 34 + 42 + 52. \\
&:= 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 = 26 + 26 + 33 + 33 + 33 + 33 + 42 + 42.
\end{aligned}$$

$$\begin{aligned}
270 &:= 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^4 + 5^2 + 6^2 = 24 + 24 + 24 + 24 + 26 + 34 + 52 + 62. \\
&:= 2^4 + 2^5 + 2^5 + 2^5 + 3^3 + 3^4 + 5^2 + 5^2 = 24 + 25 + 25 + 25 + 33 + 34 + 52 + 52. \\
&:= 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 4^2 + 6^2 = 25 + 25 + 25 + 25 + 32 + 34 + 42 + 62.
\end{aligned}$$

$$\begin{aligned}
271 &:= 2^2 + 2^2 + 2^3 + 2^3 + 3^4 + 4^2 + 5^2 + 5^3 = 22 + 22 + 23 + 23 + 34 + 42 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^4 + 3^2 + 3^4 + 4^2 + 4^2 + 5^3 = 22 + 22 + 24 + 32 + 34 + 42 + 42 + 53. \\
&:= 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^3 = 32 + 32 + 32 + 32 + 32 + 34 + 34 + 43.
\end{aligned}$$

$$272 := 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 6^2 + 6^2 = 23 + 24 + 24 + 25 + 26 + 26 + 62 + 62.$$

$$\begin{aligned}
273 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^7 + 4^3 + 5^2 + 6^2 = 22 + 22 + 22 + 23 + 27 + 43 + 52 + 62. \\
&:= 2^2 + 2^2 + 2^2 + 2^6 + 3^4 + 4^2 + 4^3 + 6^2 = 22 + 22 + 22 + 26 + 34 + 42 + 43 + 62. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 4^3 + 5^3 + 6^2 = 22 + 22 + 23 + 24 + 24 + 43 + 53 + 62. \\
&:= 2^2 + 2^2 + 2^3 + 2^6 + 3^3 + 4^2 + 5^2 + 5^3 = 22 + 22 + 23 + 26 + 33 + 42 + 52 + 53. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 3^4 + 4^3 + 4^3 + 6^2 = 22 + 23 + 23 + 23 + 34 + 43 + 43 + 62. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 4^2 + 4^2 + 4^3 + 5^3 = 22 + 23 + 23 + 25 + 42 + 42 + 43 + 53. \\
&:= 2^2 + 2^3 + 3^2 + 3^3 + 3^3 + 3^4 + 3^4 + 6^2 = 22 + 23 + 32 + 33 + 33 + 34 + 34 + 62. \\
&:= 2^2 + 2^5 + 3^2 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 25 + 32 + 32 + 33 + 43 + 43 + 43. \\
&:= 2^2 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 = 22 + 27 + 32 + 32 + 33 + 42 + 42 + 43. \\
&:= 2^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 22 + 33 + 33 + 33 + 33 + 34 + 42 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 3^3 + 4^3 + 5^2 + 5^3 = 23 + 23 + 23 + 23 + 33 + 43 + 52 + 53. \\
&:= 2^3 + 2^3 + 2^4 + 3^2 + 3^3 + 4^2 + 4^3 + 5^3 = 23 + 23 + 24 + 32 + 33 + 42 + 43 + 53. \\
&:= 2^4 + 2^5 + 3^2 + 3^2 + 3^2 + 3^2 + 4^3 + 5^3 = 24 + 25 + 32 + 32 + 32 + 32 + 43 + 53.
\end{aligned}$$

$$\begin{aligned}
275 &:= 2^2 + 2^2 + 2^6 + 2^7 + 3^2 + 4^2 + 5^2 + 5^2 = 22 + 22 + 26 + 27 + 32 + 42 + 52 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 5^2 + 5^2 + 5^3 = 22 + 23 + 23 + 24 + 26 + 52 + 52 + 53. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 3^4 + 3^4 + 5^2 + 6^2 = 22 + 23 + 23 + 25 + 34 + 34 + 52 + 62. \\
&:= 2^2 + 2^3 + 2^3 + 2^6 + 3^3 + 4^3 + 4^3 + 6^2 = 22 + 23 + 23 + 26 + 33 + 43 + 43 + 62. \\
&:= 2^2 + 2^3 + 2^4 + 2^5 + 3^3 + 3^3 + 5^3 + 6^2 = 22 + 23 + 24 + 25 + 33 + 33 + 53 + 62. \\
&:= 2^2 + 2^4 + 2^4 + 2^6 + 3^2 + 4^2 + 5^2 + 5^3 = 22 + 24 + 24 + 26 + 32 + 42 + 52 + 53. \\
&:= 2^2 + 2^4 + 2^4 + 3^3 + 3^4 + 3^4 + 5^2 + 5^2 = 22 + 24 + 24 + 33 + 34 + 34 + 52 + 52. \\
&:= 2^2 + 2^4 + 2^5 + 3^2 + 3^4 + 3^4 + 4^2 + 6^2 = 22 + 24 + 25 + 32 + 34 + 34 + 42 + 62. \\
&:= 2^2 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 6^2 = 22 + 26 + 27 + 32 + 32 + 32 + 42 + 62. \\
&:= 2^2 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 6^2 = 22 + 26 + 32 + 33 + 33 + 33 + 34 + 62. \\
&:= 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 4^3 + 5^2 + 5^2 = 23 + 23 + 23 + 27 + 32 + 43 + 52 + 52. \\
&:= 2^3 + 2^3 + 2^4 + 2^6 + 3^2 + 3^2 + 5^3 + 6^2 = 23 + 23 + 24 + 26 + 32 + 32 + 53 + 62. \\
&:= 2^3 + 2^3 + 2^6 + 3^2 + 3^4 + 4^2 + 4^3 + 5^2 = 23 + 23 + 26 + 32 + 34 + 42 + 43 + 52.
\end{aligned}$$

$$\begin{aligned}
275 &:= 2^3 + 2^4 + 2^4 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 24 + 24 + 33 + 42 + 43 + 43 + 43. \\
&:= 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 4^2 + 4^3 + 5^2 = 23 + 24 + 27 + 32 + 32 + 42 + 43 + 52. \\
&:= 2^3 + 2^4 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 + 5^2 = 23 + 24 + 33 + 33 + 33 + 34 + 43 + 52. \\
&:= 2^4 + 2^4 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 6^2 = 24 + 24 + 32 + 32 + 33 + 34 + 34 + 62. \\
&:= 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 = 24 + 26 + 32 + 32 + 34 + 42 + 42 + 43.
\end{aligned}$$

$$\begin{aligned}
277 &:= 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 4^3 + 5^2 + 6^2 = 22 + 22 + 24 + 26 + 26 + 43 + 52 + 62. \\
&:= 2^2 + 2^2 + 2^5 + 2^5 + 2^7 + 4^2 + 5^2 + 6^2 = 22 + 22 + 25 + 25 + 27 + 42 + 52 + 62. \\
&:= 2^2 + 2^3 + 2^5 + 2^6 + 3^3 + 3^4 + 5^2 + 6^2 = 22 + 23 + 25 + 26 + 33 + 34 + 52 + 62. \\
&:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 4^2 + 5^3 + 6^2 = 22 + 24 + 24 + 25 + 25 + 42 + 53 + 62. \\
&:= 2^2 + 2^4 + 2^5 + 2^7 + 3^2 + 3^3 + 5^2 + 6^2 = 22 + 24 + 25 + 27 + 32 + 33 + 52 + 62. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 3^4 + 4^2 + 4^3 + 6^2 = 23 + 23 + 25 + 25 + 34 + 42 + 43 + 62. \\
&:= 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 4^3 + 4^3 + 6^2 = 23 + 24 + 24 + 26 + 32 + 43 + 43 + 62. \\
&:= 2^3 + 2^5 + 2^5 + 2^5 + 4^2 + 4^2 + 4^2 + 5^3 = 23 + 25 + 25 + 25 + 42 + 42 + 42 + 53. \\
&:= 2^3 + 2^6 + 2^6 + 3^2 + 3^3 + 4^2 + 4^3 + 5^2 = 23 + 26 + 26 + 32 + 33 + 42 + 43 + 52. \\
&:= 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^3 + 5^3 + 6^2 = 24 + 24 + 24 + 25 + 32 + 33 + 53 + 62. \\
&:= 2^4 + 2^4 + 2^5 + 3^3 + 3^4 + 4^2 + 4^3 + 5^2 = 24 + 24 + 25 + 33 + 34 + 42 + 43 + 52. \\
&:= 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 5^2 = 24 + 26 + 33 + 33 + 33 + 33 + 43 + 52.
\end{aligned}$$

$$278 := 2^3 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 6^3 = 23 + 32 + 32 + 32 + 32 + 32 + 32 + 63.$$

$$\begin{aligned}
279 &:= 2^2 + 2^3 + 2^6 + 2^6 + 2^6 + 5^2 + 5^2 + 5^2 = 22 + 23 + 26 + 26 + 26 + 52 + 52 + 52. \\
&:= 2^2 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 + 5^2 + 6^2 = 22 + 25 + 26 + 26 + 33 + 33 + 52 + 62. \\
&:= 2^3 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 4^3 + 6^2 = 23 + 25 + 25 + 26 + 33 + 42 + 43 + 62. \\
&:= 2^3 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 5^2 + 6^2 = 23 + 26 + 26 + 26 + 32 + 32 + 52 + 62. \\
&:= 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^4 + 5^2 + 6^2 = 24 + 24 + 25 + 26 + 32 + 34 + 52 + 62.
\end{aligned}$$

$$\begin{aligned}
280 &:= 2^2 + 2^2 + 2^2 + 3^3 + 3^3 + 4^3 + 5^2 + 5^3 = 22 + 22 + 22 + 33 + 33 + 43 + 52 + 53. \\
&:= 2^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 5^3 = 22 + 32 + 32 + 32 + 33 + 34 + 42 + 53.
\end{aligned}$$

$$\begin{aligned}
281 &:= 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 6^2 + 6^2 = 23 + 25 + 25 + 26 + 26 + 32 + 62 + 62. \\
&:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^4 + 6^2 + 6^2 = 24 + 24 + 25 + 25 + 25 + 34 + 62 + 62.
\end{aligned}$$

$$\begin{aligned}
282 &:= 2^2 + 2^2 + 2^3 + 2^5 + 3^2 + 4^3 + 5^3 + 6^2 = 22 + 22 + 23 + 25 + 32 + 43 + 53 + 62. \\
&:= 2^2 + 2^3 + 2^4 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 = 22 + 23 + 24 + 34 + 42 + 42 + 42 + 53. \\
&:= 2^2 + 2^3 + 3^2 + 3^3 + 3^4 + 4^3 + 4^3 + 5^2 = 22 + 23 + 32 + 33 + 34 + 43 + 43 + 52. \\
&:= 2^3 + 2^4 + 3^2 + 3^2 + 3^2 + 3^4 + 5^2 + 5^3 = 23 + 24 + 32 + 32 + 32 + 34 + 52 + 53.
\end{aligned}$$

$$\begin{aligned}
284 &:= 2^2 + 2^2 + 2^4 + 2^5 + 4^3 + 4^3 + 4^3 + 6^2 = 22 + 22 + 24 + 25 + 43 + 43 + 43 + 62. \\
&:= 2^2 + 2^2 + 2^4 + 2^7 + 4^2 + 4^2 + 4^3 + 6^2 = 22 + 22 + 24 + 27 + 42 + 42 + 43 + 62. \\
&:= 2^2 + 2^4 + 2^6 + 3^3 + 4^2 + 4^2 + 4^2 + 5^3 = 22 + 24 + 26 + 33 + 42 + 42 + 42 + 53. \\
&:= 2^2 + 2^5 + 2^6 + 3^2 + 3^2 + 4^2 + 5^2 + 5^3 = 22 + 25 + 26 + 32 + 32 + 42 + 52 + 53. \\
&:= 2^2 + 2^5 + 3^2 + 3^3 + 3^4 + 3^4 + 5^2 + 5^2 = 22 + 25 + 32 + 33 + 34 + 34 + 52 + 52. \\
&:= 2^2 + 2^6 + 3^2 + 3^3 + 3^3 + 4^3 + 4^3 + 5^2 = 22 + 26 + 32 + 33 + 33 + 43 + 43 + 52.
\end{aligned}$$

$$\begin{aligned}
284 &:= 2^3 + 2^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 6^2 = 23 + 23 + 33 + 33 + 34 + 34 + 42 + 62. \\
&:= 2^3 + 2^5 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 25 + 32 + 33 + 42 + 43 + 43 + 43. \\
&:= 2^3 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 = 23 + 27 + 32 + 33 + 42 + 42 + 42 + 43. \\
&:= 2^4 + 2^4 + 3^2 + 3^2 + 3^4 + 4^3 + 4^3 + 5^2 = 24 + 24 + 32 + 32 + 34 + 43 + 43 + 52. \\
&:= 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 5^2 + 5^3 = 24 + 26 + 32 + 32 + 32 + 33 + 52 + 53. \\
&:= 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 6^2 = 25 + 32 + 32 + 32 + 33 + 34 + 34 + 62. \\
286 &:= 2^2 + 2^3 + 2^5 + 2^6 + 4^3 + 4^3 + 5^2 + 5^2 = 22 + 23 + 25 + 26 + 43 + 43 + 52 + 52. \\
&:= 2^2 + 2^3 + 2^6 + 2^7 + 4^2 + 4^2 + 5^2 + 5^2 = 22 + 23 + 26 + 27 + 42 + 42 + 52 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 3^4 + 3^4 + 6^2 + 6^2 = 22 + 24 + 24 + 24 + 34 + 34 + 62 + 62. \\
&:= 2^2 + 2^4 + 2^5 + 2^5 + 3^3 + 5^2 + 5^2 + 5^3 = 22 + 24 + 25 + 25 + 33 + 52 + 52 + 53. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 3^2 + 4^2 + 5^3 + 6^2 = 22 + 25 + 25 + 25 + 32 + 42 + 53 + 62. \\
&:= 2^2 + 2^5 + 2^5 + 3^3 + 3^3 + 4^3 + 4^3 + 6^2 = 22 + 25 + 25 + 33 + 33 + 43 + 43 + 62. \\
&:= 2^2 + 2^5 + 2^7 + 3^3 + 3^3 + 4^2 + 4^2 + 6^2 = 22 + 25 + 27 + 33 + 33 + 42 + 42 + 62. \\
&:= 2^2 + 2^6 + 2^6 + 3^4 + 4^2 + 4^2 + 4^2 + 5^2 = 22 + 26 + 26 + 34 + 42 + 42 + 42 + 52. \\
&:= 2^3 + 2^3 + 2^7 + 3^3 + 3^3 + 3^3 + 5^2 + 6^2 = 23 + 23 + 27 + 33 + 33 + 33 + 52 + 62. \\
&:= 2^3 + 2^4 + 2^4 + 2^6 + 4^2 + 4^2 + 5^2 + 5^3 = 23 + 24 + 24 + 26 + 42 + 42 + 52 + 53. \\
&:= 2^3 + 2^4 + 2^5 + 3^4 + 3^4 + 4^2 + 4^2 + 6^2 = 23 + 24 + 25 + 34 + 34 + 42 + 42 + 62. \\
&:= 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 4^3 + 4^3 + 6^2 = 23 + 25 + 26 + 32 + 32 + 43 + 43 + 62. \\
&:= 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 6^2 = 23 + 26 + 27 + 32 + 32 + 42 + 42 + 62. \\
&:= 2^3 + 2^6 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 6^2 = 23 + 26 + 33 + 33 + 33 + 34 + 42 + 62. \\
&:= 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 5^3 + 6^2 = 24 + 25 + 25 + 32 + 32 + 33 + 53 + 62. \\
&:= 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 6^2 = 24 + 27 + 32 + 33 + 33 + 33 + 42 + 62. \\
&:= 2^5 + 2^5 + 3^2 + 3^3 + 3^4 + 4^2 + 4^3 + 5^2 = 25 + 25 + 32 + 33 + 34 + 42 + 43 + 52. \\
&:= 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 + 5^2 + 5^2 = 26 + 26 + 32 + 32 + 32 + 34 + 52 + 52. \\
287 &:= 2^2 + 2^2 + 2^2 + 3^2 + 3^2 + 4^2 + 5^2 + 6^3 = 22 + 22 + 22 + 32 + 32 + 42 + 52 + 63. \\
288 &:= 2^2 + 2^2 + 2^6 + 2^6 + 2^6 + 4^2 + 6^2 + 6^2 = 22 + 22 + 26 + 26 + 26 + 42 + 62 + 62. \\
&:= 2^2 + 2^5 + 2^5 + 2^6 + 3^4 + 5^2 + 5^2 + 5^2 = 22 + 25 + 25 + 26 + 34 + 52 + 52 + 52. \\
&:= 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 4^3 + 6^2 + 6^2 = 23 + 23 + 23 + 26 + 26 + 43 + 62 + 62. \\
&:= 2^3 + 2^4 + 2^5 + 2^7 + 3^3 + 4^2 + 5^2 + 6^2 = 23 + 24 + 25 + 27 + 33 + 42 + 52 + 62. \\
&:= 2^4 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 4^2 + 6^2 = 24 + 25 + 26 + 33 + 34 + 42 + 42 + 62. \\
&:= 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 5^2 + 6^2 = 25 + 25 + 26 + 32 + 32 + 34 + 52 + 62. \\
&:= 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 25 + 26 + 26 + 42 + 42 + 42 + 42 + 43. \\
&:= 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 6^2 = 26 + 26 + 33 + 33 + 33 + 33 + 42 + 62. \\
290 &:= 2^4 + 2^6 + 2^6 + 2^6 + 4^2 + 4^2 + 5^2 + 5^2 = 24 + 26 + 26 + 26 + 42 + 42 + 52 + 52. \\
&:= 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 6^2 + 6^2 = 25 + 25 + 25 + 25 + 32 + 34 + 62 + 62. \\
&:= 2^5 + 2^5 + 2^5 + 2^6 + 4^2 + 4^3 + 5^2 + 5^2 = 25 + 25 + 25 + 26 + 42 + 43 + 52 + 52. \\
291 &:= 2^2 + 2^2 + 2^3 + 2^3 + 3^4 + 5^2 + 5^3 + 6^2 = 22 + 22 + 23 + 23 + 34 + 52 + 53 + 62. \\
&:= 2^2 + 2^2 + 2^4 + 3^2 + 3^4 + 4^2 + 5^3 + 6^2 = 22 + 22 + 24 + 32 + 34 + 42 + 53 + 62. \\
&:= 2^2 + 2^2 + 3^4 + 3^4 + 4^2 + 4^2 + 4^3 + 5^2 = 22 + 22 + 34 + 34 + 42 + 42 + 43 + 52. \\
&:= 2^3 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 = 23 + 32 + 32 + 32 + 43 + 43 + 43 + 43. \\
&:= 2^3 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 5^3 = 23 + 32 + 32 + 33 + 34 + 42 + 42 + 53.
\end{aligned}$$

$$\begin{aligned}
293 &:= 2^2 + 2^2 + 2^2 + 2^6 + 3^4 + 4^3 + 6^2 + 6^2 = 22 + 22 + 22 + 26 + 34 + 43 + 62 + 62. \\
&:= 2^2 + 2^2 + 2^3 + 2^6 + 3^3 + 5^2 + 5^3 + 6^2 = 22 + 22 + 23 + 26 + 33 + 52 + 53 + 62. \\
&:= 2^2 + 2^2 + 2^7 + 3^3 + 4^2 + 4^3 + 5^2 + 5^2 = 22 + 22 + 27 + 33 + 42 + 43 + 52 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 4^2 + 4^3 + 5^3 + 6^2 = 22 + 23 + 23 + 25 + 42 + 43 + 53 + 62. \\
&:= 2^2 + 2^4 + 2^4 + 3^3 + 4^2 + 4^3 + 5^2 + 5^3 = 22 + 24 + 24 + 33 + 42 + 43 + 52 + 53. \\
&:= 2^2 + 2^5 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 25 + 34 + 42 + 42 + 42 + 43 + 43. \\
&:= 2^2 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 + 6^2 = 22 + 27 + 32 + 32 + 33 + 42 + 43 + 62. \\
&:= 2^2 + 2^7 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 22 + 27 + 34 + 42 + 42 + 42 + 42 + 42. \\
&:= 2^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 + 6^2 = 22 + 33 + 33 + 33 + 33 + 34 + 43 + 62. \\
&:= 2^3 + 2^3 + 2^4 + 3^2 + 3^3 + 4^3 + 5^3 + 6^2 = 23 + 23 + 24 + 32 + 33 + 43 + 53 + 62. \\
&:= 2^3 + 2^3 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 + 5^2 = 23 + 23 + 33 + 34 + 42 + 43 + 43 + 52. \\
&:= 2^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 5^2 + 5^3 = 23 + 33 + 33 + 33 + 33 + 33 + 52 + 53. \\
&:= 2^4 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 = 24 + 32 + 33 + 34 + 42 + 42 + 43 + 43. \\
&:= 2^5 + 3^2 + 3^2 + 3^2 + 3^4 + 4^3 + 4^3 + 5^2 = 25 + 32 + 32 + 32 + 34 + 43 + 43 + 52. \\
&:= 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 5^3 = 26 + 32 + 32 + 33 + 33 + 42 + 42 + 53. \\
&:= 2^7 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 5^2 = 27 + 32 + 32 + 32 + 34 + 42 + 42 + 52. \\
&:= 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 5^2 = 32 + 33 + 33 + 33 + 34 + 34 + 42 + 52.
\end{aligned}$$

$$\begin{aligned}
295 &:= 2^2 + 2^2 + 2^6 + 2^7 + 3^2 + 5^2 + 5^2 + 6^2 = 22 + 22 + 26 + 27 + 32 + 52 + 52 + 62. \\
&:= 2^2 + 2^3 + 2^4 + 2^7 + 4^3 + 5^2 + 5^2 + 5^2 = 22 + 23 + 24 + 27 + 43 + 52 + 52 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 2^6 + 3^2 + 5^2 + 5^3 + 6^2 = 22 + 24 + 24 + 26 + 32 + 52 + 53 + 62. \\
&:= 2^2 + 2^4 + 2^5 + 3^2 + 3^4 + 3^4 + 6^2 + 6^2 = 22 + 24 + 25 + 32 + 34 + 34 + 62 + 62. \\
&:= 2^2 + 2^4 + 2^6 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 = 22 + 24 + 26 + 34 + 42 + 43 + 52 + 52. \\
&:= 2^2 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 6^2 + 6^2 = 22 + 26 + 27 + 32 + 32 + 32 + 62 + 62. \\
&:= 2^3 + 2^3 + 2^6 + 3^2 + 3^4 + 4^3 + 5^2 + 6^2 = 23 + 23 + 26 + 32 + 34 + 43 + 52 + 62. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 4^3 + 5^2 + 5^2 + 5^3 = 23 + 24 + 24 + 24 + 43 + 52 + 52 + 53. \\
&:= 2^3 + 2^4 + 2^4 + 3^3 + 4^3 + 4^3 + 4^3 + 6^2 = 23 + 24 + 24 + 33 + 43 + 43 + 43 + 62. \\
&:= 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 4^3 + 5^2 + 6^2 = 23 + 24 + 27 + 32 + 32 + 43 + 52 + 62. \\
&:= 2^3 + 2^5 + 2^6 + 3^2 + 4^2 + 4^2 + 5^2 + 5^3 = 23 + 25 + 26 + 32 + 42 + 42 + 52 + 53. \\
&:= 2^3 + 2^5 + 3^3 + 3^4 + 3^4 + 4^2 + 5^2 + 5^2 = 23 + 25 + 33 + 34 + 34 + 42 + 52 + 52. \\
&:= 2^3 + 2^6 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 + 5^2 = 23 + 26 + 33 + 33 + 42 + 43 + 43 + 52. \\
&:= 2^4 + 2^5 + 3^3 + 3^3 + 3^3 + 4^2 + 5^2 + 5^3 = 24 + 25 + 33 + 33 + 33 + 42 + 52 + 53. \\
&:= 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 + 6^2 = 24 + 26 + 32 + 32 + 34 + 42 + 43 + 62. \\
&:= 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 5^2 + 5^2 = 27 + 32 + 33 + 33 + 33 + 33 + 52 + 52.
\end{aligned}$$

$$\begin{aligned}
297 &:= 2^2 + 2^2 + 2^5 + 2^5 + 2^7 + 5^2 + 6^2 + 6^2 = 22 + 22 + 25 + 25 + 27 + 52 + 62 + 62. \\
&:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 5^3 + 6^2 + 6^2 = 22 + 24 + 24 + 25 + 25 + 53 + 62 + 62. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 3^4 + 4^3 + 6^2 + 6^2 = 23 + 23 + 25 + 25 + 34 + 43 + 62 + 62. \\
&:= 2^3 + 2^5 + 2^5 + 2^5 + 4^2 + 4^2 + 5^3 + 6^2 = 23 + 25 + 25 + 25 + 42 + 42 + 53 + 62. \\
&:= 2^3 + 2^5 + 2^7 + 3^3 + 3^3 + 5^2 + 5^2 + 5^2 = 23 + 25 + 27 + 33 + 33 + 52 + 52 + 52. \\
&:= 2^3 + 2^6 + 2^6 + 3^2 + 3^3 + 4^3 + 5^2 + 6^2 = 23 + 26 + 26 + 32 + 33 + 43 + 52 + 62. \\
&:= 2^4 + 2^4 + 2^5 + 3^3 + 3^4 + 4^3 + 5^2 + 6^2 = 24 + 24 + 25 + 33 + 34 + 43 + 52 + 62.
\end{aligned}$$

$$\begin{aligned}
297 &:= 2^4 + 2^5 + 2^6 + 4^2 + 4^2 + 4^3 + 4^3 + 5^2 = 24 + 25 + 26 + 42 + 42 + 43 + 43 + 52. \\
&:= 2^4 + 2^6 + 2^7 + 4^2 + 4^2 + 4^2 + 4^2 + 5^2 = 24 + 26 + 27 + 42 + 42 + 42 + 42 + 52. \\
&:= 2^5 + 2^6 + 3^3 + 3^3 + 3^4 + 4^2 + 5^2 + 5^2 = 25 + 26 + 33 + 33 + 34 + 42 + 52 + 52.
\end{aligned}$$

$$298 := 2^2 + 2^2 + 2^3 + 3^2 + 4^2 + 4^2 + 5^2 + 6^3 = 22 + 22 + 23 + 32 + 42 + 42 + 52 + 63.$$

$$\begin{aligned}
299 &:= 2^3 + 2^5 + 2^5 + 2^6 + 3^3 + 4^3 + 6^2 + 6^2 = 23 + 25 + 25 + 26 + 33 + 43 + 62 + 62. \\
&:= 2^4 + 2^4 + 2^6 + 2^6 + 4^3 + 5^2 + 5^2 + 5^2 = 24 + 24 + 26 + 26 + 43 + 52 + 52 + 52. \\
&:= 2^4 + 2^5 + 2^5 + 2^7 + 4^2 + 5^2 + 5^2 + 5^2 = 24 + 25 + 25 + 27 + 42 + 52 + 52 + 52.
\end{aligned}$$

$$\begin{aligned}
300 &:= 2^2 + 2^2 + 3^2 + 3^3 + 3^4 + 5^2 + 5^2 + 5^3 = 22 + 22 + 32 + 33 + 34 + 52 + 52 + 53. \\
&:= 2^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 5^3 + 6^2 = 22 + 32 + 32 + 32 + 33 + 34 + 53 + 62.
\end{aligned}$$

$$\begin{aligned}
302 &:= 2^2 + 2^3 + 2^4 + 3^4 + 4^2 + 4^2 + 5^3 + 6^2 = 22 + 23 + 24 + 34 + 42 + 42 + 53 + 62. \\
&:= 2^2 + 2^5 + 3^2 + 3^3 + 4^2 + 4^3 + 5^2 + 5^3 = 22 + 25 + 32 + 33 + 42 + 43 + 52 + 53. \\
&:= 2^2 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 + 5^2 = 22 + 33 + 33 + 33 + 43 + 43 + 43 + 52. \\
&:= 2^3 + 3^2 + 3^2 + 3^4 + 3^4 + 4^3 + 5^2 + 5^2 = 23 + 32 + 32 + 34 + 34 + 43 + 52 + 52. \\
&:= 2^4 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 + 5^2 + 5^3 = 24 + 32 + 32 + 33 + 33 + 43 + 52 + 53.
\end{aligned}$$

$$\begin{aligned}
304 &:= 2^2 + 2^2 + 2^4 + 2^7 + 4^2 + 4^3 + 6^2 + 6^2 = 22 + 22 + 24 + 27 + 42 + 43 + 62 + 62. \\
&:= 2^2 + 2^2 + 2^5 + 2^6 + 5^2 + 5^2 + 5^2 + 5^3 = 22 + 22 + 25 + 26 + 52 + 52 + 52 + 53. \\
&:= 2^2 + 2^4 + 2^6 + 3^3 + 4^2 + 4^2 + 5^3 + 6^2 = 22 + 24 + 26 + 33 + 42 + 42 + 53 + 62. \\
&:= 2^2 + 2^5 + 2^6 + 3^2 + 3^2 + 5^2 + 5^3 + 6^2 = 22 + 25 + 26 + 32 + 32 + 52 + 53 + 62. \\
&:= 2^3 + 2^3 + 3^3 + 3^3 + 3^4 + 3^4 + 6^2 + 6^2 = 23 + 23 + 33 + 33 + 34 + 34 + 62 + 62. \\
&:= 2^3 + 2^4 + 2^5 + 3^2 + 4^3 + 5^2 + 5^2 + 5^3 = 23 + 24 + 25 + 32 + 43 + 52 + 52 + 53. \\
&:= 2^3 + 2^5 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 + 6^2 = 23 + 25 + 32 + 33 + 43 + 43 + 43 + 62. \\
&:= 2^3 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 + 6^2 = 23 + 27 + 32 + 33 + 42 + 42 + 43 + 62. \\
&:= 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 + 5^2 + 5^2 = 26 + 32 + 32 + 33 + 34 + 43 + 52 + 52.
\end{aligned}$$

$$\begin{aligned}
306 &:= 2^2 + 2^3 + 2^6 + 2^7 + 4^2 + 5^2 + 5^2 + 6^2 = 22 + 23 + 26 + 27 + 42 + 52 + 52 + 62. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 3^2 + 5^3 + 6^2 + 6^2 = 22 + 25 + 25 + 25 + 32 + 53 + 62 + 62. \\
&:= 2^2 + 2^5 + 2^7 + 3^3 + 3^3 + 4^2 + 6^2 + 6^2 = 22 + 25 + 27 + 33 + 33 + 42 + 62 + 62. \\
&:= 2^2 + 2^6 + 2^6 + 3^4 + 4^2 + 4^2 + 5^2 + 6^2 = 22 + 26 + 26 + 34 + 42 + 42 + 52 + 62. \\
&:= 2^3 + 2^4 + 2^4 + 2^6 + 4^2 + 5^2 + 5^3 + 6^2 = 23 + 24 + 24 + 26 + 42 + 52 + 53 + 62. \\
&:= 2^3 + 2^4 + 2^5 + 3^4 + 3^4 + 4^2 + 6^2 + 6^2 = 23 + 24 + 25 + 34 + 34 + 42 + 62 + 62. \\
&:= 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 4^2 + 6^2 + 6^2 = 23 + 26 + 27 + 32 + 32 + 42 + 62 + 62. \\
&:= 2^3 + 2^6 + 3^3 + 3^3 + 3^3 + 3^4 + 6^2 + 6^2 = 23 + 26 + 33 + 33 + 33 + 34 + 62 + 62. \\
&:= 2^4 + 2^4 + 2^5 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 = 24 + 24 + 25 + 43 + 43 + 43 + 52 + 52. \\
&:= 2^4 + 2^4 + 2^7 + 4^2 + 4^2 + 4^3 + 5^2 + 5^2 = 24 + 24 + 27 + 42 + 42 + 43 + 52 + 52. \\
&:= 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 6^2 + 6^2 = 24 + 27 + 32 + 33 + 33 + 33 + 62 + 62. \\
&:= 2^5 + 2^5 + 3^2 + 3^3 + 3^4 + 4^3 + 5^2 + 6^2 = 25 + 25 + 32 + 33 + 34 + 43 + 52 + 62.
\end{aligned}$$

$$\begin{aligned}
307 &:= 2^2 + 2^2 + 2^2 + 2^2 + 5^2 + 5^2 + 5^2 + 6^3 = 22 + 22 + 22 + 22 + 52 + 52 + 52 + 63. \\
&:= 2^2 + 2^2 + 2^2 + 3^2 + 3^2 + 5^2 + 6^2 + 6^3 = 22 + 22 + 22 + 32 + 32 + 52 + 62 + 63.
\end{aligned}$$

$$\begin{aligned}
308 &:= 2^2 + 2^2 + 2^6 + 2^6 + 2^6 + 6^2 + 6^2 + 6^2 = 22 + 22 + 26 + 26 + 26 + 62 + 62 + 62. \\
&:= 2^3 + 2^4 + 2^5 + 2^7 + 3^3 + 5^2 + 6^2 + 6^2 = 23 + 24 + 25 + 27 + 33 + 52 + 62 + 62. \\
&:= 2^4 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 6^2 + 6^2 = 24 + 25 + 26 + 33 + 34 + 42 + 62 + 62. \\
&:= 2^5 + 2^6 + 2^6 + 3^2 + 4^3 + 5^2 + 5^2 + 5^2 = 25 + 26 + 26 + 32 + 43 + 52 + 52 + 52. \\
&:= 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 4^2 + 4^3 + 6^2 = 25 + 26 + 26 + 42 + 42 + 42 + 43 + 62. \\
&:= 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 6^2 + 6^2 = 26 + 26 + 33 + 33 + 33 + 33 + 62 + 62.
\end{aligned}$$

$$\begin{aligned}
309 &:= 2^2 + 2^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 5^3 = 22 + 22 + 42 + 42 + 42 + 43 + 43 + 53. \\
&:= 2^2 + 2^3 + 2^3 + 4^2 + 4^2 + 4^2 + 5^2 + 6^3 = 22 + 23 + 23 + 42 + 42 + 42 + 52 + 63. \\
&:= 2^2 + 2^4 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 6^3 = 22 + 24 + 32 + 42 + 42 + 42 + 42 + 63. \\
&:= 2^2 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 + 5^2 + 5^3 = 22 + 32 + 32 + 32 + 43 + 43 + 52 + 53. \\
&:= 2^3 + 2^3 + 3^2 + 3^2 + 3^2 + 5^2 + 5^2 + 6^3 = 23 + 23 + 32 + 32 + 32 + 52 + 52 + 63. \\
&:= 2^4 + 3^2 + 3^2 + 3^2 + 3^2 + 4^2 + 5^2 + 6^3 = 24 + 32 + 32 + 32 + 32 + 42 + 52 + 63.
\end{aligned}$$

$$\begin{aligned}
310 &:= 2^4 + 2^6 + 2^6 + 2^6 + 4^2 + 5^2 + 5^2 + 6^2 = 24 + 26 + 26 + 26 + 42 + 52 + 52 + 62. \\
&:= 2^5 + 2^5 + 2^5 + 2^6 + 4^3 + 5^2 + 5^2 + 6^2 = 25 + 25 + 25 + 26 + 43 + 52 + 52 + 62.
\end{aligned}$$

$$\begin{aligned}
311 &:= 2^2 + 2^2 + 2^4 + 3^2 + 3^4 + 5^3 + 6^2 + 6^2 = 22 + 22 + 24 + 32 + 34 + 53 + 62 + 62. \\
&:= 2^2 + 2^2 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 + 6^2 = 22 + 22 + 34 + 34 + 42 + 43 + 52 + 62. \\
&:= 2^2 + 2^3 + 3^3 + 3^4 + 4^2 + 5^2 + 5^2 + 5^3 = 22 + 23 + 33 + 34 + 42 + 52 + 52 + 53. \\
&:= 2^3 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 5^3 + 6^2 = 23 + 32 + 32 + 33 + 34 + 42 + 53 + 62. \\
&:= 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 5^3 = 32 + 33 + 33 + 33 + 42 + 42 + 43 + 53.
\end{aligned}$$

$$\begin{aligned}
313 &:= 2^2 + 2^2 + 2^7 + 3^3 + 4^3 + 5^2 + 5^2 + 6^2 = 22 + 22 + 27 + 33 + 43 + 52 + 52 + 62. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 4^3 + 5^3 + 6^2 + 6^2 = 22 + 23 + 23 + 25 + 43 + 53 + 62 + 62. \\
&:= 2^2 + 2^4 + 2^4 + 3^3 + 4^3 + 5^2 + 5^3 + 6^2 = 22 + 24 + 24 + 33 + 43 + 52 + 53 + 62. \\
&:= 2^2 + 2^5 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 + 6^2 = 22 + 25 + 34 + 42 + 42 + 43 + 43 + 62. \\
&:= 2^2 + 2^6 + 3^3 + 3^3 + 4^2 + 5^2 + 5^2 + 5^3 = 22 + 26 + 33 + 33 + 42 + 52 + 52 + 53. \\
&:= 2^2 + 2^7 + 3^2 + 3^2 + 3^3 + 4^3 + 6^2 + 6^2 = 22 + 27 + 32 + 32 + 33 + 43 + 62 + 62. \\
&:= 2^2 + 2^7 + 3^2 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 = 22 + 27 + 32 + 34 + 42 + 52 + 52 + 52. \\
&:= 2^2 + 2^7 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 6^2 = 22 + 27 + 34 + 42 + 42 + 42 + 42 + 62. \\
&:= 2^3 + 2^3 + 2^4 + 3^4 + 5^2 + 5^2 + 5^2 + 5^3 = 23 + 23 + 24 + 34 + 52 + 52 + 52 + 53. \\
&:= 2^3 + 2^3 + 3^3 + 3^4 + 4^3 + 4^3 + 5^2 + 6^2 = 23 + 23 + 33 + 34 + 43 + 43 + 52 + 62. \\
&:= 2^3 + 2^5 + 3^3 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 = 23 + 25 + 33 + 42 + 42 + 43 + 52 + 53. \\
&:= 2^4 + 2^4 + 3^2 + 3^4 + 4^2 + 5^2 + 5^2 + 5^3 = 24 + 24 + 32 + 34 + 42 + 52 + 52 + 53. \\
&:= 2^4 + 3^2 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 + 6^2 = 24 + 32 + 33 + 34 + 42 + 43 + 43 + 62. \\
&:= 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 + 5^3 + 6^2 = 26 + 32 + 32 + 33 + 33 + 42 + 53 + 62. \\
&:= 2^6 + 3^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 26 + 32 + 42 + 42 + 42 + 43 + 43 + 43. \\
&:= 2^7 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 5^2 + 6^2 = 27 + 32 + 32 + 32 + 34 + 42 + 52 + 62. \\
&:= 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 5^2 + 6^2 = 32 + 33 + 33 + 33 + 34 + 34 + 52 + 62.
\end{aligned}$$

$$\begin{aligned}
315 &:= 2^2 + 2^4 + 2^6 + 3^4 + 4^3 + 5^2 + 5^2 + 6^2 = 22 + 24 + 26 + 34 + 43 + 52 + 52 + 62. \\
&:= 2^3 + 2^4 + 2^6 + 3^3 + 5^2 + 5^2 + 5^2 + 5^3 = 23 + 24 + 26 + 33 + 52 + 52 + 52 + 53. \\
&:= 2^3 + 2^5 + 2^6 + 3^2 + 4^2 + 5^2 + 5^3 + 6^2 = 23 + 25 + 26 + 32 + 42 + 52 + 53 + 62. \\
&:= 2^3 + 2^5 + 3^3 + 3^4 + 3^4 + 5^2 + 5^2 + 6^2 = 23 + 25 + 33 + 34 + 34 + 52 + 52 + 62. \\
&:= 2^3 + 2^6 + 3^3 + 3^3 + 4^3 + 4^3 + 5^2 + 6^2 = 23 + 26 + 33 + 33 + 43 + 43 + 52 + 62. \\
&:= 2^4 + 2^5 + 3^3 + 3^3 + 3^3 + 5^2 + 5^3 + 6^2 = 24 + 25 + 33 + 33 + 33 + 52 + 53 + 62. \\
&:= 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 4^3 + 6^2 + 6^2 = 24 + 26 + 32 + 32 + 34 + 43 + 62 + 62. \\
&:= 2^5 + 2^5 + 3^2 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 = 25 + 25 + 32 + 43 + 43 + 43 + 52 + 52. \\
&:= 2^5 + 2^7 + 3^2 + 4^2 + 4^2 + 4^3 + 5^2 + 5^2 = 25 + 27 + 32 + 42 + 42 + 43 + 52 + 52.
\end{aligned}$$

$$\begin{aligned}
317 &:= 2^3 + 2^5 + 2^5 + 2^5 + 4^2 + 5^3 + 6^2 + 6^2 = 23 + 25 + 25 + 25 + 42 + 53 + 62 + 62. \\
&:= 2^3 + 2^6 + 2^6 + 3^4 + 5^2 + 5^2 + 5^2 + 5^2 = 23 + 26 + 26 + 34 + 52 + 52 + 52 + 52. \\
&:= 2^4 + 2^5 + 2^6 + 4^2 + 4^3 + 4^3 + 5^2 + 6^2 = 24 + 25 + 26 + 42 + 43 + 43 + 52 + 62. \\
&:= 2^4 + 2^6 + 2^7 + 3^2 + 5^2 + 5^2 + 5^2 + 5^2 = 24 + 26 + 27 + 32 + 52 + 52 + 52 + 52. \\
&:= 2^4 + 2^6 + 2^7 + 4^2 + 4^2 + 4^2 + 5^2 + 6^2 = 24 + 26 + 27 + 42 + 42 + 42 + 52 + 62. \\
&:= 2^5 + 2^6 + 3^3 + 3^3 + 3^4 + 5^2 + 5^2 + 6^2 = 25 + 26 + 33 + 33 + 34 + 52 + 52 + 62.
\end{aligned}$$

$$\begin{aligned}
318 &:= 2^2 + 2^2 + 2^3 + 3^2 + 4^2 + 5^2 + 6^2 + 6^3 = 22 + 22 + 23 + 32 + 42 + 52 + 62 + 63. \\
&:= 3^2 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 + 5^3 + 5^3 = 32 + 32 + 32 + 32 + 42 + 42 + 53 + 53. \\
&:= 3^2 + 3^2 + 3^2 + 3^3 + 4^2 + 4^2 + 4^2 + 6^3 = 32 + 32 + 32 + 33 + 42 + 42 + 42 + 63.
\end{aligned}$$

$$\begin{aligned}
319 &:= 2^4 + 2^5 + 2^5 + 2^7 + 5^2 + 5^2 + 5^2 + 6^2 = 24 + 25 + 25 + 27 + 52 + 52 + 52 + 62. \\
&:= 2^6 + 2^6 + 2^6 + 3^3 + 5^2 + 5^2 + 5^2 + 5^2 = 26 + 26 + 26 + 33 + 52 + 52 + 52 + 52.
\end{aligned}$$

$$\begin{aligned}
320 &:= 2^3 + 2^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 6^3 = 23 + 24 + 42 + 42 + 42 + 42 + 42 + 63. \\
&:= 2^3 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 + 5^2 + 5^3 = 23 + 32 + 32 + 42 + 43 + 43 + 52 + 53.
\end{aligned}$$

$$\begin{aligned}
322 &:= 2^2 + 2^3 + 2^4 + 3^4 + 4^2 + 5^3 + 6^2 + 6^2 = 22 + 23 + 24 + 34 + 42 + 53 + 62 + 62. \\
&:= 2^2 + 2^5 + 3^2 + 3^3 + 4^3 + 5^2 + 5^3 + 6^2 = 22 + 25 + 32 + 33 + 43 + 52 + 53 + 62. \\
&:= 2^3 + 2^3 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 = 23 + 23 + 43 + 43 + 43 + 43 + 52 + 52. \\
&:= 2^4 + 3^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 = 24 + 32 + 42 + 43 + 43 + 43 + 43 + 52. \\
&:= 2^4 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 5^2 + 5^3 = 24 + 33 + 34 + 42 + 42 + 42 + 52 + 53. \\
&:= 2^5 + 3^2 + 3^2 + 3^4 + 4^2 + 5^2 + 5^2 + 5^3 = 25 + 32 + 32 + 34 + 42 + 52 + 52 + 53. \\
&:= 3^2 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 + 5^2 + 5^2 = 32 + 33 + 33 + 34 + 43 + 43 + 52 + 52.
\end{aligned}$$

$$\begin{aligned}
324 &:= 2^2 + 2^2 + 2^4 + 2^7 + 4^3 + 6^2 + 6^2 + 6^2 = 22 + 22 + 24 + 27 + 43 + 62 + 62 + 62. \\
&:= 2^2 + 2^4 + 2^6 + 3^3 + 4^2 + 5^3 + 6^2 + 6^2 = 22 + 24 + 26 + 33 + 42 + 53 + 62 + 62. \\
&:= 2^3 + 2^5 + 3^4 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 = 23 + 25 + 34 + 43 + 43 + 52 + 52 + 52. \\
&:= 2^3 + 2^7 + 3^2 + 3^3 + 4^2 + 4^3 + 6^2 + 6^2 = 23 + 27 + 32 + 33 + 42 + 43 + 62 + 62. \\
&:= 2^3 + 2^7 + 3^4 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 = 23 + 27 + 34 + 42 + 42 + 52 + 52 + 52. \\
&:= 2^6 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 = 26 + 34 + 34 + 42 + 42 + 42 + 52 + 52.
\end{aligned}$$

$$\begin{aligned}
326 &:= 2^2 + 2^3 + 2^6 + 2^7 + 5^2 + 5^2 + 6^2 + 6^2 = 22 + 23 + 26 + 27 + 52 + 52 + 62 + 62. \\
&:= 2^2 + 2^5 + 2^7 + 3^3 + 3^3 + 6^2 + 6^2 + 6^2 = 22 + 25 + 27 + 33 + 33 + 62 + 62 + 62. \\
&:= 2^2 + 2^6 + 2^6 + 3^4 + 4^2 + 5^2 + 6^2 + 6^2 = 22 + 26 + 26 + 34 + 42 + 52 + 62 + 62. \\
&:= 2^3 + 2^4 + 2^4 + 2^6 + 5^2 + 5^3 + 6^2 + 6^2 = 23 + 24 + 24 + 26 + 52 + 53 + 62 + 62. \\
&:= 2^3 + 2^4 + 2^5 + 3^4 + 3^4 + 6^2 + 6^2 + 6^2 = 23 + 24 + 25 + 34 + 34 + 62 + 62 + 62. \\
&:= 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 6^2 + 6^2 + 6^2 = 23 + 26 + 27 + 32 + 32 + 62 + 62 + 62. \\
&:= 2^4 + 2^4 + 2^7 + 4^2 + 4^3 + 5^2 + 5^2 + 6^2 = 24 + 24 + 27 + 42 + 43 + 52 + 52 + 62. \\
&:= 2^5 + 2^5 + 3^4 + 3^4 + 5^2 + 5^2 + 5^2 + 5^2 = 25 + 25 + 34 + 34 + 52 + 52 + 52 + 52. \\
&:= 2^5 + 2^6 + 3^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 = 25 + 26 + 33 + 43 + 43 + 52 + 52 + 52. \\
&:= 2^6 + 2^7 + 3^3 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 = 26 + 27 + 33 + 42 + 42 + 52 + 52 + 52. \\
\\
328 &:= 2^4 + 2^5 + 2^6 + 3^3 + 3^4 + 6^2 + 6^2 + 6^2 = 24 + 25 + 26 + 33 + 34 + 62 + 62 + 62. \\
&:= 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 4^3 + 6^2 + 6^2 = 25 + 26 + 26 + 42 + 42 + 43 + 62 + 62. \\
\\
329 &:= 2^2 + 2^2 + 4^2 + 4^2 + 4^3 + 4^3 + 5^3 + 6^2 = 22 + 22 + 42 + 42 + 43 + 43 + 53 + 62. \\
&:= 2^2 + 2^3 + 2^3 + 4^2 + 4^2 + 5^2 + 6^2 + 6^3 = 22 + 23 + 23 + 42 + 42 + 52 + 62 + 63. \\
&:= 2^2 + 2^4 + 3^2 + 3^2 + 5^2 + 5^2 + 5^2 + 6^3 = 22 + 24 + 32 + 32 + 52 + 52 + 52 + 63. \\
\\
329 &:= 2^2 + 2^4 + 3^2 + 4^2 + 4^2 + 4^2 + 6^2 + 6^3 = 22 + 24 + 32 + 42 + 42 + 42 + 62 + 63. \\
&:= 2^4 + 3^2 + 3^2 + 3^2 + 3^2 + 5^2 + 6^2 + 6^3 = 24 + 32 + 32 + 32 + 32 + 52 + 62 + 63. \\
\\
330 &:= 2^4 + 2^6 + 2^6 + 2^6 + 5^2 + 5^2 + 6^2 + 6^2 = 24 + 26 + 26 + 26 + 52 + 52 + 62 + 62. \\
\\
331 &:= 2^2 + 2^2 + 3^4 + 3^4 + 4^3 + 5^2 + 6^2 + 6^2 = 22 + 22 + 34 + 34 + 43 + 52 + 62 + 62. \\
&:= 2^2 + 2^3 + 3^3 + 3^4 + 5^2 + 5^2 + 5^3 + 6^2 = 22 + 23 + 33 + 34 + 52 + 52 + 53 + 62. \\
&:= 2^3 + 3^2 + 3^2 + 3^3 + 3^4 + 5^3 + 6^2 + 6^2 = 23 + 32 + 32 + 33 + 34 + 53 + 62 + 62. \\
&:= 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 + 5^3 + 6^2 = 32 + 33 + 33 + 33 + 42 + 43 + 53 + 62. \\
&:= 3^3 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 33 + 42 + 42 + 42 + 43 + 43 + 43 + 43. \\
\\
333 &:= 2^2 + 2^5 + 3^4 + 4^2 + 4^3 + 4^3 + 6^2 + 6^2 = 22 + 25 + 34 + 42 + 43 + 43 + 62 + 62. \\
&:= 2^2 + 2^6 + 3^3 + 3^3 + 5^2 + 5^2 + 5^3 + 6^2 = 22 + 26 + 33 + 33 + 52 + 52 + 53 + 62. \\
&:= 2^2 + 2^7 + 3^2 + 3^4 + 5^2 + 5^2 + 5^2 + 6^2 = 22 + 27 + 32 + 34 + 52 + 52 + 52 + 62. \\
&:= 2^2 + 2^7 + 3^4 + 4^2 + 4^2 + 4^2 + 6^2 + 6^2 = 22 + 27 + 34 + 42 + 42 + 42 + 62 + 62. \\
&:= 2^3 + 2^5 + 3^3 + 4^2 + 4^3 + 5^2 + 5^3 + 6^2 = 23 + 25 + 33 + 42 + 43 + 52 + 53 + 62. \\
&:= 2^4 + 2^4 + 3^2 + 3^4 + 5^2 + 5^2 + 5^3 + 6^2 = 24 + 24 + 32 + 34 + 52 + 52 + 53 + 62. \\
&:= 2^4 + 3^2 + 3^3 + 3^4 + 4^3 + 4^3 + 6^2 + 6^2 = 24 + 32 + 33 + 34 + 43 + 43 + 62 + 62. \\
&:= 2^4 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 = 24 + 34 + 34 + 42 + 43 + 52 + 52 + 52. \\
&:= 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 5^3 + 6^2 + 6^2 = 26 + 32 + 32 + 33 + 33 + 53 + 62 + 62. \\
&:= 2^6 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 6^2 = 26 + 32 + 42 + 42 + 43 + 43 + 43 + 62. \\
&:= 2^7 + 3^2 + 3^2 + 3^2 + 3^4 + 5^2 + 6^2 + 6^2 = 27 + 32 + 32 + 32 + 34 + 52 + 62 + 62. \\
\\
335 &:= 2^3 + 2^5 + 2^6 + 3^2 + 5^2 + 5^3 + 6^2 + 6^2 = 23 + 25 + 26 + 32 + 52 + 53 + 62 + 62. \\
&:= 2^4 + 2^7 + 3^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 = 24 + 27 + 33 + 43 + 52 + 52 + 52 + 52. \\
&:= 2^5 + 2^7 + 3^2 + 4^2 + 4^3 + 5^2 + 5^2 + 6^2 = 25 + 27 + 32 + 42 + 43 + 52 + 52 + 62.
\end{aligned}$$

$$\begin{aligned}
337 &:= 2^3 + 2^5 + 2^5 + 2^5 + 5^3 + 6^2 + 6^2 + 6^2 = 23 + 25 + 25 + 25 + 53 + 62 + 62 + 62. \\
&:= 2^4 + 2^5 + 2^6 + 4^3 + 4^3 + 5^2 + 6^2 + 6^2 = 24 + 25 + 26 + 43 + 43 + 52 + 62 + 62. \\
&:= 2^4 + 2^6 + 2^7 + 4^2 + 4^2 + 5^2 + 6^2 + 6^2 = 24 + 26 + 27 + 42 + 42 + 52 + 62 + 62.
\end{aligned}$$

$$\begin{aligned}
338 &:= 2^2 + 2^2 + 2^3 + 3^2 + 5^2 + 6^2 + 6^2 + 6^3 = 22 + 22 + 23 + 32 + 52 + 62 + 62 + 63. \\
&:= 2^2 + 3^2 + 3^2 + 4^2 + 5^2 + 5^2 + 5^3 + 5^3 = 22 + 32 + 32 + 42 + 52 + 52 + 53 + 53. \\
&:= 2^2 + 3^2 + 3^3 + 4^2 + 4^2 + 5^2 + 5^2 + 6^3 = 22 + 32 + 33 + 42 + 42 + 52 + 52 + 63. \\
&:= 3^2 + 3^2 + 3^2 + 3^2 + 4^2 + 5^3 + 5^3 + 6^2 = 32 + 32 + 32 + 32 + 42 + 53 + 53 + 62. \\
&:= 3^2 + 3^2 + 3^2 + 3^3 + 4^2 + 4^2 + 6^2 + 6^3 = 32 + 32 + 32 + 33 + 42 + 42 + 62 + 63.
\end{aligned}$$

$$\begin{aligned}
340 &:= 2^2 + 2^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 = 22 + 23 + 43 + 43 + 52 + 52 + 52 + 53. \\
&:= 2^3 + 2^3 + 2^3 + 5^2 + 5^2 + 5^2 + 5^2 + 6^3 = 23 + 23 + 23 + 52 + 52 + 52 + 52 + 63. \\
&:= 2^3 + 2^4 + 3^2 + 4^2 + 5^2 + 5^2 + 5^2 + 6^3 = 23 + 24 + 32 + 42 + 52 + 52 + 52 + 63. \\
&:= 2^3 + 2^4 + 4^2 + 4^2 + 4^2 + 4^2 + 6^2 + 6^3 = 23 + 24 + 42 + 42 + 42 + 42 + 62 + 63. \\
&:= 2^3 + 3^2 + 3^2 + 4^3 + 4^3 + 5^2 + 5^3 + 6^2 = 23 + 32 + 32 + 43 + 43 + 52 + 53 + 62.
\end{aligned}$$

$$\begin{aligned}
342 &:= 2^2 + 2^3 + 2^4 + 3^4 + 5^3 + 6^2 + 6^2 + 6^2 = 22 + 23 + 24 + 34 + 53 + 62 + 62 + 62. \\
&:= 2^2 + 2^5 + 3^4 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 = 22 + 25 + 34 + 52 + 52 + 52 + 52 + 53. \\
&:= 2^4 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 + 6^2 = 24 + 32 + 43 + 43 + 43 + 43 + 52 + 62. \\
&:= 2^4 + 3^3 + 3^4 + 4^2 + 4^2 + 5^2 + 5^3 + 6^2 = 24 + 33 + 34 + 42 + 42 + 52 + 53 + 62. \\
&:= 2^5 + 3^2 + 3^2 + 3^4 + 5^2 + 5^2 + 5^3 + 6^2 = 25 + 32 + 32 + 34 + 52 + 52 + 53 + 62. \\
&:= 2^6 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 = 26 + 42 + 42 + 42 + 42 + 43 + 52 + 53.
\end{aligned}$$

$$\begin{aligned}
344 &:= 2^2 + 2^4 + 2^6 + 3^3 + 5^3 + 6^2 + 6^2 + 6^2 = 22 + 24 + 26 + 33 + 53 + 62 + 62 + 62. \\
&:= 2^3 + 2^7 + 3^2 + 3^3 + 4^3 + 6^2 + 6^2 + 6^2 = 23 + 27 + 32 + 33 + 43 + 62 + 62 + 62. \\
&:= 2^3 + 2^7 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 + 6^2 = 23 + 27 + 34 + 42 + 52 + 52 + 52 + 62. \\
&:= 2^5 + 2^5 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 = 25 + 25 + 42 + 43 + 52 + 52 + 52 + 53. \\
&:= 2^6 + 3^4 + 3^4 + 4^2 + 4^2 + 5^2 + 5^2 + 6^2 = 26 + 34 + 34 + 42 + 42 + 52 + 52 + 62.
\end{aligned}$$

$$\begin{aligned}
346 &:= 2^2 + 2^6 + 2^6 + 3^4 + 5^2 + 6^2 + 6^2 + 6^2 = 22 + 26 + 26 + 34 + 52 + 62 + 62 + 62. \\
&:= 2^4 + 2^4 + 2^7 + 4^3 + 5^2 + 5^2 + 6^2 + 6^2 = 24 + 24 + 27 + 43 + 52 + 52 + 62 + 62. \\
&:= 2^6 + 2^7 + 3^3 + 4^2 + 5^2 + 5^2 + 5^2 + 6^2 = 26 + 27 + 33 + 42 + 52 + 52 + 52 + 62.
\end{aligned}$$

$$348 := 2^5 + 2^6 + 2^6 + 4^2 + 4^3 + 6^2 + 6^2 + 6^2 = 25 + 26 + 26 + 42 + 43 + 62 + 62 + 62.$$

$$\begin{aligned}
349 &:= 2^2 + 2^2 + 4^2 + 4^3 + 4^3 + 5^3 + 6^2 + 6^2 = 22 + 22 + 42 + 43 + 43 + 53 + 62 + 62. \\
&:= 2^2 + 2^3 + 2^3 + 4^2 + 5^2 + 6^2 + 6^2 + 6^3 = 22 + 23 + 23 + 42 + 52 + 62 + 62 + 63. \\
&:= 2^2 + 2^4 + 3^2 + 4^2 + 4^2 + 6^2 + 6^2 + 6^3 = 22 + 24 + 32 + 42 + 42 + 62 + 62 + 63. \\
&:= 2^3 + 3^2 + 4^2 + 4^2 + 5^2 + 5^2 + 5^3 + 5^3 = 23 + 32 + 42 + 42 + 52 + 52 + 53 + 53. \\
&:= 2^3 + 3^3 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 + 6^3 = 23 + 33 + 42 + 42 + 42 + 52 + 52 + 63.
\end{aligned}$$

$$\begin{aligned}
351 &:= 2^4 + 4^2 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 = 24 + 42 + 42 + 43 + 43 + 52 + 52 + 53. \\
&:= 3^2 + 3^3 + 3^3 + 3^3 + 4^3 + 5^3 + 6^2 + 6^2 = 32 + 33 + 33 + 33 + 43 + 53 + 62 + 62. \\
&:= 3^3 + 3^3 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 + 5^3 = 33 + 33 + 34 + 42 + 52 + 52 + 52 + 53. \\
&:= 3^3 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 6^2 = 33 + 42 + 42 + 43 + 43 + 43 + 43 + 62.
\end{aligned}$$

$$\begin{aligned}
353 &:= 2^2 + 2^5 + 3^4 + 4^3 + 4^3 + 6^2 + 6^2 + 6^2 = 22 + 25 + 34 + 43 + 43 + 62 + 62 + 62. \\
&:= 2^2 + 2^7 + 3^4 + 4^2 + 4^2 + 6^2 + 6^2 + 6^2 = 22 + 27 + 34 + 42 + 42 + 62 + 62 + 62. \\
&:= 2^3 + 2^5 + 3^3 + 4^3 + 5^2 + 5^3 + 6^2 + 6^2 = 23 + 25 + 33 + 43 + 52 + 53 + 62 + 62. \\
&:= 2^4 + 3^4 + 3^4 + 4^3 + 5^2 + 5^2 + 5^2 + 6^2 = 24 + 34 + 34 + 43 + 52 + 52 + 52 + 62. \\
&:= 2^6 + 3^2 + 4^2 + 4^3 + 4^3 + 4^3 + 6^2 + 6^2 = 26 + 32 + 42 + 43 + 43 + 43 + 62 + 62.
\end{aligned}$$

$$\begin{aligned}
355 &:= 2^5 + 2^7 + 3^2 + 4^3 + 5^2 + 5^2 + 6^2 + 6^2 = 25 + 27 + 32 + 43 + 52 + 52 + 62 + 62. \\
357 &:= 2^4 + 2^6 + 2^7 + 4^2 + 5^2 + 6^2 + 6^2 + 6^2 = 24 + 26 + 27 + 42 + 52 + 62 + 62 + 62.
\end{aligned}$$

$$\begin{aligned}
358 &:= 2^2 + 2^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 + 5^3 = 22 + 22 + 52 + 52 + 52 + 52 + 53 + 53. \\
&:= 2^2 + 3^2 + 3^2 + 5^2 + 5^2 + 5^3 + 5^3 + 6^2 = 22 + 32 + 32 + 52 + 52 + 53 + 53 + 62. \\
&:= 2^2 + 3^2 + 3^3 + 4^2 + 5^2 + 5^2 + 6^2 + 6^3 = 22 + 32 + 33 + 42 + 52 + 52 + 62 + 63. \\
&:= 3^2 + 3^2 + 3^2 + 3^2 + 5^3 + 5^3 + 6^2 + 6^2 = 32 + 32 + 32 + 32 + 53 + 53 + 62 + 62. \\
&:= 3^2 + 3^2 + 3^2 + 3^3 + 4^2 + 6^2 + 6^2 + 6^3 = 32 + 32 + 32 + 33 + 42 + 62 + 62 + 63.
\end{aligned}$$

$$\begin{aligned}
360 &:= 2^3 + 2^4 + 3^2 + 5^2 + 5^2 + 5^2 + 6^2 + 6^3 = 23 + 24 + 32 + 52 + 52 + 52 + 62 + 63. \\
&:= 2^3 + 2^4 + 4^2 + 4^2 + 4^2 + 6^2 + 6^2 + 6^3 = 23 + 24 + 42 + 42 + 42 + 62 + 62 + 63.
\end{aligned}$$

$$\begin{aligned}
362 &:= 2^4 + 3^3 + 3^4 + 4^2 + 5^2 + 5^3 + 6^2 + 6^2 = 24 + 33 + 34 + 42 + 52 + 53 + 62 + 62. \\
&:= 2^6 + 3^2 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 = 26 + 32 + 43 + 52 + 52 + 52 + 52 + 53. \\
&:= 2^6 + 4^2 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 + 6^2 = 26 + 42 + 42 + 42 + 43 + 52 + 53 + 62.
\end{aligned}$$

$$\begin{aligned}
364 &:= 2^3 + 2^7 + 3^4 + 5^2 + 5^2 + 5^2 + 6^2 + 6^2 = 23 + 27 + 34 + 52 + 52 + 52 + 62 + 62. \\
&:= 2^5 + 2^5 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 + 6^2 = 25 + 25 + 43 + 52 + 52 + 52 + 53 + 62. \\
&:= 2^6 + 3^4 + 3^4 + 4^2 + 5^2 + 5^2 + 6^2 + 6^2 = 26 + 34 + 34 + 42 + 52 + 52 + 62 + 62.
\end{aligned}$$

$$\begin{aligned}
366 &:= 2^6 + 2^7 + 3^3 + 5^2 + 5^2 + 5^2 + 6^2 + 6^2 = 26 + 27 + 33 + 52 + 52 + 52 + 62 + 62. \\
368 &:= 2^5 + 2^6 + 2^6 + 4^3 + 6^2 + 6^2 + 6^2 + 6^2 = 25 + 26 + 26 + 43 + 62 + 62 + 62 + 62.
\end{aligned}$$

$$\begin{aligned}
369 &:= 2^2 + 2^2 + 4^3 + 4^3 + 5^3 + 6^2 + 6^2 + 6^2 = 22 + 22 + 43 + 43 + 53 + 62 + 62 + 62. \\
&:= 2^2 + 2^3 + 2^3 + 5^2 + 6^2 + 6^2 + 6^2 + 6^3 = 22 + 23 + 23 + 52 + 62 + 62 + 62 + 63. \\
&:= 2^2 + 2^4 + 3^2 + 4^2 + 6^2 + 6^2 + 6^2 + 6^3 = 22 + 24 + 32 + 42 + 62 + 62 + 62 + 63. \\
&:= 2^3 + 3^2 + 4^2 + 5^2 + 5^2 + 5^3 + 5^3 + 6^2 = 23 + 32 + 42 + 52 + 52 + 53 + 53 + 62. \\
&:= 2^3 + 3^3 + 4^2 + 4^2 + 5^2 + 5^2 + 6^2 + 6^3 = 23 + 33 + 42 + 42 + 52 + 52 + 62 + 63.
\end{aligned}$$

$$\begin{aligned}
371 &:= 2^4 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 + 6^2 = 24 + 42 + 43 + 43 + 52 + 52 + 53 + 62. \\
&:= 3^3 + 3^3 + 3^4 + 5^2 + 5^2 + 5^2 + 5^3 + 6^2 = 33 + 33 + 34 + 52 + 52 + 52 + 53 + 62. \\
&:= 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 6^2 + 6^2 = 33 + 42 + 43 + 43 + 43 + 43 + 62 + 62.
\end{aligned}$$

$$\begin{aligned}
373 &:= 2^2 + 2^7 + 3^4 + 4^2 + 6^2 + 6^2 + 6^2 + 6^2 = 22 + 27 + 34 + 42 + 62 + 62 + 62 + 62. \\
&:= 2^6 + 3^2 + 4^3 + 4^3 + 4^3 + 6^2 + 6^2 + 6^2 = 26 + 32 + 43 + 43 + 43 + 62 + 62 + 62.
\end{aligned}$$

$$377 := 2^4 + 2^6 + 2^7 + 5^2 + 6^2 + 6^2 + 6^2 + 6^2 = 24 + 26 + 27 + 52 + 62 + 62 + 62 + 62.$$

$$378 := 2^2 + 3^2 + 3^3 + 5^2 + 5^2 + 6^2 + 6^2 + 6^3 = 22 + 32 + 33 + 52 + 52 + 62 + 62 + 63.$$

$$:= 3^2 + 3^2 + 3^2 + 3^3 + 6^2 + 6^2 + 6^2 + 6^3 = 32 + 32 + 32 + 33 + 62 + 62 + 62 + 63.$$

$$380 := 2^3 + 2^4 + 4^2 + 4^2 + 6^2 + 6^2 + 6^2 + 6^3 = 23 + 24 + 42 + 42 + 62 + 62 + 62 + 63.$$

$$:= 2^5 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 + 5^2 + 6^3 = 25 + 42 + 42 + 52 + 52 + 52 + 52 + 63.$$

$$:= 3^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 = 33 + 43 + 43 + 52 + 52 + 52 + 52 + 53.$$

$$382 := 2^4 + 3^3 + 3^4 + 5^2 + 5^3 + 6^2 + 6^2 + 6^2 = 24 + 33 + 34 + 52 + 53 + 62 + 62 + 62.$$

$$:= 2^6 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 + 6^2 + 6^2 = 26 + 42 + 42 + 43 + 52 + 53 + 62 + 62.$$

$$384 := 2^6 + 3^4 + 3^4 + 5^2 + 5^2 + 6^2 + 6^2 + 6^2 = 26 + 34 + 34 + 52 + 52 + 62 + 62 + 62.$$

$$389 := 2^2 + 2^4 + 3^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^3 = 22 + 24 + 32 + 62 + 62 + 62 + 62 + 63.$$

$$:= 2^3 + 3^2 + 5^2 + 5^2 + 5^3 + 5^3 + 6^2 + 6^2 = 23 + 32 + 52 + 52 + 53 + 53 + 62 + 62.$$

$$:= 2^3 + 3^3 + 4^2 + 5^2 + 5^2 + 6^2 + 6^2 + 6^3 = 23 + 33 + 42 + 52 + 52 + 62 + 62 + 63.$$

$$391 := 2^4 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 + 6^2 + 6^2 = 24 + 43 + 43 + 52 + 52 + 53 + 62 + 62.$$

$$:= 3^3 + 4^3 + 4^3 + 4^3 + 4^3 + 6^2 + 6^2 + 6^2 = 33 + 43 + 43 + 43 + 43 + 62 + 62 + 62.$$

$$393 := 2^2 + 2^7 + 3^4 + 6^2 + 6^2 + 6^2 + 6^2 + 6^2 = 22 + 27 + 34 + 62 + 62 + 62 + 62 + 62.$$

$$400 := 2^3 + 2^4 + 4^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^3 = 23 + 24 + 42 + 62 + 62 + 62 + 62 + 63.$$

$$:= 2^5 + 4^2 + 5^2 + 5^2 + 5^2 + 5^2 + 6^2 + 6^3 = 25 + 42 + 52 + 52 + 52 + 52 + 62 + 63.$$

$$402 := 2^6 + 4^2 + 4^3 + 5^2 + 5^3 + 6^2 + 6^2 + 6^2 = 26 + 42 + 43 + 52 + 53 + 62 + 62 + 62.$$

$$:= 2^3 + 3^3 + 5^2 + 5^2 + 6^2 + 6^2 + 6^2 + 6^3 = 23 + 33 + 52 + 52 + 62 + 62 + 62 + 63.$$

$$420 := 2^3 + 2^4 + 6^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^3 = 23 + 24 + 62 + 62 + 62 + 62 + 62 + 63.$$

$$:= 2^5 + 5^2 + 5^2 + 5^2 + 5^2 + 6^2 + 6^2 + 6^3 = 25 + 52 + 52 + 52 + 52 + 62 + 62 + 63.$$

$$422 := 2^6 + 4^3 + 5^2 + 5^3 + 6^2 + 6^2 + 6^2 + 6^2 = 26 + 43 + 52 + 53 + 62 + 62 + 62 + 62.$$

7 Nine Terms Equalities Expressions

This section deals with nine terms equality expressions, where we have considered only positive expressions with both powers and bases bigger than one.

$$212 := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 2^6 + 2^6 = 22 + 22 + 22 + 22 + 22 + 25 + 25 + 26 + 26.$$

$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 = 22 + 22 + 22 + 23 + 24 + 24 + 24 + 24 + 27.$$

$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^7 = 22 + 23 + 23 + 23 + 23 + 23 + 23 + 25 + 27.$$

$$216 := 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 = 22 + 22 + 23 + 23 + 25 + 25 + 25 + 25 + 26.$$

$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 = 22 + 22 + 24 + 24 + 24 + 24 + 24 + 26 + 26.$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 2^6 = 23 + 23 + 23 + 23 + 23 + 24 + 25 + 26 + 26.$$

$$219 := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^7 + 3^3 = 22 + 22 + 22 + 22 + 23 + 23 + 25 + 27 + 33.$$

$$\begin{aligned}
221 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 3^4 = 22 + 22 + 22 + 23 + 23 + 24 + 25 + 26 + 34. \\
&:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 = 22 + 22 + 22 + 23 + 24 + 24 + 25 + 27 + 32. \\
223 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^6 + 2^6 + 3^3 = 22 + 22 + 22 + 23 + 24 + 25 + 26 + 26 + 33. \\
225 &:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 = 22 + 22 + 24 + 24 + 24 + 25 + 26 + 26 + 32. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 3^4 = 23 + 23 + 23 + 23 + 24 + 25 + 25 + 25 + 34. \\
227 &:= 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^3 = 22 + 22 + 25 + 25 + 25 + 25 + 25 + 25 + 33. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 = 23 + 23 + 23 + 24 + 25 + 25 + 25 + 26 + 33. \\
230 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 = 22 + 22 + 22 + 23 + 25 + 25 + 27 + 32 + 32. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^7 + 3^3 + 3^3 = 22 + 22 + 23 + 23 + 23 + 24 + 27 + 33 + 33. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 3^4 + 3^4 = 22 + 23 + 23 + 23 + 23 + 24 + 24 + 34 + 34. \\
232 &:= 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 3^3 + 3^4 = 22 + 22 + 22 + 24 + 25 + 25 + 25 + 33 + 34. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^7 + 4^2 = 22 + 22 + 23 + 23 + 24 + 24 + 25 + 27 + 42. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 3^3 + 3^4 = 22 + 23 + 23 + 23 + 24 + 24 + 26 + 33 + 34. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 = 22 + 23 + 23 + 24 + 24 + 24 + 27 + 32 + 33. \\
234 &:= 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 = 22 + 22 + 24 + 25 + 25 + 26 + 26 + 32 + 32. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 = 22 + 23 + 23 + 24 + 24 + 26 + 26 + 33 + 33. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^4 = 23 + 23 + 24 + 24 + 24 + 24 + 26 + 32 + 34. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 = 23 + 24 + 24 + 24 + 24 + 24 + 27 + 32 + 32. \\
236 &:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 4^2 = 22 + 23 + 24 + 24 + 24 + 25 + 26 + 26 + 42. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 4^3 = 22 + 23 + 24 + 24 + 25 + 25 + 25 + 25 + 43. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 = 23 + 24 + 24 + 24 + 24 + 26 + 26 + 32 + 33. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 3^3 + 3^4 = 24 + 24 + 24 + 24 + 24 + 24 + 25 + 33 + 34. \\
237 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^6 + 2^7 + 3^2 + 4^2 = 22 + 22 + 22 + 22 + 22 + 26 + 27 + 32 + 42. \\
&:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 5^3 = 22 + 22 + 22 + 22 + 23 + 23 + 24 + 26 + 53. \\
&:= 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 3^3 + 3^4 + 3^4 = 22 + 22 + 22 + 22 + 24 + 24 + 33 + 34 + 34. \\
&:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 4^3 = 22 + 22 + 22 + 23 + 23 + 23 + 27 + 32 + 43. \\
238 &:= 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 = 23 + 24 + 25 + 25 + 25 + 25 + 25 + 33 + 33. \\
239 &:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 3^2 + 3^4 + 3^4 = 22 + 23 + 23 + 23 + 23 + 25 + 32 + 34 + 34. \\
240 &:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 4^2 = 24 + 24 + 25 + 25 + 25 + 25 + 25 + 25 + 42. \\
241 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 2^6 + 2^6 + 5^2 = 22 + 22 + 22 + 22 + 23 + 26 + 26 + 26 + 52. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 4^3 = 22 + 22 + 23 + 23 + 24 + 26 + 26 + 32 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^7 + 3^2 + 4^2 = 22 + 22 + 23 + 23 + 25 + 25 + 27 + 32 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 3^4 + 4^3 = 22 + 22 + 23 + 24 + 24 + 24 + 25 + 34 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 5^3 = 22 + 23 + 23 + 23 + 23 + 24 + 25 + 25 + 53. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 3^2 + 3^3 + 3^4 = 22 + 23 + 23 + 23 + 25 + 26 + 32 + 33 + 34. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 = 22 + 23 + 23 + 24 + 25 + 27 + 32 + 32 + 33.
\end{aligned}$$

$$\begin{aligned}
243 &:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 4^3 = 22 + 22 + 24 + 24 + 24 + 25 + 26 + 33 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 = 22 + 23 + 23 + 25 + 26 + 26 + 32 + 33 + 33. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 = 22 + 23 + 24 + 24 + 25 + 25 + 33 + 33 + 34. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^7 + 3^3 + 4^2 = 23 + 23 + 23 + 24 + 24 + 24 + 27 + 33 + 42. \\
&:= 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 = 23 + 23 + 23 + 26 + 26 + 26 + 32 + 32 + 32. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 = 23 + 23 + 24 + 24 + 25 + 26 + 32 + 32 + 34. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 = 23 + 24 + 24 + 24 + 25 + 27 + 32 + 32 + 32.
\end{aligned}$$

$$\begin{aligned}
245 &:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 5^2 = 22 + 23 + 23 + 23 + 25 + 25 + 26 + 26 + 52. \\
&:= 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 = 22 + 23 + 24 + 25 + 25 + 26 + 26 + 32 + 42. \\
&:= 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 4^3 = 22 + 23 + 25 + 25 + 25 + 25 + 25 + 32 + 43. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 = 22 + 24 + 24 + 24 + 25 + 25 + 25 + 34 + 42. \\
&:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 = 22 + 24 + 24 + 25 + 25 + 26 + 33 + 33 + 33. \\
&:= 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 = 23 + 24 + 24 + 25 + 26 + 26 + 32 + 32 + 33. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 3^2 + 3^3 + 3^4 = 24 + 24 + 24 + 24 + 25 + 25 + 32 + 33 + 34.
\end{aligned}$$

$$246 := 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 3^2 + 3^3 + 3^4 + 3^4 = 22 + 22 + 22 + 22 + 25 + 32 + 33 + 34 + 34.$$

$$\begin{aligned}
248 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 4^3 + 4^3 = 22 + 22 + 22 + 22 + 23 + 25 + 26 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 2^7 + 4^2 + 4^2 = 22 + 22 + 22 + 22 + 23 + 26 + 27 + 42 + 42. \\
&:= 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 3^3 + 5^3 = 22 + 22 + 22 + 22 + 24 + 25 + 25 + 33 + 53. \\
&:= 2^2 + 2^2 + 2^2 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 = 22 + 22 + 22 + 26 + 26 + 32 + 32 + 32 + 34. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 4^2 + 4^3 = 22 + 22 + 23 + 23 + 23 + 23 + 27 + 42 + 43.
\end{aligned}$$

$$\begin{aligned}
249 &:= 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 5^2 = 24 + 24 + 24 + 24 + 25 + 25 + 25 + 26 + 52. \\
&:= 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 4^2 = 25 + 25 + 25 + 25 + 25 + 25 + 25 + 32 + 42.
\end{aligned}$$

$$\begin{aligned}
250 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 2^6 + 3^4 + 5^2 = 22 + 22 + 22 + 22 + 25 + 25 + 26 + 34 + 52. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 3^2 + 3^4 + 4^3 = 22 + 22 + 23 + 24 + 25 + 25 + 32 + 34 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 3^4 + 3^4 + 4^2 = 22 + 22 + 24 + 24 + 24 + 24 + 34 + 34 + 42. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 3^4 + 3^4 + 4^2 = 23 + 23 + 23 + 23 + 23 + 25 + 34 + 34 + 42. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 = 23 + 23 + 23 + 23 + 27 + 32 + 33 + 33 + 33.
\end{aligned}$$

$$\begin{aligned}
252 &:= 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 2^6 + 4^2 + 4^2 = 22 + 22 + 22 + 24 + 26 + 26 + 26 + 42 + 42. \\
&:= 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 4^2 + 4^3 = 22 + 22 + 22 + 25 + 25 + 25 + 26 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^3 + 5^2 = 22 + 22 + 24 + 24 + 24 + 24 + 27 + 33 + 52. \\
&:= 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 4^3 = 22 + 22 + 24 + 25 + 25 + 26 + 32 + 33 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 4^2 + 4^3 = 22 + 23 + 23 + 23 + 24 + 26 + 26 + 42 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 4^3 + 4^3 = 22 + 23 + 23 + 23 + 25 + 25 + 25 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^7 + 4^2 + 4^2 = 22 + 23 + 23 + 23 + 25 + 25 + 27 + 42 + 42. \\
&:= 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^4 = 22 + 23 + 25 + 25 + 25 + 32 + 33 + 33 + 34. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^3 + 5^3 = 22 + 24 + 24 + 24 + 24 + 24 + 24 + 33 + 53.
\end{aligned}$$

$$\begin{aligned}
252 &:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^7 + 3^3 + 5^2 = 23 + 23 + 23 + 23 + 23 + 25 + 27 + 33 + 52. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 = 23 + 23 + 23 + 23 + 25 + 26 + 33 + 34 + 42. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 = 23 + 23 + 23 + 24 + 25 + 27 + 32 + 33 + 42. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 3^3 + 3^4 + 4^3 = 23 + 23 + 24 + 24 + 24 + 24 + 33 + 34 + 43. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 = 23 + 23 + 25 + 25 + 26 + 32 + 32 + 32 + 34. \\
&:= 2^3 + 2^4 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 = 23 + 24 + 25 + 25 + 27 + 32 + 32 + 32 + 32.
\end{aligned}$$

$$\begin{aligned}
254 &:= 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 3^4 + 5^2 = 22 + 23 + 23 + 25 + 25 + 25 + 25 + 34 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^4 + 5^2 = 22 + 24 + 24 + 24 + 24 + 24 + 26 + 34 + 52. \\
&:= 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 4^2 = 22 + 24 + 25 + 25 + 25 + 25 + 32 + 34 + 42. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 = 22 + 25 + 25 + 25 + 26 + 32 + 33 + 33 + 33. \\
&:= 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 = 23 + 23 + 23 + 25 + 26 + 26 + 33 + 33 + 42. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^3 + 3^3 + 4^3 = 23 + 24 + 24 + 24 + 24 + 26 + 33 + 33 + 43. \\
&:= 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 = 23 + 25 + 25 + 26 + 26 + 32 + 32 + 32 + 33. \\
&:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 = 24 + 24 + 25 + 25 + 25 + 32 + 32 + 33 + 34.
\end{aligned}$$

$$\begin{aligned}
255 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^7 + 3^3 + 4^2 + 4^3 = 22 + 22 + 22 + 22 + 22 + 27 + 33 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 3^2 + 3^4 + 5^3 = 22 + 22 + 23 + 23 + 23 + 23 + 32 + 34 + 53.
\end{aligned}$$

$$\begin{aligned}
256 &:= 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 5^2 = 22 + 23 + 25 + 25 + 25 + 25 + 26 + 33 + 52. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 = 23 + 23 + 24 + 25 + 25 + 26 + 26 + 42 + 42. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 4^2 + 4^3 = 23 + 23 + 25 + 25 + 25 + 25 + 25 + 42 + 43. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 4^2 + 4^3 = 24 + 24 + 24 + 24 + 24 + 25 + 26 + 42 + 43.
\end{aligned}$$

$$\begin{aligned}
257 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^7 + 4^3 + 5^2 = 22 + 22 + 22 + 22 + 23 + 24 + 27 + 43 + 52. \\
&:= 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 3^4 + 4^2 + 4^3 = 22 + 22 + 22 + 22 + 24 + 26 + 34 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 4^3 + 5^3 = 22 + 22 + 22 + 23 + 24 + 24 + 24 + 43 + 53. \\
&:= 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 3^3 + 3^4 + 3^4 + 4^2 = 22 + 22 + 22 + 23 + 25 + 33 + 34 + 34 + 42. \\
&:= 2^2 + 2^2 + 2^2 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 = 22 + 22 + 22 + 27 + 32 + 33 + 33 + 33 + 33. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 3^4 + 4^3 + 4^3 = 22 + 22 + 23 + 23 + 23 + 24 + 34 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 3^3 + 5^3 = 22 + 22 + 23 + 23 + 23 + 26 + 32 + 33 + 53. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 3^2 + 3^3 + 3^3 + 3^4 + 3^4 = 22 + 22 + 23 + 24 + 32 + 33 + 33 + 34 + 34.
\end{aligned}$$

$$258 := 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 5^2 = 24 + 24 + 25 + 25 + 25 + 25 + 26 + 32 + 52.$$

$$\begin{aligned}
259 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 2^7 + 3^3 + 3^3 + 5^2 = 22 + 22 + 22 + 23 + 25 + 27 + 33 + 33 + 52. \\
&:= 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 3^3 + 3^3 + 3^4 + 4^2 = 22 + 22 + 22 + 25 + 26 + 33 + 33 + 34 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 3^4 + 3^4 + 5^2 = 22 + 22 + 23 + 23 + 24 + 25 + 34 + 34 + 52. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 3^3 + 4^3 + 4^3 = 22 + 22 + 23 + 23 + 24 + 26 + 33 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 5^2 = 22 + 22 + 23 + 23 + 26 + 27 + 32 + 32 + 52. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 5^3 = 22 + 22 + 23 + 24 + 24 + 25 + 33 + 33 + 53. \\
&:= 2^2 + 2^2 + 2^3 + 2^6 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 = 22 + 22 + 23 + 26 + 26 + 32 + 32 + 34 + 42. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 3^2 + 3^4 + 3^4 + 4^2 = 22 + 22 + 24 + 24 + 25 + 32 + 34 + 34 + 42. \\
&:= 2^2 + 2^2 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 = 22 + 22 + 24 + 26 + 27 + 32 + 32 + 32 + 42.
\end{aligned}$$

$$\begin{aligned}
259 &:= 2^2 + 2^2 + 2^4 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 = 22 + 22 + 24 + 26 + 32 + 33 + 33 + 33 + 34. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 23 + 23 + 23 + 25 + 33 + 33 + 34 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 5^3 = 22 + 23 + 23 + 24 + 24 + 26 + 32 + 32 + 53. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 = 22 + 24 + 24 + 24 + 32 + 32 + 33 + 34 + 34. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 3^2 + 3^4 + 4^3 = 23 + 23 + 23 + 23 + 26 + 32 + 32 + 34 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 4^3 = 23 + 23 + 23 + 24 + 27 + 32 + 32 + 32 + 43.
\end{aligned}$$

$$\begin{aligned}
261 &:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 2^6 + 4^3 + 5^2 = 22 + 22 + 22 + 24 + 24 + 26 + 26 + 43 + 52. \\
&:= 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^7 + 4^2 + 5^2 = 22 + 22 + 22 + 24 + 25 + 25 + 27 + 42 + 52. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^6 + 3^3 + 3^4 + 5^2 = 22 + 22 + 23 + 24 + 25 + 26 + 33 + 34 + 52. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 4^2 + 5^3 = 22 + 22 + 24 + 24 + 24 + 25 + 25 + 42 + 53. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^3 + 5^2 = 22 + 22 + 24 + 24 + 25 + 27 + 32 + 33 + 52. \\
&:= 2^2 + 2^2 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 4^2 = 22 + 22 + 26 + 26 + 26 + 32 + 32 + 33 + 42. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 3^4 + 4^2 + 4^3 = 22 + 23 + 23 + 24 + 25 + 25 + 34 + 42 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 4^3 = 22 + 23 + 23 + 25 + 26 + 33 + 33 + 33 + 43. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 4^3 + 4^3 = 22 + 23 + 24 + 24 + 24 + 26 + 32 + 43 + 43. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^3 + 5^3 = 22 + 24 + 24 + 24 + 24 + 25 + 32 + 33 + 53. \\
&:= 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 4^3 = 23 + 23 + 23 + 26 + 26 + 32 + 32 + 33 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 3^2 + 3^3 + 3^4 + 4^3 = 23 + 23 + 24 + 24 + 25 + 32 + 33 + 34 + 43.
\end{aligned}$$

$$262 := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 3^2 + 3^3 + 3^4 + 5^3 = 22 + 22 + 22 + 22 + 22 + 32 + 33 + 34 + 53.$$

$$\begin{aligned}
263 &:= 2^2 + 2^2 + 2^4 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 + 5^2 = 22 + 22 + 24 + 25 + 26 + 26 + 33 + 33 + 52. \\
&:= 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 4^3 = 22 + 23 + 24 + 25 + 25 + 26 + 33 + 42 + 43. \\
&:= 2^2 + 2^3 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 5^2 = 22 + 23 + 24 + 26 + 26 + 26 + 32 + 32 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^4 + 5^2 = 22 + 24 + 24 + 24 + 25 + 26 + 32 + 34 + 52. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 4^2 = 23 + 23 + 25 + 25 + 25 + 33 + 33 + 34 + 42. \\
&:= 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 4^3 = 23 + 24 + 24 + 25 + 26 + 32 + 33 + 33 + 43. \\
&:= 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 = 25 + 25 + 25 + 25 + 32 + 32 + 32 + 33 + 34.
\end{aligned}$$

$$264 := 2^2 + 2^2 + 2^2 + 2^3 + 3^2 + 3^2 + 3^4 + 3^4 + 4^3 = 22 + 22 + 22 + 23 + 32 + 32 + 34 + 34 + 43.$$

$$\begin{aligned}
265 &:= 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 4^3 + 5^2 = 23 + 23 + 24 + 24 + 25 + 25 + 26 + 43 + 52. \\
&:= 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 4^2 = 23 + 24 + 25 + 25 + 25 + 25 + 34 + 42 + 42. \\
&:= 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 4^2 = 23 + 25 + 25 + 25 + 26 + 33 + 33 + 33 + 42. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 4^2 + 5^2 = 24 + 24 + 24 + 24 + 24 + 24 + 27 + 42 + 52. \\
&:= 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 4^2 + 4^3 = 24 + 24 + 24 + 25 + 25 + 26 + 32 + 42 + 43.
\end{aligned}$$

$$\begin{aligned}
266 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 5^2 + 5^3 = 22 + 22 + 22 + 22 + 22 + 25 + 26 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 3^2 + 4^3 + 5^3 = 22 + 22 + 22 + 23 + 24 + 25 + 32 + 43 + 53. \\
&:= 2^2 + 2^2 + 2^2 + 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 = 22 + 22 + 22 + 26 + 32 + 32 + 33 + 34 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 3^4 + 4^2 + 5^3 = 22 + 23 + 23 + 23 + 23 + 23 + 34 + 42 + 53. \\
&:= 2^2 + 2^3 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 = 22 + 23 + 27 + 32 + 32 + 32 + 32 + 32 + 34.
\end{aligned}$$

$$267 := 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 4^2 = 24 + 25 + 25 + 25 + 25 + 26 + 33 + 42 + 42.$$

$$:= 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 5^2 = 25 + 25 + 25 + 25 + 25 + 26 + 32 + 32 + 52.$$

$$268 := 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 24 + 24 + 25 + 43 + 43 + 43.$$

$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^7 + 4^2 + 4^2 + 4^3 = 22 + 22 + 22 + 24 + 24 + 27 + 42 + 42 + 43.$$

$$:= 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 5^3 = 22 + 22 + 23 + 25 + 25 + 32 + 33 + 33 + 53.$$

$$:= 2^2 + 2^2 + 2^3 + 2^7 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 = 22 + 22 + 23 + 27 + 33 + 33 + 33 + 33 + 42.$$

$$:= 2^2 + 2^2 + 2^5 + 2^5 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 = 22 + 22 + 25 + 25 + 32 + 32 + 34 + 34 + 42.$$

$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 3^3 + 4^2 + 5^3 = 22 + 23 + 23 + 23 + 23 + 26 + 33 + 42 + 53.$$

$$:= 2^2 + 2^3 + 2^3 + 2^4 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 = 22 + 23 + 23 + 24 + 33 + 33 + 34 + 34 + 42.$$

$$:= 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 5^3 = 22 + 23 + 23 + 25 + 26 + 32 + 32 + 32 + 53.$$

$$:= 2^2 + 2^4 + 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 = 22 + 24 + 25 + 32 + 32 + 32 + 33 + 34 + 34.$$

$$:= 2^2 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 = 22 + 26 + 27 + 32 + 32 + 32 + 32 + 32 + 33.$$

$$270 := 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 2^6 + 3^2 + 4^3 + 5^2 = 22 + 22 + 22 + 25 + 26 + 26 + 32 + 43 + 52.$$

$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 5^2 + 5^3 = 22 + 22 + 23 + 23 + 25 + 25 + 25 + 52 + 53.$$

$$:= 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 3^2 + 4^2 + 5^3 = 22 + 22 + 24 + 25 + 25 + 25 + 32 + 42 + 53.$$

$$:= 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 4^3 + 4^3 = 22 + 22 + 24 + 25 + 25 + 33 + 33 + 43 + 43.$$

$$:= 2^2 + 2^2 + 2^4 + 2^5 + 2^7 + 3^3 + 3^3 + 4^2 + 4^2 = 22 + 22 + 24 + 25 + 27 + 33 + 33 + 42 + 42.$$

$$:= 2^2 + 2^2 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 5^2 = 22 + 22 + 25 + 25 + 27 + 32 + 32 + 33 + 52.$$

$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^6 + 2^7 + 3^2 + 4^2 + 5^2 = 22 + 23 + 23 + 23 + 26 + 27 + 32 + 42 + 52.$$

$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^7 + 3^3 + 3^3 + 3^3 + 5^2 = 22 + 23 + 23 + 24 + 27 + 33 + 33 + 33 + 52.$$

$$:= 2^2 + 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 3^4 + 4^2 + 4^2 = 22 + 23 + 23 + 26 + 26 + 32 + 34 + 42 + 42.$$

$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 23 + 24 + 24 + 25 + 34 + 34 + 42 + 42.$$

$$:= 2^2 + 2^3 + 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 4^3 + 4^3 = 22 + 23 + 24 + 25 + 26 + 32 + 32 + 43 + 43.$$

$$:= 2^2 + 2^3 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 = 22 + 23 + 24 + 26 + 27 + 32 + 32 + 42 + 42.$$

$$:= 2^2 + 2^3 + 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 = 22 + 23 + 24 + 26 + 33 + 33 + 33 + 34 + 42.$$

$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 5^3 = 22 + 24 + 24 + 25 + 25 + 32 + 32 + 33 + 53.$$

$$:= 2^2 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 = 22 + 24 + 24 + 27 + 32 + 33 + 33 + 33 + 42.$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 5^2 + 5^3 = 23 + 23 + 23 + 23 + 23 + 24 + 26 + 52 + 53.$$

$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 4^2 + 5^3 = 23 + 23 + 23 + 24 + 24 + 26 + 32 + 42 + 53.$$

$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 3^3 + 3^4 + 3^4 + 5^2 = 23 + 23 + 23 + 24 + 24 + 33 + 34 + 34 + 52.$$

$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 3^3 + 3^3 + 3^3 + 5^3 = 23 + 23 + 24 + 24 + 24 + 33 + 33 + 33 + 53.$$

$$:= 2^3 + 2^3 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 = 23 + 23 + 25 + 25 + 32 + 32 + 33 + 34 + 43.$$

$$:= 2^3 + 2^4 + 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 = 23 + 24 + 24 + 24 + 32 + 33 + 34 + 34 + 42.$$

$$:= 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 = 24 + 26 + 26 + 32 + 32 + 32 + 32 + 32 + 34.$$

$$272 := 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 2^7 + 3^3 + 4^2 + 5^2 = 22 + 23 + 24 + 24 + 25 + 27 + 33 + 42 + 52.$$

$$:= 2^2 + 2^3 + 2^6 + 2^6 + 2^6 + 3^2 + 3^3 + 4^2 + 4^2 = 22 + 23 + 26 + 26 + 26 + 32 + 33 + 42 + 42.$$

$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 4^2 = 22 + 24 + 24 + 25 + 26 + 33 + 34 + 42 + 42.$$

$$:= 2^2 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 5^2 = 22 + 24 + 25 + 25 + 26 + 32 + 32 + 34 + 52.$$

$$:= 2^2 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 = 22 + 24 + 26 + 26 + 33 + 33 + 33 + 33 + 42.$$

$$:= 2^2 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 = 22 + 25 + 25 + 25 + 33 + 33 + 33 + 33 + 43.$$

$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 4^2 + 4^3 + 4^3 = 23 + 23 + 24 + 24 + 24 + 26 + 42 + 43 + 43.$$

$$\begin{aligned}
272 &:= 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 3^3 + 3^3 + 3^4 + 5^2 = 23 + 23 + 24 + 24 + 26 + 33 + 33 + 34 + 52. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 3^3 + 4^2 + 5^3 = 23 + 24 + 24 + 24 + 24 + 25 + 33 + 42 + 53. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 5^2 = 23 + 24 + 24 + 24 + 27 + 32 + 33 + 33 + 52. \\
&:= 2^3 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 = 23 + 25 + 25 + 26 + 32 + 32 + 33 + 33 + 43. \\
&:= 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 = 24 + 24 + 24 + 26 + 32 + 33 + 33 + 34 + 42.
\end{aligned}$$

$$273 := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 3^3 + 3^4 + 4^2 + 5^3 = 22 + 22 + 22 + 22 + 23 + 33 + 34 + 42 + 53.$$

$$\begin{aligned}
274 &:= 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 2^6 + 5^2 + 5^2 = 23 + 23 + 23 + 23 + 26 + 26 + 26 + 52 + 52. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^7 + 5^2 + 5^2 = 23 + 23 + 24 + 24 + 24 + 25 + 27 + 52 + 52. \\
&:= 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 4^2 + 5^2 = 23 + 23 + 24 + 26 + 26 + 26 + 32 + 42 + 52. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 4^3 + 5^2 = 23 + 23 + 25 + 25 + 25 + 26 + 32 + 43 + 52. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^4 + 4^2 + 5^2 = 23 + 24 + 24 + 24 + 25 + 26 + 34 + 42 + 52. \\
&:= 2^3 + 2^4 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 5^2 = 23 + 24 + 24 + 26 + 26 + 33 + 33 + 33 + 52. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 4^2 + 5^2 = 24 + 24 + 24 + 24 + 25 + 27 + 32 + 42 + 52. \\
&:= 2^4 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 4^2 + 4^2 = 24 + 24 + 26 + 26 + 26 + 32 + 32 + 42 + 42. \\
&:= 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 4^2 + 4^3 = 24 + 25 + 25 + 25 + 26 + 32 + 32 + 42 + 43.
\end{aligned}$$

$$\begin{aligned}
275 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^6 + 3^3 + 3^3 + 4^2 + 5^3 = 22 + 22 + 22 + 22 + 26 + 33 + 33 + 42 + 53. \\
&:= 2^2 + 2^2 + 2^2 + 2^2 + 2^7 + 3^2 + 3^4 + 4^2 + 5^2 = 22 + 22 + 22 + 22 + 27 + 32 + 34 + 42 + 52. \\
&:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 3^4 + 5^2 + 5^3 = 22 + 22 + 22 + 23 + 23 + 24 + 34 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 3^2 + 3^4 + 4^2 + 5^3 = 22 + 22 + 22 + 24 + 24 + 32 + 34 + 42 + 53. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 3^3 + 3^3 + 4^3 + 5^3 = 22 + 22 + 23 + 23 + 23 + 33 + 33 + 43 + 53. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 3^2 + 3^4 + 3^4 + 4^2 + 4^3 = 22 + 22 + 23 + 23 + 32 + 34 + 34 + 42 + 43.
\end{aligned}$$

$$\begin{aligned}
276 &:= 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 3^3 + 4^2 + 5^2 = 24 + 24 + 24 + 25 + 26 + 26 + 33 + 42 + 52. \\
&:= 2^4 + 2^4 + 2^5 + 2//5 + 2^5 + 2^5 + 3^3 + 4^3 + 5^2 = 24 + 24 + 25 + 25 + 25 + 25 + 33 + 43 + 52.
\end{aligned}$$

$$\begin{aligned}
277 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 3^3 + 5^2 + 5^3 = 22 + 22 + 22 + 23 + 24 + 26 + 33 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 3^2 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 25 + 25 + 32 + 43 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^5 + 2^7 + 3^2 + 4^2 + 4^2 + 4^3 = 22 + 22 + 22 + 25 + 27 + 32 + 42 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 4^2 + 4^3 + 5^3 = 22 + 22 + 23 + 23 + 24 + 25 + 42 + 43 + 53. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^7 + 3^2 + 3^3 + 4^3 + 5^2 = 22 + 22 + 23 + 23 + 27 + 32 + 33 + 43 + 52. \\
&:= 2^2 + 2^2 + 2^3 + 2^6 + 3^2 + 3^3 + 3^4 + 4^2 + 4^3 = 22 + 22 + 23 + 26 + 32 + 33 + 34 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 = 22 + 22 + 24 + 27 + 32 + 32 + 33 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 22 + 24 + 33 + 33 + 33 + 33 + 34 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 3^2 + 3^3 + 4^3 + 5^3 = 22 + 23 + 23 + 24 + 24 + 32 + 33 + 43 + 53. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 3^2 + 3^3 + 3^4 + 4^3 + 4^3 = 23 + 23 + 23 + 23 + 32 + 33 + 34 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 = 23 + 23 + 27 + 32 + 32 + 32 + 32 + 34 + 42. \\
&:= 2^3 + 2^3 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 = 23 + 23 + 32 + 32 + 33 + 33 + 33 + 34 + 34.
\end{aligned}$$

$$\begin{aligned}
279 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 2^6 + 3^4 + 5^2 + 5^2 = 22 + 22 + 22 + 23 + 26 + 26 + 34 + 52 + 52. \\
&:= 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 2^7 + 3^2 + 5^2 + 5^2 = 22 + 22 + 22 + 24 + 26 + 27 + 32 + 52 + 52. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 5^2 + 5^3 = 22 + 22 + 24 + 24 + 24 + 26 + 32 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 4^2 + 4^3 = 22 + 22 + 26 + 26 + 32 + 33 + 33 + 42 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 3^2 + 3^4 + 4^3 + 5^2 = 22 + 23 + 23 + 24 + 26 + 32 + 34 + 43 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 3^3 + 3^3 + 4^2 + 5^3 = 22 + 23 + 23 + 25 + 25 + 33 + 33 + 42 + 53. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 24 + 24 + 24 + 33 + 43 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 4^3 + 5^2 = 22 + 23 + 24 + 24 + 27 + 32 + 32 + 43 + 52. \\
&:= 2^2 + 2^3 + 2^5 + 2^5 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 23 + 25 + 25 + 32 + 34 + 34 + 42 + 42. \\
&:= 2^2 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 = 22 + 24 + 24 + 26 + 32 + 32 + 34 + 42 + 43. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 5^3 = 22 + 25 + 25 + 25 + 32 + 32 + 32 + 33 + 53. \\
&:= 2^2 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 = 22 + 25 + 27 + 32 + 32 + 33 + 33 + 33 + 42. \\
&:= 2^2 + 2^5 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 = 22 + 25 + 33 + 33 + 33 + 33 + 33 + 33 + 34. \\
&:= 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 4^2 + 5^3 = 23 + 23 + 23 + 25 + 26 + 32 + 32 + 42 + 53. \\
&:= 2^3 + 2^3 + 2^3 + 2^5 + 3^2 + 3^3 + 3^4 + 3^4 + 5^2 = 23 + 23 + 23 + 25 + 32 + 33 + 34 + 34 + 52. \\
&:= 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 3^3 + 3^3 + 4^3 + 4^3 = 23 + 23 + 23 + 26 + 32 + 33 + 33 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 5^3 = 23 + 23 + 24 + 25 + 32 + 33 + 33 + 33 + 53. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 3^2 + 3^2 + 4^3 + 5^3 = 23 + 24 + 24 + 24 + 24 + 32 + 32 + 43 + 53. \\
&:= 2^3 + 2^4 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 = 23 + 24 + 25 + 32 + 32 + 33 + 34 + 34 + 42. \\
&:= 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 4^2 = 23 + 26 + 27 + 32 + 32 + 32 + 32 + 33 + 42. \\
&:= 2^3 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 = 23 + 26 + 32 + 32 + 33 + 33 + 33 + 33 + 34. \\
&:= 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 = 24 + 27 + 32 + 32 + 32 + 33 + 33 + 33 + 33. \\
281 &:= 2^2 + 2^2 + 2^2 + 2^6 + 2^6 + 2^6 + 3^3 + 5^2 + 5^2 = 22 + 22 + 22 + 26 + 26 + 26 + 33 + 52 + 52. \\
&:= 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 2^6 + 4^2 + 4^3 + 5^2 = 22 + 22 + 23 + 25 + 26 + 26 + 42 + 43 + 52. \\
&:= 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 4^2 + 4^2 + 5^3 = 22 + 23 + 24 + 25 + 25 + 25 + 42 + 42 + 53. \\
&:= 2^2 + 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 4^3 + 5^2 = 22 + 23 + 24 + 26 + 26 + 32 + 33 + 43 + 52. \\
&:= 2^2 + 2^3 + 2^5 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 5^2 = 22 + 23 + 25 + 25 + 27 + 32 + 33 + 42 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 3^3 + 3^4 + 4^3 + 5^2 = 22 + 24 + 24 + 24 + 25 + 33 + 34 + 43 + 52. \\
&:= 2^2 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 = 22 + 25 + 25 + 26 + 32 + 33 + 34 + 42 + 42. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 4^3 + 4^3 + 5^2 = 23 + 23 + 23 + 23 + 25 + 26 + 43 + 43 + 52. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 2^7 + 4^2 + 4^2 + 5^2 = 23 + 23 + 23 + 23 + 26 + 27 + 42 + 42 + 52. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 3^3 + 5^2 + 5^3 = 23 + 23 + 23 + 24 + 25 + 25 + 33 + 52 + 53. \\
&:= 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 3^4 + 4^2 + 4^2 + 4^2 = 23 + 23 + 23 + 26 + 26 + 34 + 42 + 42 + 42. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 = 23 + 23 + 24 + 25 + 26 + 32 + 42 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^6 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 = 23 + 23 + 24 + 26 + 27 + 32 + 42 + 42 + 42. \\
&:= 2^3 + 2^3 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 5^2 = 23 + 23 + 25 + 26 + 32 + 33 + 33 + 34 + 52. \\
&:= 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 3^2 + 3^3 + 4^2 + 5^3 = 23 + 24 + 24 + 25 + 25 + 32 + 33 + 42 + 53. \\
&:= 2^3 + 2^4 + 2^4 + 2^7 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 = 23 + 24 + 24 + 27 + 33 + 33 + 33 + 42 + 42. \\
&:= 2^3 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 5^2 = 23 + 24 + 25 + 27 + 32 + 32 + 33 + 33 + 52. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^2 + 4^3 + 4^3 + 4^3 = 24 + 24 + 24 + 24 + 24 + 32 + 43 + 43 + 43. \\
&:= 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 = 24 + 25 + 26 + 32 + 32 + 33 + 33 + 34 + 42. \\
&:= 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 = 26 + 26 + 32 + 32 + 33 + 33 + 33 + 33 + 33.
\end{aligned}$$

$$\begin{aligned}
283 &:= 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 3^4 + 5^2 + 5^2 = 23 + 23 + 23 + 25 + 25 + 26 + 34 + 52 + 52. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^7 + 3^2 + 5^2 + 5^2 = 23 + 23 + 24 + 25 + 25 + 27 + 32 + 52 + 52. \\
&:= 2^3 + 2^3 + 2^6 + 2^6 + 2^6 + 3^3 + 4^2 + 4^2 + 4^2 = 23 + 23 + 26 + 26 + 26 + 33 + 42 + 42 + 42. \\
&:= 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^4 + 4^2 + 5^2 = 23 + 24 + 25 + 25 + 26 + 32 + 34 + 42 + 52. \\
&:= 2^3 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 5^2 = 23 + 25 + 26 + 26 + 32 + 33 + 33 + 33 + 52. \\
&:= 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 3^3 + 4^2 + 4^3 + 4^3 = 24 + 24 + 24 + 25 + 25 + 33 + 42 + 43 + 43. \\
&:= 2^4 + 2^4 + 2^4 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 = 24 + 24 + 24 + 25 + 27 + 33 + 42 + 42 + 42. \\
&:= 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 4^3 + 5^2 = 24 + 24 + 24 + 26 + 26 + 32 + 32 + 43 + 52. \\
&:= 2^4 + 2^4 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 4^2 + 5^2 = 24 + 24 + 25 + 25 + 27 + 32 + 32 + 42 + 52. \\
&:= 2^4 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 3^3 + 3^4 + 5^2 = 24 + 24 + 25 + 25 + 33 + 33 + 33 + 34 + 52. \\
&:= 2^5 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 = 25 + 26 + 26 + 26 + 32 + 32 + 32 + 42 + 42.
\end{aligned}$$

$$\begin{aligned}
284 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 23 + 23 + 43 + 43 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^5 + 3^2 + 3^2 + 3^4 + 4^2 + 5^3 = 22 + 22 + 22 + 25 + 32 + 32 + 34 + 42 + 53. \\
&:= 2^2 + 2^2 + 2^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 = 22 + 22 + 22 + 32 + 33 + 33 + 34 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 5^3 = 22 + 22 + 24 + 32 + 32 + 32 + 33 + 34 + 53.
\end{aligned}$$

$$\begin{aligned}
285 &:= 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 5^2 = 22 + 25 + 25 + 25 + 26 + 26 + 42 + 42 + 52. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 3^3 + 5^2 + 5^2 = 23 + 23 + 25 + 25 + 26 + 26 + 33 + 52 + 52. \\
&:= 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 + 4^2 + 5^2 = 24 + 25 + 25 + 26 + 26 + 32 + 33 + 42 + 52. \\
&:= 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 4^3 + 5^2 = 25 + 25 + 25 + 25 + 25 + 32 + 33 + 43 + 52.
\end{aligned}$$

$$\begin{aligned}
286 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 3^4 + 4^3 + 4^3 + 5^2 = 22 + 22 + 22 + 23 + 25 + 34 + 43 + 43 + 52. \\
&:= 2^2 + 2^2 + 2^2 + 2^3 + 2^7 + 3^4 + 4^2 + 4^2 + 5^2 = 22 + 22 + 22 + 23 + 27 + 34 + 42 + 42 + 52. \\
&:= 2^2 + 2^2 + 2^2 + 2^6 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 22 + 22 + 26 + 34 + 34 + 42 + 42 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 3^4 + 4^2 + 4^2 + 5^3 = 22 + 22 + 23 + 24 + 24 + 34 + 42 + 42 + 53. \\
&:= 2^2 + 2^2 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 5^2 = 22 + 22 + 26 + 32 + 32 + 32 + 34 + 34 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^3 = 22 + 23 + 23 + 23 + 34 + 34 + 42 + 42 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 3^2 + 3^2 + 3^3 + 4^3 + 5^3 = 22 + 23 + 23 + 25 + 32 + 32 + 33 + 43 + 53. \\
&:= 2^2 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 = 22 + 27 + 32 + 32 + 32 + 32 + 33 + 33 + 43. \\
&:= 2^3 + 2^4 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^3 = 23 + 24 + 32 + 32 + 32 + 32 + 34 + 34 + 43.
\end{aligned}$$

$$\begin{aligned}
288 &:= 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 3^4 + 3^4 + 5^2 + 5^2 = 22 + 22 + 22 + 25 + 25 + 34 + 34 + 52 + 52. \\
&:= 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 3^3 + 4^3 + 4^3 + 5^2 = 22 + 22 + 22 + 25 + 26 + 33 + 43 + 43 + 52. \\
&:= 2^2 + 2^2 + 2^2 + 2^6 + 2^7 + 3^3 + 4^2 + 4^2 + 5^2 = 22 + 22 + 22 + 26 + 27 + 33 + 42 + 42 + 52. \\
&:= 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 22 + 23 + 25 + 25 + 42 + 43 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^5 + 2^7 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 22 + 23 + 25 + 27 + 42 + 42 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 3^3 + 4^2 + 4^2 + 5^3 = 22 + 22 + 24 + 24 + 26 + 33 + 42 + 42 + 53. \\
&:= 2^2 + 2^2 + 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 5^2 + 5^3 = 22 + 22 + 24 + 25 + 26 + 32 + 32 + 52 + 53. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^7 + 3^3 + 4^2 + 4^3 + 5^2 = 22 + 23 + 23 + 23 + 27 + 33 + 42 + 43 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^6 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 = 22 + 23 + 23 + 26 + 33 + 34 + 42 + 42 + 43.
\end{aligned}$$

$$\begin{aligned}
288 &:= 2^2 + 2^3 + 2^4 + 2^5 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 24 + 25 + 32 + 33 + 43 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^4 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 = 22 + 23 + 24 + 27 + 32 + 33 + 42 + 42 + 43. \\
&:= 2^2 + 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 4^3 + 5^2 = 22 + 23 + 25 + 27 + 32 + 32 + 32 + 43 + 52. \\
&:= 2^2 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 = 22 + 25 + 26 + 32 + 32 + 32 + 34 + 42 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 3^3 + 4^2 + 4^3 + 5^3 = 23 + 23 + 23 + 24 + 24 + 33 + 42 + 43 + 53. \\
&:= 2^3 + 2^4 + 2^4 + 2^5 + 3^2 + 3^2 + 3^2 + 4^3 + 5^3 = 23 + 24 + 24 + 25 + 32 + 32 + 32 + 43 + 53. \\
&:= 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 = 24 + 26 + 32 + 32 + 32 + 32 + 33 + 34 + 43. \\
290 &:= 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 2^7 + 4^2 + 5^2 + 5^2 = 22 + 22 + 23 + 24 + 26 + 27 + 42 + 52 + 52. \\
&:= 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 3^4 + 4^2 + 4^2 + 5^2 = 22 + 22 + 24 + 26 + 26 + 34 + 42 + 42 + 52. \\
&:= 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 4^3 + 5^2 = 22 + 22 + 25 + 25 + 25 + 34 + 42 + 43 + 52. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 4^2 + 5^2 + 5^3 = 22 + 23 + 24 + 24 + 24 + 26 + 42 + 52 + 53. \\
&:= 2^2 + 2^3 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 = 22 + 23 + 26 + 26 + 33 + 33 + 42 + 42 + 43. \\
&:= 2^2 + 2^4 + 2^5 + 2^5 + 3^2 + 3^3 + 3^4 + 4^3 + 5^2 = 22 + 24 + 25 + 25 + 32 + 33 + 34 + 43 + 52. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^7 + 4^3 + 5^2 + 5^2 = 23 + 23 + 23 + 23 + 24 + 27 + 43 + 52 + 52. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 3^4 + 4^2 + 4^3 + 5^2 = 23 + 23 + 23 + 24 + 26 + 34 + 42 + 43 + 52. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 4^2 + 4^3 + 5^2 = 23 + 23 + 24 + 24 + 27 + 32 + 42 + 43 + 52. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 23 + 23 + 25 + 25 + 34 + 34 + 42 + 42 + 42. \\
&:= 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 = 23 + 24 + 24 + 26 + 32 + 34 + 42 + 42 + 43. \\
&:= 2^3 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 4^2 + 5^3 = 23 + 25 + 25 + 25 + 32 + 32 + 33 + 42 + 53. \\
&:= 2^3 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 23 + 25 + 25 + 32 + 33 + 33 + 33 + 43 + 43. \\
&:= 2^3 + 2^5 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 = 23 + 25 + 27 + 32 + 33 + 33 + 33 + 42 + 42. \\
&:= 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 = 24 + 24 + 24 + 25 + 32 + 32 + 43 + 43 + 43. \\
&:= 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 = 24 + 24 + 24 + 27 + 32 + 32 + 42 + 42 + 43. \\
&:= 2^4 + 2^4 + 2^4 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 24 + 24 + 24 + 33 + 33 + 33 + 34 + 42 + 43. \\
290 &:= 2^2 + 2^4 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 24 + 25 + 26 + 26 + 42 + 42 + 42 + 43. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 25 + 25 + 25 + 25 + 42 + 42 + 43 + 43. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 2^7 + 4^2 + 4^2 + 4^2 + 4^2 = 22 + 25 + 25 + 25 + 27 + 42 + 42 + 42 + 42. \\
&:= 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^3 + 4^2 + 4^3 + 5^2 = 23 + 23 + 24 + 26 + 26 + 33 + 42 + 43 + 52. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 3^3 + 4^3 + 4^3 + 5^2 = 23 + 23 + 25 + 25 + 25 + 33 + 43 + 43 + 52. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 5^2 = 23 + 23 + 25 + 25 + 27 + 33 + 42 + 42 + 52. \\
&:= 2^3 + 2^5 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 = 23 + 25 + 25 + 26 + 33 + 34 + 42 + 42 + 42. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^4 + 3^4 + 5^2 + 5^2 = 24 + 24 + 24 + 24 + 24 + 34 + 34 + 52 + 52. \\
&:= 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 = 24 + 24 + 26 + 26 + 32 + 33 + 42 + 42 + 43. \\
&:= 2^4 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 = 24 + 25 + 25 + 25 + 32 + 33 + 42 + 43 + 43. \\
&:= 2^4 + 2^5 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 4^2 = 24 + 25 + 25 + 27 + 32 + 33 + 42 + 42 + 42. \\
&:= 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 4^3 + 5^2 = 24 + 25 + 26 + 26 + 32 + 32 + 32 + 43 + 52. \\
&:= 2^5 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 5^2 = 25 + 25 + 25 + 27 + 32 + 32 + 32 + 42 + 52. \\
&:= 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 5^2 = 25 + 25 + 25 + 32 + 33 + 33 + 33 + 34 + 52. \\
294 &:= 2^2 + 2^4 + 2^4 + 2^6 + 2^6 + 2^6 + 4^2 + 5^2 + 5^2 = 22 + 24 + 24 + 26 + 26 + 26 + 42 + 52 + 52. \\
&:= 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 4^3 + 5^2 + 5^2 = 22 + 24 + 25 + 25 + 25 + 26 + 43 + 52 + 52. \\
&:= 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 3^3 + 3^4 + 5^2 + 5^2 = 23 + 25 + 25 + 25 + 25 + 33 + 34 + 52 + 52. \\
&:= 2^5 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 = 25 + 25 + 26 + 26 + 33 + 33 + 42 + 42 + 42.
\end{aligned}$$

$$\begin{aligned}
295 &:= 2^2 + 2^2 + 2^2 + 2^4 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 = 22 + 22 + 22 + 24 + 34 + 34 + 42 + 43 + 52. \\
&:= 2^2 + 2^2 + 2^3 + 2^5 + 3^2 + 3^4 + 4^2 + 4^2 + 5^3 = 22 + 22 + 23 + 25 + 32 + 34 + 42 + 42 + 53. \\
&:= 2^2 + 2^2 + 2^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 22 + 23 + 33 + 33 + 34 + 42 + 43 + 43. \\
&:= 2^2 + 2^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 5^3 = 22 + 22 + 33 + 33 + 33 + 33 + 33 + 33 + 53. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 3^2 + 3^3 + 3^4 + 5^2 + 5^3 = 22 + 23 + 23 + 23 + 32 + 33 + 34 + 52 + 53. \\
&:= 2^2 + 2^3 + 2^4 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 5^3 = 22 + 23 + 24 + 32 + 32 + 33 + 34 + 42 + 53.
\end{aligned}$$

$$296 := 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 + 5^2 + 5^2 = 25 + 25 + 25 + 25 + 26 + 33 + 33 + 52 + 52.$$

$$\begin{aligned}
297 &:= 2^2 + 2^2 + 2^2 + 2^4 + 2^7 + 3^3 + 4^3 + 5^2 + 5^2 = 22 + 22 + 22 + 24 + 27 + 33 + 43 + 52 + 52. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 3^3 + 4^3 + 5^2 + 5^3 = 22 + 22 + 24 + 24 + 24 + 33 + 43 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^4 + 2^5 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 22 + 24 + 25 + 34 + 42 + 42 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 2^7 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 = 22 + 22 + 24 + 27 + 34 + 42 + 42 + 42 + 42. \\
&:= 2^2 + 2^2 + 2^5 + 2^6 + 3^2 + 3^3 + 4^2 + 4^2 + 5^3 = 22 + 22 + 25 + 26 + 32 + 33 + 42 + 42 + 53. \\
&:= 2^2 + 2^2 + 2^5 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 5^2 = 22 + 22 + 25 + 33 + 33 + 34 + 34 + 42 + 52. \\
&:= 2^2 + 2^2 + 2^6 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 = 22 + 22 + 26 + 33 + 33 + 33 + 42 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 3^3 + 3^4 + 4^3 + 4^3 + 5^2 = 22 + 23 + 23 + 24 + 33 + 34 + 43 + 43 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^6 + 3^2 + 3^3 + 3^3 + 5^2 + 5^3 = 22 + 23 + 23 + 26 + 32 + 33 + 33 + 52 + 53. \\
&:= 2^2 + 2^3 + 2^3 + 2^7 + 3^2 + 3^2 + 3^4 + 5^2 + 5^2 = 22 + 23 + 23 + 27 + 32 + 32 + 34 + 52 + 52. \\
&:= 2^2 + 2^3 + 2^6 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 5^2 = 22 + 23 + 26 + 32 + 32 + 34 + 34 + 42 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 24 + 24 + 32 + 33 + 34 + 42 + 43 + 43. \\
&:= 2^2 + 2^4 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 + 5^3 = 22 + 24 + 26 + 32 + 32 + 33 + 33 + 42 + 53. \\
&:= 2^2 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 5^2 = 22 + 24 + 27 + 32 + 32 + 32 + 34 + 42 + 52. \\
&:= 2^2 + 2^4 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 5^2 = 22 + 24 + 32 + 33 + 33 + 33 + 34 + 34 + 52. \\
&:= 2^3 + 2^3 + 2^3 + 2^5 + 3^2 + 3^3 + 4^2 + 4^3 + 5^3 = 23 + 23 + 23 + 25 + 32 + 33 + 42 + 43 + 53. \\
&:= 2^3 + 2^3 + 2^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 = 23 + 23 + 23 + 33 + 33 + 33 + 43 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 3^2 + 3^2 + 3^4 + 5^2 + 5^3 = 23 + 23 + 24 + 24 + 32 + 32 + 34 + 52 + 53. \\
&:= 2^3 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 3^2 + 4^3 + 5^3 = 23 + 25 + 25 + 32 + 32 + 32 + 32 + 43 + 53. \\
&:= 2^3 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 + 4^3 = 23 + 27 + 32 + 32 + 32 + 33 + 33 + 42 + 43. \\
&:= 2^3 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 = 23 + 32 + 33 + 33 + 33 + 33 + 33 + 34 + 43. \\
&:= 2^4 + 2^4 + 2^4 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 5^3 = 24 + 24 + 24 + 32 + 32 + 32 + 34 + 42 + 53.
\end{aligned}$$

$$\begin{aligned}
299 &:= 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 3^4 + 4^3 + 5^2 + 5^2 = 22 + 22 + 24 + 24 + 26 + 34 + 43 + 52 + 52. \\
&:= 2^2 + 2^2 + 2^5 + 2^7 + 3^3 + 3^3 + 3^3 + 5^2 + 5^2 = 22 + 22 + 25 + 27 + 33 + 33 + 33 + 52 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 5^2 + 5^2 + 5^3 = 22 + 23 + 23 + 23 + 25 + 26 + 52 + 52 + 53. \\
&:= 2^2 + 2^3 + 2^4 + 2^5 + 2^6 + 3^2 + 4^2 + 5^2 + 5^3 = 22 + 23 + 24 + 25 + 26 + 32 + 42 + 52 + 53. \\
&:= 2^2 + 2^3 + 2^4 + 2^5 + 3^3 + 3^4 + 3^4 + 5^2 + 5^2 = 22 + 23 + 24 + 25 + 33 + 34 + 34 + 52 + 52. \\
&:= 2^2 + 2^3 + 2^4 + 2^6 + 3^3 + 3^3 + 4^3 + 4^3 + 5^2 = 22 + 23 + 24 + 26 + 33 + 33 + 43 + 43 + 52. \\
&:= 2^2 + 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 3^3 + 5^2 + 5^2 = 22 + 23 + 26 + 27 + 32 + 32 + 33 + 52 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 3^3 + 5^2 + 5^3 = 22 + 24 + 24 + 25 + 33 + 33 + 33 + 52 + 53. \\
&:= 2^2 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 = 22 + 25 + 25 + 33 + 33 + 34 + 42 + 42 + 43. \\
&:= 2^2 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 5^2 = 22 + 26 + 26 + 32 + 32 + 33 + 34 + 42 + 52. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 23 + 24 + 25 + 33 + 42 + 43 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 = 23 + 23 + 24 + 27 + 33 + 42 + 42 + 42 + 43.
\end{aligned}$$

$$\begin{aligned}
299 &:= 2^3 + 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 4^2 + 4^3 + 5^2 = 23 + 23 + 25 + 27 + 32 + 32 + 42 + 43 + 52. \\
&:= 2^3 + 2^3 + 2^5 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 + 5^2 = 23 + 23 + 25 + 33 + 33 + 33 + 34 + 43 + 52. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 3^2 + 3^4 + 4^3 + 4^3 + 5^2 = 23 + 24 + 24 + 24 + 32 + 34 + 43 + 43 + 52. \\
&:= 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^3 + 5^2 + 5^3 = 23 + 24 + 24 + 26 + 32 + 32 + 33 + 52 + 53. \\
&:= 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 = 23 + 25 + 26 + 32 + 32 + 34 + 42 + 42 + 43. \\
&:= 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 = 24 + 25 + 25 + 32 + 32 + 32 + 43 + 43 + 43. \\
&:= 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 = 24 + 25 + 27 + 32 + 32 + 32 + 42 + 42 + 43. \\
&:= 2^4 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 24 + 25 + 32 + 33 + 33 + 33 + 34 + 42 + 43. \\
&:= 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 = 26 + 32 + 33 + 33 + 33 + 33 + 33 + 33 + 43.
\end{aligned}$$

$$300 := 2^2 + 2^2 + 2^2 + 2^2 + 3^2 + 3^2 + 4^2 + 5^3 + 5^3 = 22 + 22 + 22 + 22 + 32 + 32 + 42 + 53 + 53.$$

$$\begin{aligned}
301 &:= 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 4^2 + 4^3 + 4^3 + 5^2 = 22 + 24 + 24 + 25 + 26 + 42 + 43 + 43 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 2^6 + 2^7 + 4^2 + 4^2 + 4^2 + 5^2 = 22 + 24 + 24 + 26 + 27 + 42 + 42 + 42 + 52. \\
&:= 2^2 + 2^4 + 2^5 + 2^6 + 3^3 + 3^3 + 3^4 + 5^2 + 5^2 = 22 + 24 + 25 + 26 + 33 + 33 + 34 + 52 + 52. \\
&:= 2^3 + 2^4 + 2^5 + 2^5 + 3^3 + 3^4 + 4^2 + 4^3 + 5^2 = 23 + 24 + 25 + 25 + 33 + 34 + 42 + 43 + 52. \\
&:= 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^4 + 5^2 + 5^2 = 23 + 24 + 26 + 26 + 32 + 32 + 34 + 52 + 52. \\
&:= 2^3 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 5^2 = 23 + 25 + 26 + 33 + 33 + 33 + 33 + 43 + 52. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 4^2 + 4^2 + 4^2 + 5^3 = 24 + 24 + 24 + 24 + 26 + 42 + 42 + 42 + 53. \\
&:= 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^4 + 3^4 + 5^2 + 5^2 = 24 + 24 + 24 + 25 + 32 + 34 + 34 + 52 + 52. \\
&:= 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^3 + 4^3 + 4^3 + 5^2 = 24 + 24 + 24 + 26 + 32 + 33 + 43 + 43 + 52. \\
&:= 2^4 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 5^2 + 5^2 = 24 + 24 + 26 + 27 + 32 + 32 + 32 + 52 + 52. \\
&:= 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 = 25 + 26 + 26 + 32 + 32 + 33 + 42 + 42 + 43.
\end{aligned}$$

$$302 := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 4^3 + 4^3 + 5^2 + 5^3 = 22 + 22 + 22 + 22 + 23 + 43 + 43 + 52 + 53.$$

$$\begin{aligned}
303 &:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^7 + 5^2 + 5^2 + 5^2 = 22 + 24 + 24 + 25 + 25 + 27 + 52 + 52 + 52. \\
&:= 2^2 + 2^5 + 2^6 + 2^6 + 2^6 + 3^2 + 4^2 + 5^2 + 5^2 = 22 + 25 + 26 + 26 + 26 + 32 + 42 + 52 + 52. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 5^2 + 5^2 + 5^3 = 24 + 24 + 24 + 24 + 25 + 25 + 52 + 52 + 53. \\
&:= 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 + 4^2 + 4^3 + 5^2 = 24 + 25 + 25 + 26 + 33 + 33 + 42 + 43 + 52. \\
&:= 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 5^2 + 5^2 = 24 + 26 + 26 + 26 + 32 + 32 + 33 + 52 + 52.
\end{aligned}$$

$$\begin{aligned}
304 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 3^4 + 5^2 + 5^2 + 5^3 = 22 + 22 + 22 + 22 + 25 + 34 + 52 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^6 + 3^2 + 3^2 + 3^2 + 4^2 + 4^3 + 5^3 = 22 + 22 + 26 + 32 + 32 + 32 + 42 + 43 + 53. \\
&:= 2^2 + 2^2 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^3 + 5^2 = 22 + 22 + 32 + 32 + 33 + 34 + 34 + 43 + 52. \\
&:= 2^3 + 2^3 + 2^3 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 + 5^3 = 23 + 23 + 23 + 32 + 32 + 32 + 43 + 43 + 53. \\
&:= 2^3 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 5^3 = 23 + 32 + 32 + 32 + 32 + 33 + 33 + 34 + 53. \\
&:= 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 3^4 + 4^2 = 32 + 32 + 32 + 32 + 32 + 34 + 34 + 34 + 42.
\end{aligned}$$

$$\begin{aligned}
306 &:= 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 4^2 + 4^3 + 5^2 + 5^3 = 22 + 22 + 22 + 25 + 25 + 42 + 43 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^3 + 2^6 + 3^2 + 4^3 + 4^3 + 4^3 + 5^2 = 22 + 22 + 23 + 26 + 32 + 43 + 43 + 43 + 52. \\
&:= 2^2 + 2^2 + 2^4 + 2^5 + 3^2 + 3^3 + 4^3 + 5^2 + 5^3 = 22 + 22 + 24 + 25 + 32 + 33 + 43 + 52 + 53. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 = 22 + 23 + 23 + 25 + 34 + 42 + 42 + 42 + 53. \\
&:= 2^2 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 25 + 32 + 32 + 33 + 34 + 42 + 43 + 43. \\
&:= 2^2 + 2^7 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 27 + 32 + 32 + 33 + 34 + 42 + 42 + 42. \\
&:= 2^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 33 + 33 + 33 + 33 + 34 + 34 + 42 + 42. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 3^3 + 3^4 + 4^2 + 5^2 + 5^3 = 23 + 23 + 23 + 23 + 33 + 34 + 42 + 52 + 53. \\
&:= 2^3 + 2^3 + 2^4 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 = 23 + 23 + 24 + 32 + 32 + 43 + 43 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 5^3 = 23 + 23 + 24 + 32 + 33 + 34 + 42 + 42 + 53. \\
&:= 2^3 + 2^3 + 2^5 + 3^2 + 3^2 + 3^2 + 3^4 + 5^2 + 5^3 = 23 + 23 + 25 + 32 + 32 + 32 + 34 + 52 + 53. \\
&:= 2^4 + 2^5 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 5^3 = 24 + 25 + 32 + 32 + 32 + 32 + 34 + 42 + 53. \\
&:= 2^4 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 = 24 + 32 + 32 + 32 + 33 + 33 + 34 + 43 + 43. \\
&:= 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 5^3 = 26 + 32 + 32 + 32 + 32 + 33 + 33 + 33 + 53. \\
&:= 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 5^2 = 27 + 32 + 32 + 32 + 32 + 32 + 33 + 34 + 52.
\end{aligned}$$

$$\begin{aligned}
308 &:= 2^2 + 2^2 + 2^5 + 2^6 + 3^2 + 3^4 + 4^3 + 5^2 + 5^2 = 22 + 22 + 25 + 26 + 32 + 34 + 43 + 52 + 52. \\
&:= 2^2 + 2^3 + 2^5 + 2^6 + 3^3 + 4^2 + 4^2 + 4^2 + 5^3 = 22 + 23 + 25 + 26 + 33 + 42 + 42 + 42 + 53. \\
&:= 2^2 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 5^2 + 5^3 = 22 + 25 + 25 + 32 + 33 + 33 + 33 + 52 + 53. \\
&:= 2^2 + 2^7 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 5^2 = 22 + 27 + 33 + 33 + 33 + 33 + 33 + 42 + 52. \\
&:= 2^3 + 2^3 + 2^3 + 2^6 + 3^3 + 3^3 + 4^2 + 5^2 + 5^3 = 23 + 23 + 23 + 26 + 33 + 33 + 42 + 52 + 53. \\
&:= 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 3^4 + 4^2 + 5^2 + 5^2 = 23 + 23 + 23 + 27 + 32 + 34 + 42 + 52 + 52. \\
&:= 2^3 + 2^3 + 2^6 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 5^2 = 23 + 23 + 26 + 32 + 34 + 34 + 42 + 42 + 52. \\
&:= 2^3 + 2^4 + 2^4 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 = 23 + 24 + 24 + 33 + 34 + 42 + 42 + 43 + 43. \\
&:= 2^3 + 2^4 + 2^5 + 3^2 + 3^2 + 3^4 + 4^3 + 4^3 + 5^2 = 23 + 24 + 25 + 32 + 32 + 34 + 43 + 43 + 52. \\
&:= 2^3 + 2^4 + 2^6 + 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 5^3 = 23 + 24 + 26 + 32 + 33 + 33 + 42 + 42 + 53. \\
&:= 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 5^2 = 23 + 24 + 27 + 32 + 32 + 34 + 42 + 42 + 52. \\
&:= 2^3 + 2^4 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 5^2 = 23 + 24 + 33 + 33 + 33 + 34 + 34 + 42 + 52. \\
&:= 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 5^2 + 5^3 = 23 + 25 + 26 + 32 + 32 + 32 + 33 + 52 + 53. \\
&:= 2^4 + 2^4 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 5^3 = 24 + 24 + 33 + 33 + 33 + 33 + 33 + 42 + 53. \\
&:= 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 24 + 26 + 32 + 32 + 34 + 34 + 42 + 42 + 42. \\
&:= 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 = 26 + 26 + 32 + 32 + 32 + 32 + 42 + 43 + 43.
\end{aligned}$$

$$\begin{aligned}
310 &:= 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 3^3 + 5^2 + 5^2 + 5^3 = 22 + 23 + 25 + 25 + 25 + 33 + 52 + 52 + 53. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^7 + 4^2 + 4^3 + 5^2 + 5^2 = 22 + 24 + 24 + 24 + 27 + 42 + 43 + 52 + 52. \\
&:= 2^2 + 2^5 + 2^5 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 + 5^2 = 22 + 25 + 25 + 26 + 32 + 42 + 43 + 43 + 52. \\
&:= 2^2 + 2^5 + 2^6 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 + 5^2 = 22 + 25 + 26 + 27 + 32 + 42 + 42 + 42 + 52. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 4^2 + 4^2 + 5^2 + 5^3 = 23 + 23 + 24 + 25 + 26 + 42 + 42 + 52 + 53. \\
&:= 2^3 + 2^3 + 2^6 + 2^7 + 3^2 + 3^3 + 4^2 + 5^2 + 5^2 = 23 + 23 + 26 + 27 + 32 + 33 + 42 + 52 + 52. \\
&:= 2^3 + 2^4 + 2^7 + 3^3 + 3^3 + 3^3 + 3^3 + 5^2 + 5^2 = 23 + 24 + 27 + 33 + 33 + 33 + 33 + 52 + 52. \\
&:= 2^3 + 2^6 + 2^6 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 5^2 = 23 + 26 + 26 + 32 + 33 + 34 + 42 + 42 + 52. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 4^2 + 4^3 + 5^2 + 5^3 = 24 + 24 + 24 + 24 + 24 + 42 + 43 + 52 + 53.
\end{aligned}$$

$$\begin{aligned}
310 &:= 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 4^2 + 4^2 + 4^2 + 5^3 = 24 + 24 + 25 + 26 + 32 + 42 + 42 + 42 + 53. \\
&:= 2^4 + 2^4 + 2^5 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 5^2 = 24 + 24 + 25 + 33 + 34 + 34 + 42 + 42 + 52. \\
&:= 2^4 + 2^4 + 2^6 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 = 24 + 24 + 26 + 33 + 33 + 42 + 42 + 43 + 43. \\
&:= 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^4 + 3^4 + 5^2 + 5^2 = 24 + 25 + 25 + 32 + 32 + 34 + 34 + 52 + 52. \\
&:= 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 + 4^3 + 4^3 + 5^2 = 24 + 25 + 26 + 32 + 32 + 33 + 43 + 43 + 52. \\
&:= 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 + 4^2 + 5^2 = 24 + 26 + 27 + 32 + 32 + 33 + 42 + 42 + 52. \\
&:= 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 5^2 = 24 + 26 + 33 + 33 + 33 + 33 + 34 + 42 + 52. \\
&:= 2^5 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 5^2 + 5^2 = 25 + 26 + 27 + 32 + 32 + 32 + 32 + 52 + 52. \\
311 &:= 2^2 + 2^2 + 2^2 + 2^3 + 3^2 + 4^2 + 4^2 + 5^3 + 5^3 = 22 + 22 + 22 + 23 + 32 + 42 + 42 + 53 + 53. \\
312 &:= 2^2 + 2^5 + 2^5 + 2^5 + 2^7 + 3^2 + 5^2 + 5^2 + 5^2 = 22 + 25 + 25 + 25 + 27 + 32 + 52 + 52 + 52. \\
&:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^2 + 5^2 + 5^2 + 5^3 = 24 + 24 + 25 + 25 + 25 + 32 + 52 + 52 + 53. \\
&:= 2^4 + 2^4 + 2^5 + 2^7 + 3^3 + 3^3 + 4^2 + 5^2 + 5^2 = 24 + 24 + 25 + 27 + 33 + 33 + 42 + 52 + 52. \\
&:= 2^6 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 5^2 = 26 + 26 + 26 + 32 + 33 + 33 + 42 + 42 + 52. \\
313 &:= 2^2 + 2^2 + 2^2 + 2^4 + 4^2 + 4^2 + 4^3 + 4^3 + 5^3 = 22 + 22 + 22 + 24 + 42 + 42 + 43 + 43 + 53. \\
&:= 2^2 + 2^2 + 2^2 + 3^3 + 3^3 + 3^4 + 4^2 + 5^2 + 5^3 = 22 + 22 + 22 + 33 + 33 + 34 + 42 + 52 + 53. \\
&:= 2^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 4^3 + 4^3 + 4^3 = 22 + 32 + 32 + 32 + 32 + 34 + 43 + 43 + 43. \\
314 &:= 2^3 + 2^5 + 2^6 + 2^6 + 2^6 + 4^2 + 4^2 + 5^2 + 5^2 = 23 + 25 + 26 + 26 + 26 + 42 + 42 + 52 + 52. \\
315 &:= 2^2 + 2^2 + 2^3 + 2^4 + 3^3 + 3^4 + 5^2 + 5^2 + 5^3 = 22 + 22 + 23 + 24 + 33 + 34 + 52 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^5 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 5^3 = 22 + 22 + 25 + 33 + 33 + 42 + 42 + 43 + 53. \\
&:= 2^2 + 2^3 + 2^3 + 3^3 + 3^3 + 3^3 + 4^3 + 5^2 + 5^3 = 22 + 23 + 23 + 33 + 33 + 33 + 43 + 52 + 53. \\
&:= 2^2 + 2^3 + 2^6 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 + 5^3 = 22 + 23 + 26 + 32 + 32 + 42 + 42 + 43 + 53. \\
&:= 2^2 + 2^3 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 = 22 + 23 + 32 + 33 + 34 + 34 + 42 + 43 + 52. \\
&:= 2^2 + 2^4 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 + 5^3 = 22 + 24 + 32 + 33 + 33 + 33 + 42 + 43 + 53. \\
317 &:= 2^2 + 2^2 + 2^3 + 2^6 + 3^4 + 3^4 + 5^2 + 5^2 + 5^2 = 22 + 22 + 23 + 26 + 34 + 34 + 52 + 52 + 52. \\
&:= 2^2 + 2^2 + 2^4 + 2^6 + 3^3 + 3^3 + 5^2 + 5^2 + 5^3 = 22 + 22 + 24 + 26 + 33 + 33 + 52 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^4 + 2^7 + 3^2 + 3^4 + 5^2 + 5^2 + 5^2 = 22 + 22 + 24 + 27 + 32 + 34 + 52 + 52 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^6 + 4^2 + 4^3 + 4^3 + 4^3 + 5^2 = 22 + 23 + 23 + 26 + 42 + 43 + 43 + 43 + 52. \\
&:= 2^2 + 2^3 + 2^4 + 2^5 + 3^3 + 4^2 + 4^3 + 5^2 + 5^3 = 22 + 23 + 24 + 25 + 33 + 42 + 43 + 52 + 53. \\
&:= 2^2 + 2^3 + 2^7 + 3^2 + 3^3 + 3^3 + 4^3 + 5^2 + 5^2 = 22 + 23 + 27 + 32 + 33 + 33 + 43 + 52 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 3^2 + 3^4 + 5^2 + 5^2 + 5^3 = 22 + 24 + 24 + 24 + 32 + 34 + 52 + 52 + 53. \\
&:= 2^2 + 2^4 + 2^6 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 24 + 26 + 32 + 42 + 42 + 43 + 43 + 43. \\
&:= 2^2 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 + 5^2 = 22 + 26 + 32 + 33 + 33 + 34 + 42 + 43 + 52. \\
&:= 2^3 + 2^3 + 2^4 + 3^2 + 3^4 + 3^4 + 4^3 + 5^2 + 5^2 = 23 + 23 + 24 + 32 + 34 + 34 + 43 + 52 + 52. \\
&:= 2^3 + 2^4 + 2^4 + 3^2 + 3^3 + 3^3 + 4^3 + 5^2 + 5^3 = 23 + 24 + 24 + 32 + 33 + 33 + 43 + 52 + 53. \\
&:= 2^3 + 2^5 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 = 23 + 25 + 32 + 33 + 34 + 42 + 42 + 43 + 43. \\
&:= 2^3 + 2^7 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 = 23 + 27 + 32 + 33 + 34 + 42 + 42 + 42 + 42. \\
&:= 2^4 + 2^4 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 = 24 + 24 + 32 + 32 + 34 + 34 + 42 + 43 + 52. \\
&:= 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 5^3 = 25 + 32 + 33 + 33 + 33 + 33 + 33 + 42 + 53. \\
&:= 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 33 + 33 + 33 + 33 + 33 + 33 + 33 + 43 + 43.
\end{aligned}$$

$$\begin{aligned}
319 &:= 2^2 + 2^2 + 2^6 + 2^6 + 3^3 + 3^4 + 5^2 + 5^2 + 5^2 = 22 + 22 + 26 + 26 + 33 + 34 + 52 + 52 + 52. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 2^7 + 4^3 + 5^2 + 5^2 + 5^2 = 22 + 23 + 23 + 25 + 27 + 43 + 52 + 52 + 52. \\
&:= 2^2 + 2^3 + 2^5 + 2^6 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 = 22 + 23 + 25 + 26 + 34 + 42 + 43 + 52 + 52. \\
&:= 2^2 + 2^4 + 2^5 + 2^7 + 3^2 + 4^2 + 4^3 + 5^2 + 5^2 = 22 + 24 + 25 + 27 + 32 + 42 + 43 + 52 + 52. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 4^3 + 5^2 + 5^2 + 5^3 = 23 + 23 + 24 + 24 + 25 + 43 + 52 + 52 + 53. \\
&:= 2^3 + 2^4 + 2^6 + 3^2 + 3^3 + 3^4 + 4^3 + 5^2 + 5^2 = 23 + 24 + 26 + 32 + 33 + 34 + 43 + 52 + 52. \\
&:= 2^3 + 2^5 + 2^5 + 3^3 + 3^3 + 3^3 + 4^2 + 5^2 + 5^3 = 23 + 25 + 25 + 33 + 33 + 33 + 42 + 52 + 53. \\
&:= 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 4^2 + 4^3 + 5^2 + 5^3 = 24 + 24 + 24 + 25 + 32 + 42 + 43 + 52 + 53. \\
&:= 2^4 + 2^4 + 2^4 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 + 5^2 = 24 + 24 + 24 + 33 + 33 + 43 + 43 + 43 + 52. \\
&:= 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 4^3 + 5^2 + 5^2 = 24 + 24 + 27 + 32 + 32 + 33 + 43 + 52 + 52. \\
&:= 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 5^3 = 25 + 25 + 26 + 32 + 32 + 42 + 42 + 42 + 53. \\
&:= 2^5 + 2^5 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 5^2 = 25 + 25 + 32 + 33 + 34 + 34 + 42 + 42 + 52. \\
&:= 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 = 25 + 26 + 32 + 33 + 33 + 42 + 42 + 43 + 43. \\
&:= 2^6 + 2^7 + 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 = 26 + 27 + 32 + 33 + 33 + 42 + 42 + 42 + 42.
\end{aligned}$$

$$320 := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 5^2 + 5^2 + 5^3 + 5^3 = 22 + 22 + 22 + 22 + 22 + 52 + 52 + 53 + 53.$$

$$\begin{aligned}
321 &:= 2^2 + 2^5 + 2^6 + 2^6 + 3^3 + 4^2 + 4^3 + 5^2 + 5^2 = 22 + 25 + 26 + 26 + 33 + 42 + 43 + 52 + 52. \\
&:= 2^3 + 2^5 + 2^5 + 2^6 + 4^2 + 4^2 + 4^3 + 4^3 + 5^2 = 23 + 25 + 25 + 26 + 42 + 42 + 43 + 43 + 52. \\
&:= 2^3 + 2^5 + 2^6 + 2^7 + 4^2 + 4^2 + 4^2 + 4^2 + 5^2 = 23 + 25 + 26 + 27 + 42 + 42 + 42 + 42 + 52. \\
&:= 2^4 + 2^5 + 2^5 + 2^5 + 3^3 + 4^2 + 4^2 + 5^2 + 5^3 = 24 + 25 + 25 + 25 + 33 + 42 + 42 + 52 + 53. \\
&:= 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 4^3 + 5^2 + 5^2 = 24 + 26 + 26 + 32 + 33 + 33 + 43 + 52 + 52. \\
&:= 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 5^2 + 5^2 + 5^3 = 25 + 25 + 25 + 25 + 32 + 32 + 52 + 52 + 53. \\
&:= 2^5 + 2^5 + 2^7 + 3^2 + 3^3 + 3^3 + 4^2 + 5^2 + 5^2 = 25 + 25 + 27 + 32 + 33 + 33 + 42 + 52 + 52. \\
&:= 2^5 + 2^6 + 2^6 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 25 + 26 + 26 + 34 + 42 + 42 + 42 + 42 + 42.
\end{aligned}$$

$$\begin{aligned}
322 &:= 2^2 + 2^2 + 2^3 + 2^3 + 4^2 + 4^2 + 4^2 + 5^3 + 5^3 = 22 + 22 + 23 + 23 + 42 + 42 + 42 + 53 + 53. \\
&:= 2^2 + 2^2 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 + 5^3 = 22 + 22 + 32 + 32 + 33 + 42 + 43 + 43 + 53. \\
&:= 2^2 + 2^3 + 2^3 + 3^2 + 3^2 + 3^2 + 5^2 + 5^3 + 5^3 = 22 + 23 + 23 + 32 + 32 + 32 + 52 + 53 + 53. \\
&:= 2^2 + 2^4 + 3^2 + 3^2 + 3^2 + 3^2 + 4^2 + 5^3 + 5^3 = 22 + 24 + 32 + 32 + 32 + 32 + 42 + 53 + 53.
\end{aligned}$$

$$\begin{aligned}
323 &:= 2^3 + 2^4 + 2^5 + 2^6 + 2^6 + 4^3 + 5^2 + 5^2 + 5^2 = 23 + 24 + 25 + 26 + 26 + 43 + 52 + 52 + 52. \\
&:= 2^3 + 2^5 + 2^5 + 2^5 + 2^7 + 4^2 + 5^2 + 5^2 + 5^2 = 23 + 25 + 25 + 25 + 27 + 42 + 52 + 52 + 52. \\
&:= 2^5 + 2^5 + 2^5 + 2^6 + 3^4 + 4^2 + 4^2 + 5^2 + 5^2 = 25 + 25 + 25 + 26 + 34 + 42 + 42 + 52 + 52.
\end{aligned}$$

$$\begin{aligned}
324 &:= 2^2 + 2^2 + 2^2 + 2^6 + 3^2 + 4^3 + 5^2 + 5^2 + 5^3 = 22 + 22 + 22 + 26 + 32 + 43 + 52 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^3 + 3^3 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 = 22 + 22 + 23 + 33 + 43 + 43 + 43 + 43 + 52. \\
&:= 2^2 + 2^2 + 3^4 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 5^2 = 22 + 22 + 34 + 34 + 34 + 42 + 42 + 42 + 52. \\
&:= 2^2 + 2^3 + 2^4 + 3^2 + 3^2 + 4^3 + 4^3 + 5^2 + 5^3 = 22 + 23 + 24 + 32 + 32 + 43 + 43 + 52 + 53. \\
&:= 2^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 3^4 + 5^2 + 5^2 = 22 + 32 + 32 + 32 + 34 + 34 + 34 + 52 + 52. \\
&:= 2^3 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 32 + 32 + 32 + 34 + 42 + 43 + 43 + 43. \\
&:= 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 5^3 = 32 + 32 + 32 + 33 + 33 + 33 + 33 + 43 + 53.
\end{aligned}$$

$$\begin{aligned}
326 &:= 2^2 + 2^2 + 2^5 + 3^3 + 3^4 + 4^3 + 4^3 + 5^2 + 5^2 = 22 + 22 + 25 + 33 + 34 + 43 + 43 + 52 + 52. \\
&:= 2^2 + 2^2 + 2^7 + 3^3 + 3^4 + 4^2 + 4^2 + 5^2 + 5^2 = 22 + 22 + 27 + 33 + 34 + 42 + 42 + 52 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 = 22 + 24 + 24 + 32 + 43 + 43 + 43 + 43 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 3^3 + 3^4 + 4^2 + 4^2 + 5^2 + 5^3 = 22 + 24 + 24 + 33 + 34 + 42 + 42 + 52 + 53. \\
&:= 2^2 + 2^4 + 2^5 + 3^2 + 3^2 + 3^4 + 5^2 + 5^2 + 5^3 = 22 + 24 + 25 + 32 + 32 + 34 + 52 + 52 + 53. \\
&:= 2^2 + 2^5 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 25 + 34 + 34 + 42 + 42 + 42 + 42 + 43. \\
&:= 2^3 + 2^3 + 2^6 + 3^2 + 4^2 + 4^2 + 4^2 + 4^3 + 5^3 = 23 + 23 + 26 + 32 + 42 + 42 + 42 + 43 + 53. \\
&:= 2^3 + 2^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^3 + 5^2 = 23 + 23 + 33 + 34 + 34 + 42 + 42 + 43 + 52. \\
&:= 2^3 + 2^4 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 5^3 = 23 + 24 + 33 + 33 + 33 + 42 + 42 + 43 + 53. \\
&:= 2^3 + 2^5 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 + 5^2 + 5^3 = 23 + 25 + 32 + 32 + 33 + 33 + 43 + 52 + 53. \\
&:= 2^4 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 = 24 + 32 + 33 + 34 + 34 + 42 + 42 + 42 + 43. \\
&:= 2^5 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 = 25 + 32 + 32 + 32 + 34 + 34 + 42 + 43 + 52. \\
&:= 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 26 + 32 + 32 + 32 + 33 + 42 + 43 + 43 + 43. \\
328 &:= 2^2 + 2^3 + 2^4 + 2^7 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 = 22 + 23 + 24 + 27 + 34 + 42 + 52 + 52 + 52. \\
&:= 2^2 + 2^4 + 2^6 + 3^4 + 3^4 + 4^2 + 4^2 + 5^2 + 5^2 = 22 + 24 + 26 + 34 + 34 + 42 + 42 + 52 + 52. \\
&:= 2^2 + 2^5 + 2^5 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 5^2 = 22 + 25 + 25 + 33 + 42 + 43 + 43 + 43 + 52. \\
&:= 2^2 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 + 5^2 = 22 + 25 + 27 + 33 + 42 + 42 + 42 + 43 + 52. \\
&:= 2^2 + 2^6 + 2^6 + 3^2 + 3^2 + 4^3 + 4^3 + 5^2 + 5^2 = 22 + 26 + 26 + 32 + 32 + 43 + 43 + 52 + 52. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 3^2 + 4^3 + 5^2 + 5^2 + 5^3 = 23 + 23 + 25 + 25 + 32 + 43 + 52 + 52 + 53. \\
&:= 2^3 + 2^3 + 2^7 + 3^3 + 3^3 + 4^2 + 4^3 + 5^2 + 5^2 = 23 + 23 + 27 + 33 + 33 + 42 + 43 + 52 + 52. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 3^4 + 4^2 + 5^2 + 5^2 + 5^3 = 23 + 24 + 24 + 24 + 34 + 42 + 52 + 52 + 53. \\
&:= 2^3 + 2^4 + 2^6 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 24 + 26 + 42 + 42 + 42 + 43 + 43 + 43. \\
&:= 2^3 + 2^6 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 + 5^2 = 23 + 26 + 33 + 33 + 34 + 42 + 42 + 43 + 52. \\
&:= 2^4 + 2^4 + 2^5 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 + 5^3 = 24 + 24 + 25 + 33 + 42 + 42 + 42 + 43 + 53. \\
&:= 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 4^2 + 4^3 + 5^2 + 5^3 = 24 + 25 + 25 + 32 + 32 + 42 + 43 + 52 + 53. \\
&:= 2^4 + 2^5 + 3^2 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 + 5^2 = 24 + 25 + 32 + 33 + 33 + 43 + 43 + 43 + 52. \\
&:= 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 5^2 = 24 + 27 + 32 + 33 + 33 + 42 + 42 + 43 + 52. \\
&:= 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 4^3 + 5^2 + 5^2 = 25 + 27 + 32 + 32 + 32 + 33 + 43 + 52 + 52. \\
330 &:= 2^2 + 2^4 + 2^6 + 2^7 + 3^3 + 4^2 + 5^2 + 5^2 + 5^2 = 22 + 24 + 26 + 27 + 33 + 42 + 52 + 52 + 52. \\
&:= 2^3 + 2^4 + 2^5 + 2^5 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 = 23 + 24 + 25 + 25 + 43 + 43 + 43 + 52 + 52. \\
&:= 2^3 + 2^4 + 2^5 + 2^7 + 4^2 + 4^2 + 4^3 + 5^2 + 5^2 = 23 + 24 + 25 + 27 + 42 + 42 + 43 + 52 + 52. \\
&:= 2^4 + 2^4 + 2^4 + 2^6 + 3^3 + 4^2 + 5^2 + 5^2 + 5^3 = 24 + 24 + 24 + 26 + 33 + 42 + 52 + 52 + 53. \\
&:= 2^4 + 2^5 + 2^6 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 + 5^2 = 24 + 25 + 26 + 34 + 42 + 42 + 42 + 43 + 52. \\
&:= 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 5^2 = 26 + 26 + 33 + 33 + 33 + 42 + 42 + 43 + 52. \\
331 &:= 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 5^3 + 5^3 = 32 + 32 + 32 + 32 + 32 + 32 + 33 + 53 + 53. \\
332 &:= 2^3 + 2^4 + 2^4 + 2^6 + 2^7 + 5^2 + 5^2 + 5^2 + 5^2 = 23 + 24 + 24 + 26 + 27 + 52 + 52 + 52 + 52. \\
&:= 2^4 + 2^4 + 2^6 + 2^6 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 = 24 + 24 + 26 + 26 + 34 + 42 + 52 + 52 + 52. \\
&:= 2^4 + 2^5 + 2^5 + 2^5 + 3^4 + 4^3 + 5^2 + 5^2 + 5^2 = 24 + 25 + 25 + 25 + 34 + 43 + 52 + 52 + 52. \\
333 &:= 2^2 + 2^3 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 + 5^3 = 22 + 23 + 32 + 33 + 42 + 42 + 43 + 43 + 53. \\
&:= 2^3 + 2^3 + 2^3 + 3^2 + 3^2 + 4^2 + 5^2 + 5^3 + 5^3 = 23 + 23 + 23 + 32 + 32 + 42 + 52 + 53 + 53. \\
&:= 2^3 + 2^4 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 + 5^3 + 5^3 = 23 + 24 + 32 + 32 + 32 + 42 + 42 + 53 + 53.
\end{aligned}$$

$$\begin{aligned}
335 &:= 2^2 + 2^2 + 2^3 + 2^6 + 4^2 + 4^3 + 5^2 + 5^2 + 5^3 = 22 + 22 + 23 + 26 + 42 + 43 + 52 + 52 + 53. \\
&:= 2^2 + 2^4 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 24 + 33 + 42 + 42 + 43 + 43 + 43 + 43. \\
&:= 2^2 + 2^5 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 = 22 + 25 + 32 + 32 + 43 + 43 + 43 + 43 + 52. \\
&:= 2^2 + 2^5 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 5^2 + 5^3 = 22 + 25 + 32 + 33 + 34 + 42 + 42 + 52 + 53. \\
&:= 2^2 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 5^2 = 22 + 27 + 32 + 32 + 42 + 42 + 43 + 43 + 52. \\
&:= 2^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 + 5^2 = 22 + 33 + 33 + 33 + 34 + 42 + 43 + 43 + 52. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 = 23 + 23 + 23 + 23 + 43 + 43 + 52 + 52 + 53. \\
&:= 2^3 + 2^3 + 2^4 + 3^2 + 4^2 + 4^3 + 4^3 + 5^2 + 5^3 = 23 + 23 + 24 + 32 + 42 + 43 + 43 + 52 + 53. \\
&:= 2^3 + 2^3 + 3^2 + 3^3 + 3^3 + 3^4 + 5^2 + 5^2 + 5^3 = 23 + 23 + 32 + 33 + 33 + 34 + 52 + 52 + 53. \\
&:= 2^3 + 3^2 + 3^2 + 3^4 + 3^4 + 3^4 + 4^2 + 5^2 + 5^2 = 23 + 32 + 32 + 34 + 34 + 34 + 42 + 52 + 52. \\
&:= 2^4 + 2^4 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 5^3 = 24 + 24 + 32 + 32 + 42 + 42 + 43 + 43 + 53. \\
&:= 2^4 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 + 5^2 + 5^3 = 24 + 32 + 32 + 33 + 33 + 34 + 42 + 52 + 53.
\end{aligned}$$

$$\begin{aligned}
337 &:= 2^2 + 2^4 + 2^4 + 3^4 + 3^4 + 4^3 + 5^2 + 5^2 + 5^2 = 22 + 24 + 24 + 34 + 34 + 43 + 52 + 52 + 52. \\
&:= 2^2 + 2^6 + 2^6 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 5^3 = 22 + 26 + 26 + 42 + 42 + 42 + 42 + 42 + 53. \\
&:= 2^3 + 2^3 + 2^3 + 2^5 + 3^4 + 5^2 + 5^2 + 5^2 + 5^3 = 23 + 23 + 23 + 25 + 34 + 52 + 52 + 52 + 53. \\
&:= 2^3 + 2^4 + 2^4 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 = 23 + 24 + 24 + 42 + 43 + 43 + 43 + 43 + 52. \\
&:= 2^3 + 2^4 + 2^5 + 3^2 + 3^4 + 4^2 + 5^2 + 5^2 + 5^3 = 23 + 24 + 25 + 32 + 34 + 42 + 52 + 52 + 53. \\
&:= 2^3 + 2^4 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 + 5^2 + 5^2 = 23 + 24 + 33 + 33 + 34 + 43 + 43 + 52 + 52. \\
&:= 2^3 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 5^2 + 5^2 + 5^3 = 23 + 26 + 32 + 33 + 33 + 33 + 52 + 52 + 53. \\
&:= 2^3 + 2^7 + 3^2 + 3^2 + 3^3 + 3^4 + 5^2 + 5^2 + 5^2 = 23 + 27 + 32 + 32 + 33 + 34 + 52 + 52 + 52. \\
&:= 2^5 + 2^5 + 3^2 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 + 5^3 = 25 + 25 + 32 + 33 + 42 + 42 + 42 + 43 + 53. \\
&:= 2^5 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 25 + 33 + 33 + 33 + 42 + 42 + 43 + 43 + 43. \\
&:= 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 + 5^2 + 5^3 = 26 + 26 + 32 + 32 + 32 + 42 + 42 + 52 + 53. \\
&:= 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 5^2 + 5^2 = 26 + 32 + 32 + 33 + 34 + 34 + 42 + 52 + 52. \\
&:= 2^7 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 27 + 33 + 33 + 33 + 42 + 42 + 42 + 42 + 43.
\end{aligned}$$

$$\begin{aligned}
339 &:= 2^2 + 2^5 + 2^5 + 2^6 + 4^2 + 4^2 + 5^2 + 5^2 + 5^3 = 22 + 25 + 25 + 26 + 42 + 42 + 52 + 52 + 53. \\
&:= 2^3 + 2^3 + 2^5 + 2^6 + 3^3 + 5^2 + 5^2 + 5^2 + 5^3 = 23 + 23 + 25 + 26 + 33 + 52 + 52 + 52 + 53. \\
&:= 2^3 + 2^6 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 = 23 + 26 + 26 + 32 + 42 + 43 + 43 + 52 + 52. \\
&:= 2^4 + 2^4 + 2^5 + 3^4 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 = 24 + 24 + 25 + 34 + 42 + 43 + 43 + 52 + 52. \\
&:= 2^4 + 2^4 + 2^7 + 3^4 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 = 24 + 24 + 27 + 34 + 42 + 42 + 42 + 52 + 52. \\
&:= 2^4 + 2^5 + 2^6 + 3^2 + 3^3 + 4^2 + 5^2 + 5^2 + 5^3 = 24 + 25 + 26 + 32 + 33 + 42 + 52 + 52 + 53. \\
&:= 2^4 + 2^5 + 3^3 + 3^3 + 3^4 + 3^4 + 5^2 + 5^2 + 5^2 = 24 + 25 + 33 + 33 + 34 + 34 + 52 + 52 + 52. \\
&:= 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 + 5^2 + 5^2 = 24 + 26 + 33 + 33 + 33 + 43 + 43 + 52 + 52. \\
&:= 2^6 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 5^2 + 5^2 + 5^2 = 26 + 27 + 32 + 32 + 33 + 33 + 52 + 52 + 52.
\end{aligned}$$

$$\begin{aligned}
341 &:= 2^3 + 2^5 + 2^6 + 2^7 + 3^2 + 5^2 + 5^2 + 5^2 + 5^2 = 23 + 25 + 26 + 27 + 32 + 52 + 52 + 52 + 52. \\
&:= 2^5 + 2^6 + 2^6 + 3^2 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 = 25 + 26 + 26 + 32 + 34 + 42 + 52 + 52 + 52.
\end{aligned}$$

$$\begin{aligned}
342 &:= 2^2 + 2^2 + 2^2 + 3^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 = 22 + 22 + 22 + 33 + 43 + 43 + 52 + 52 + 53. \\
&:= 2^2 + 2^2 + 2^4 + 3^2 + 3^2 + 5^2 + 5^2 + 5^3 + 5^3 = 22 + 22 + 24 + 32 + 32 + 52 + 52 + 53 + 53. \\
&:= 2^2 + 2^2 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 5^3 = 22 + 22 + 34 + 42 + 42 + 42 + 42 + 43 + 53. \\
&:= 2^2 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 + 5^2 + 5^3 = 22 + 32 + 32 + 32 + 34 + 42 + 43 + 52 + 53.
\end{aligned}$$

$$\begin{aligned}
344 &:= 2^2 + 2^3 + 3^2 + 3^4 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 = 22 + 23 + 32 + 34 + 43 + 43 + 43 + 52 + 52. \\
&:= 2^3 + 2^3 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 5^3 = 23 + 23 + 33 + 42 + 42 + 42 + 43 + 43 + 53. \\
&:= 2^5 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 5^3 = 25 + 32 + 32 + 32 + 42 + 42 + 43 + 43 + 53. \\
&:= 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 5^3 = 27 + 32 + 32 + 32 + 42 + 42 + 42 + 42 + 53. \\
&:= 3^2 + 3^2 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 32 + 32 + 33 + 33 + 42 + 43 + 43 + 43 + 43. \\
&:= 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 = 32 + 33 + 33 + 33 + 34 + 42 + 42 + 42 + 53. \\
346 &:= 2^2 + 2^4 + 2^6 + 4^2 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 = 22 + 24 + 26 + 42 + 42 + 42 + 43 + 52 + 53. \\
&:= 2^2 + 2^5 + 3^2 + 3^4 + 3^4 + 4^3 + 5^2 + 5^2 + 5^2 = 22 + 25 + 32 + 34 + 34 + 43 + 52 + 52 + 52. \\
&:= 2^2 + 2^6 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 = 22 + 26 + 32 + 33 + 43 + 43 + 43 + 52 + 52. \\
&:= 2^3 + 2^5 + 3^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 = 23 + 25 + 32 + 42 + 43 + 43 + 43 + 43 + 52. \\
&:= 2^3 + 2^5 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 5^2 + 5^3 = 23 + 25 + 33 + 34 + 42 + 42 + 42 + 52 + 53. \\
&:= 2^3 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 5^2 = 23 + 27 + 32 + 42 + 42 + 42 + 43 + 43 + 52. \\
&:= 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 4^3 + 5^2 + 5^2 + 5^3 = 24 + 26 + 32 + 32 + 32 + 43 + 52 + 52 + 53. \\
&:= 2^6 + 3^2 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 26 + 32 + 34 + 42 + 42 + 42 + 42 + 43 + 43. \\
344 &:= 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 = 32 + 33 + 33 + 33 + 34 + 42 + 42 + 42 + 53. \\
348 &:= 2^2 + 2^4 + 2^5 + 2^5 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 = 22 + 24 + 25 + 25 + 43 + 52 + 52 + 52 + 53. \\
&:= 2^5 + 2^5 + 3^2 + 3^4 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 = 25 + 25 + 32 + 34 + 42 + 43 + 43 + 52 + 52. \\
&:= 2^5 + 2^6 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 + 5^2 + 5^3 = 25 + 26 + 33 + 33 + 42 + 42 + 42 + 52 + 53. \\
&:= 2^5 + 2^7 + 3^2 + 3^4 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 = 25 + 27 + 32 + 34 + 42 + 42 + 42 + 52 + 52. \\
350 &:= 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 5^2 + 5^2 + 5^2 + 5^3 = 25 + 25 + 25 + 33 + 33 + 52 + 52 + 52 + 53. \\
351 &:= 2^2 + 2^2 + 3^2 + 3^3 + 4^2 + 4^2 + 5^2 + 5^3 + 5^3 = 22 + 22 + 32 + 33 + 42 + 42 + 52 + 53 + 53. \\
353 &:= 2^2 + 2^3 + 2^3 + 2^3 + 5^2 + 5^2 + 5^2 + 5^3 + 5^3 = 22 + 23 + 23 + 23 + 52 + 52 + 52 + 53 + 53. \\
&:= 2^2 + 2^3 + 2^4 + 3^2 + 4^2 + 5^2 + 5^2 + 5^3 + 5^3 = 22 + 23 + 24 + 32 + 42 + 52 + 52 + 53 + 53. \\
&:= 2^3 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 = 23 + 32 + 32 + 34 + 42 + 42 + 43 + 52 + 53. \\
355 &:= 2^2 + 2^2 + 2^7 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 = 22 + 22 + 27 + 42 + 43 + 43 + 52 + 52 + 52. \\
&:= 2^2 + 2^3 + 3^4 + 3^4 + 3^4 + 5^2 + 5^2 + 5^2 + 5^2 = 22 + 23 + 34 + 34 + 34 + 52 + 52 + 52 + 52. \\
&:= 2^2 + 2^4 + 2^4 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 = 22 + 24 + 24 + 42 + 43 + 43 + 52 + 52 + 53. \\
&:= 2^2 + 2^4 + 3^3 + 3^3 + 3^4 + 5^2 + 5^2 + 5^2 + 5^3 = 22 + 24 + 33 + 33 + 34 + 52 + 52 + 52 + 53. \\
&:= 2^3 + 2^3 + 3^4 + 4^2 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 = 23 + 23 + 34 + 42 + 43 + 43 + 43 + 52 + 52. \\
&:= 2^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 5^2 + 5^2 + 5^3 = 23 + 33 + 33 + 33 + 33 + 43 + 52 + 52 + 53. \\
&:= 2^4 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 5^2 = 24 + 32 + 34 + 42 + 42 + 43 + 43 + 43 + 52. \\
&:= 2^6 + 3^2 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 = 26 + 32 + 32 + 33 + 42 + 42 + 43 + 52 + 53. \\
&:= 3^2 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 = 32 + 33 + 33 + 34 + 34 + 42 + 43 + 52 + 52. \\
357 &:= 2^2 + 2^6 + 2^6 + 3^2 + 4^2 + 5^2 + 5^2 + 5^2 + 5^3 = 22 + 26 + 26 + 32 + 42 + 52 + 52 + 52 + 53. \\
&:= 2^2 + 2^6 + 3^3 + 3^4 + 3^4 + 5^2 + 5^2 + 5^2 + 5^2 = 22 + 26 + 33 + 34 + 34 + 52 + 52 + 52 + 52. \\
&:= 2^3 + 2^5 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 = 23 + 25 + 34 + 34 + 42 + 43 + 52 + 52 + 52. \\
&:= 2^3 + 2^6 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 = 23 + 26 + 33 + 42 + 43 + 43 + 43 + 52 + 52. \\
&:= 2^4 + 2^5 + 3^3 + 3^3 + 4^2 + 4^3 + 5^2 + 5^2 + 5^3 = 24 + 25 + 33 + 33 + 42 + 43 + 52 + 52 + 53. \\
&:= 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 + 5^2 + 5^2 + 5^2 = 27 + 32 + 33 + 33 + 33 + 43 + 52 + 52 + 52.
\end{aligned}$$

$$359 := 2^3 + 2^5 + 2^7 + 3^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 = 23 + 25 + 27 + 33 + 43 + 52 + 52 + 52 + 52.$$

$$:= 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 = 25 + 26 + 33 + 34 + 42 + 43 + 52 + 52 + 52.$$

$$362 := 2^2 + 2^2 + 3^2 + 3^4 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 = 22 + 22 + 32 + 34 + 43 + 52 + 52 + 52 + 53.$$

$$:= 2^2 + 2^3 + 3^3 + 4^2 + 4^2 + 4^2 + 5^2 + 5^3 + 5^3 = 22 + 23 + 33 + 42 + 42 + 42 + 52 + 53 + 53.$$

$$:= 2^3 + 3^2 + 3^2 + 3^2 + 3^3 + 5^2 + 5^2 + 5^3 + 5^3 = 23 + 32 + 32 + 32 + 33 + 52 + 52 + 53 + 53.$$

$$364 := 2^2 + 2^5 + 3^2 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 = 22 + 25 + 32 + 42 + 43 + 43 + 52 + 52 + 53.$$

$$:= 2^2 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 + 5^3 = 22 + 27 + 32 + 42 + 42 + 42 + 52 + 52 + 53.$$

$$:= 2^2 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 = 22 + 33 + 33 + 43 + 43 + 43 + 43 + 52 + 52.$$

$$:= 2^3 + 2^3 + 2^4 + 4^2 + 4^2 + 5^2 + 5^2 + 5^3 + 5^3 = 23 + 23 + 24 + 42 + 42 + 52 + 52 + 53 + 53.$$

$$:= 2^4 + 2^4 + 3^2 + 4^2 + 4^2 + 4^2 + 5^2 + 5^3 + 5^3 = 24 + 24 + 32 + 42 + 42 + 42 + 52 + 53 + 53.$$

$$:= 2^4 + 3^2 + 3^2 + 3^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 = 24 + 32 + 32 + 33 + 43 + 43 + 52 + 52 + 53.$$

$$:= 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 5^2 + 5^2 + 5^2 + 5^3 = 27 + 32 + 32 + 32 + 32 + 52 + 52 + 52 + 53.$$

$$:= 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 33 + 34 + 42 + 42 + 42 + 42 + 43 + 43 + 43.$$

$$366 := 2^4 + 3^4 + 3^4 + 3^4 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 = 24 + 34 + 34 + 34 + 42 + 42 + 52 + 52 + 52.$$

$$:= 2^6 + 3^2 + 3^2 + 3^4 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 = 26 + 32 + 32 + 34 + 43 + 43 + 52 + 52 + 52.$$

$$368 := 2^3 + 2^6 + 2^6 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 + 5^3 = 23 + 26 + 26 + 42 + 42 + 52 + 52 + 52 + 53.$$

$$:= 2^4 + 2^7 + 3^3 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 + 5^2 = 24 + 27 + 33 + 34 + 42 + 52 + 52 + 52 + 52.$$

$$371 := 3^5 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 35 + 42 + 42 + 42 + 42 + 42 + 42 + 42 + 42.$$

$$373 := 2^2 + 2^3 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 = 22 + 23 + 34 + 42 + 43 + 52 + 52 + 52 + 53.$$

$$:= 2^4 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 5^3 + 5^3 = 24 + 33 + 42 + 42 + 42 + 42 + 42 + 53 + 53.$$

$$:= 2^5 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 5^2 + 5^3 + 5^3 = 25 + 32 + 32 + 42 + 42 + 42 + 52 + 53 + 53.$$

$$:= 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 + 5^2 + 5^3 = 32 + 33 + 33 + 42 + 42 + 43 + 43 + 52 + 53.$$

$$375 := 2^2 + 2^6 + 3^3 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 = 22 + 26 + 33 + 42 + 43 + 52 + 52 + 52 + 53.$$

$$:= 2^3 + 2^5 + 4^2 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 = 23 + 25 + 42 + 42 + 43 + 43 + 52 + 52 + 53.$$

$$:= 2^3 + 2^7 + 4^2 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 + 5^3 = 23 + 27 + 42 + 42 + 42 + 42 + 52 + 52 + 53.$$

$$:= 2^6 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 5^2 + 5^3 = 26 + 34 + 42 + 42 + 42 + 42 + 42 + 52 + 53.$$

$$377 := 2^3 + 2^4 + 2^6 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 = 23 + 24 + 26 + 43 + 52 + 52 + 52 + 52 + 53.$$

$$:= 2^5 + 2^5 + 3^4 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 + 5^3 = 25 + 25 + 34 + 42 + 42 + 52 + 52 + 52 + 53.$$

$$381 := 2^6 + 2^6 + 2^6 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 = 26 + 26 + 26 + 43 + 52 + 52 + 52 + 52 + 52.$$

$$384 := 2^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 + 5^2 + 5^2 + 5^3 = 24 + 34 + 42 + 42 + 42 + 43 + 52 + 52 + 53.$$

$$:= 3^2 + 3^3 + 3^4 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 = 32 + 33 + 34 + 43 + 43 + 43 + 52 + 52 + 52.$$

$$388 := 2^5 + 2^6 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 = 25 + 26 + 43 + 43 + 43 + 52 + 52 + 52 + 52.$$

$$:= 2^6 + 2^7 + 4^2 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 = 26 + 27 + 42 + 42 + 43 + 52 + 52 + 52 + 52.$$

$$391 := 3^2 + 3^5 + 4^2 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 = 32 + 35 + 42 + 42 + 42 + 42 + 52 + 52 + 52.$$

$$\begin{aligned} 393 &:= 2^2 + 2^5 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 + 5^3 + 5^3 = 22 + 25 + 42 + 42 + 52 + 52 + 52 + 53 + 53. \\ &:= 2^3 + 2^3 + 3^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 + 5^3 = 23 + 23 + 33 + 52 + 52 + 52 + 52 + 53 + 53. \\ &:= 2^4 + 3^2 + 3^3 + 4^2 + 5^2 + 5^2 + 5^2 + 5^3 + 5^3 = 24 + 32 + 33 + 42 + 52 + 52 + 52 + 53 + 53. \\ &:= 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 = 42 + 42 + 42 + 43 + 43 + 43 + 43 + 43 + 52. \end{aligned}$$

$$\begin{aligned} 395 &:= 2^3 + 2^7 + 3^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 = 23 + 27 + 32 + 52 + 52 + 52 + 52 + 52 + 53. \\ &:= 2^6 + 3^2 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 = 26 + 32 + 34 + 42 + 52 + 52 + 52 + 52 + 53. \\ &:= 3^3 + 3^4 + 3^4 + 3^4 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 = 33 + 34 + 34 + 34 + 52 + 52 + 52 + 52 + 52. \end{aligned}$$

$$397 := 2^4 + 2^7 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 = 24 + 27 + 43 + 43 + 52 + 52 + 52 + 52 + 52.$$

$$402 := 3^3 + 3^3 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 + 5^3 + 5^3 = 33 + 33 + 42 + 42 + 42 + 52 + 52 + 53 + 53.$$

$$411 := 3^2 + 3^2 + 3^5 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 = 32 + 32 + 35 + 52 + 52 + 52 + 52 + 52 + 52.$$

$$413 := 3^3 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 = 33 + 34 + 42 + 43 + 52 + 52 + 52 + 52 + 53.$$

$$420 := 4^2 + 4^2 + 4^2 + 4^2 + 4^4 + 5^2 + 5^2 + 5^2 + 5^2 = 42 + 42 + 42 + 42 + 44 + 52 + 52 + 52 + 52.$$

$$440 := 3^2 + 4^4 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 = 32 + 44 + 52 + 52 + 52 + 52 + 52 + 52 + 52.$$

$$442 := 4^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 = 43 + 43 + 43 + 52 + 52 + 52 + 52 + 52 + 53.$$

8 Ten Terms Equalities Expressions

This section deals with ten terms equality expressions, where we have considered only positive expressions with both powers and bases bigger than one.

$$\begin{aligned} 236 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 2^6 = 22 + 22 + 22 + 23 + 23 + 23 + 23 + 26 + 26 + 26. \\ &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^7 = 22 + 22 + 22 + 23 + 23 + 24 + 24 + 24 + 25 + 27. \end{aligned}$$

$$\begin{aligned} 240 &:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 = 22 + 22 + 23 + 24 + 24 + 24 + 24 + 25 + 26 + 26. \\ &:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 2^6 = 23 + 23 + 23 + 23 + 23 + 23 + 25 + 25 + 26 + 26. \end{aligned}$$

$$\begin{aligned} 241 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 2^6 + 3^4 = 22 + 22 + 22 + 22 + 22 + 22 + 23 + 26 + 26 + 34. \\ &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 2^7 + 3^2 = 22 + 22 + 22 + 22 + 22 + 22 + 24 + 26 + 27 + 32. \end{aligned}$$

$$243 := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^6 + 2^6 + 2^6 + 3^3 = 22 + 22 + 22 + 22 + 22 + 22 + 26 + 26 + 26 + 33.$$

$$244 := 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 = 22 + 24 + 24 + 24 + 25 + 25 + 25 + 25 + 25 + 25.$$

$$\begin{aligned} 245 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 3^4 = 22 + 22 + 22 + 23 + 23 + 23 + 25 + 25 + 26 + 34. \\ &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^7 + 3^2 = 22 + 22 + 22 + 23 + 23 + 24 + 25 + 25 + 27 + 32. \end{aligned}$$

$$\begin{aligned} 247 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 3^3 = 22 + 22 + 22 + 23 + 23 + 25 + 25 + 26 + 26 + 33. \\ &:= 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^3 = 22 + 23 + 23 + 23 + 24 + 24 + 24 + 24 + 27 + 33. \end{aligned}$$

$$\begin{aligned} 249 &:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 = 22 + 22 + 23 + 24 + 24 + 25 + 25 + 26 + 26 + 32. \\ &:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^4 = 22 + 22 + 24 + 24 + 24 + 24 + 25 + 25 + 25 + 34. \\ &:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 3^4 = 23 + 23 + 23 + 23 + 23 + 25 + 25 + 25 + 25 + 34. \\ &:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^4 = 23 + 23 + 23 + 24 + 24 + 24 + 24 + 24 + 26 + 34. \\ &:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 = 23 + 23 + 24 + 24 + 24 + 24 + 24 + 24 + 27 + 32. \end{aligned}$$

$$\begin{aligned}
250 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 3^4 + 3^4 = 22 + 22 + 22 + 22 + 22 + 22 + 25 + 25 + 34 + 34. \\
251 &:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 = 23 + 23 + 23 + 23 + 25 + 25 + 25 + 25 + 26 + 33. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 3^3 = 23 + 23 + 24 + 24 + 24 + 24 + 24 + 26 + 26 + 33. \\
252 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 2^7 + 4^2 = 22 + 22 + 22 + 22 + 22 + 23 + 24 + 26 + 27 + 42. \\
&:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^7 + 4^3 = 22 + 22 + 22 + 23 + 23 + 23 + 23 + 24 + 27 + 43. \\
253 &:= 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 = 22 + 24 + 25 + 25 + 25 + 25 + 25 + 25 + 25 + 32. \\
254 &:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^4 + 3^4 = 22 + 22 + 22 + 24 + 24 + 24 + 24 + 24 + 34 + 34. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^7 + 3^3 + 3^3 = 22 + 22 + 23 + 23 + 23 + 23 + 25 + 27 + 33 + 33. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 3^4 + 3^4 = 22 + 23 + 23 + 23 + 23 + 23 + 24 + 25 + 34 + 34. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 2^7 + 3^2 + 3^2 = 22 + 23 + 23 + 23 + 23 + 23 + 26 + 27 + 32 + 32. \\
256 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 2^6 + 2^6 + 4^2 = 22 + 22 + 22 + 22 + 24 + 24 + 26 + 26 + 26 + 42. \\
&:= 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 4^3 = 22 + 22 + 22 + 22 + 24 + 25 + 25 + 25 + 26 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 3^3 + 3^4 = 22 + 22 + 22 + 23 + 25 + 25 + 25 + 25 + 33 + 34. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 2^6 + 4^3 = 22 + 22 + 23 + 23 + 23 + 24 + 24 + 26 + 26 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^7 + 4^2 = 22 + 22 + 23 + 23 + 23 + 24 + 25 + 25 + 27 + 42. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 3^3 + 3^4 = 22 + 23 + 23 + 23 + 23 + 24 + 25 + 26 + 33 + 34. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^3 = 22 + 23 + 23 + 23 + 24 + 24 + 25 + 27 + 32 + 33. \\
258 &:= 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 = 22 + 22 + 22 + 25 + 25 + 25 + 25 + 26 + 33 + 33. \\
&:= 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 = 22 + 22 + 23 + 25 + 25 + 25 + 26 + 26 + 32 + 32. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 = 22 + 22 + 24 + 24 + 25 + 25 + 25 + 25 + 32 + 34. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 = 22 + 23 + 23 + 23 + 24 + 25 + 26 + 26 + 33 + 33. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 = 23 + 23 + 23 + 23 + 24 + 26 + 26 + 26 + 32 + 32. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^4 = 23 + 23 + 23 + 24 + 24 + 24 + 25 + 26 + 32 + 34. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 = 23 + 23 + 24 + 24 + 24 + 24 + 25 + 27 + 32 + 32. \\
259 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^7 + 3^3 + 4^3 = 22 + 22 + 22 + 22 + 22 + 22 + 24 + 27 + 33 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^7 + 3^2 + 3^2 + 3^4 = 22 + 22 + 22 + 22 + 23 + 23 + 27 + 32 + 32 + 34. \\
260 &:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 4^2 = 22 + 23 + 23 + 24 + 24 + 25 + 25 + 26 + 26 + 42. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 4^3 = 22 + 23 + 23 + 24 + 25 + 25 + 25 + 25 + 25 + 43. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 4^3 = 22 + 24 + 24 + 24 + 24 + 24 + 24 + 25 + 26 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 = 23 + 23 + 24 + 24 + 24 + 25 + 26 + 26 + 32 + 33. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 3^3 + 3^4 = 23 + 24 + 24 + 24 + 24 + 24 + 25 + 25 + 33 + 34. \\
261 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 3^4 + 4^3 = 22 + 22 + 22 + 22 + 22 + 24 + 24 + 26 + 34 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^7 + 3^3 + 3^3 + 3^3 = 22 + 22 + 22 + 22 + 22 + 25 + 27 + 33 + 33 + 33. \\
&:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 3^3 + 3^4 + 3^4 = 22 + 22 + 22 + 22 + 23 + 24 + 25 + 33 + 34 + 34. \\
&:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 3^3 = 22 + 22 + 22 + 22 + 23 + 26 + 27 + 32 + 32 + 33.
\end{aligned}$$

$$262 := 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 = 23 + 23 + 25 + 25 + 25 + 25 + 25 + 25 + 33 + 33.$$

$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 = 24 + 24 + 24 + 24 + 24 + 25 + 25 + 26 + 33 + 33.$$

$$263 := 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^6 + 3^3 + 3^3 + 3^4 = 22 + 22 + 22 + 22 + 24 + 25 + 26 + 33 + 33 + 34.$$

$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^4 = 22 + 22 + 22 + 23 + 24 + 26 + 26 + 32 + 32 + 34.$$

$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^4 + 3^4 = 22 + 22 + 22 + 24 + 24 + 24 + 25 + 32 + 34 + 34.$$

$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 = 22 + 22 + 22 + 24 + 24 + 26 + 27 + 32 + 32 + 32.$$

$$264 := 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 4^2 = 23 + 24 + 25 + 25 + 25 + 25 + 25 + 25 + 25 + 42.$$

$$265 := 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 2^6 + 2^6 + 3^2 + 4^2 = 22 + 22 + 22 + 22 + 25 + 26 + 26 + 26 + 32 + 42.$$

$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 = 22 + 22 + 22 + 24 + 26 + 26 + 26 + 32 + 32 + 33.$$

$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 2^6 + 3^2 + 4^3 = 22 + 22 + 23 + 23 + 23 + 25 + 26 + 26 + 32 + 43.$$

$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 3^4 + 4^3 = 22 + 22 + 23 + 23 + 24 + 24 + 25 + 25 + 34 + 43.$$

$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 = 22 + 23 + 23 + 23 + 25 + 25 + 27 + 32 + 32 + 33.$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 2^7 + 3^2 + 4^2 = 23 + 23 + 23 + 23 + 23 + 23 + 26 + 27 + 32 + 42.$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^7 + 3^3 + 3^3 + 3^3 = 23 + 23 + 23 + 23 + 23 + 24 + 27 + 33 + 33 + 33.$$

$$267 := 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 4^3 = 22 + 22 + 23 + 24 + 24 + 25 + 25 + 26 + 33 + 43.$$

$$:= 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^4 = 22 + 22 + 25 + 25 + 25 + 25 + 32 + 32 + 34.$$

$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 = 22 + 23 + 23 + 24 + 25 + 25 + 25 + 33 + 33 + 34.$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^7 + 3^3 + 4^2 = 23 + 23 + 23 + 23 + 24 + 24 + 25 + 27 + 33 + 42.$$

$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 = 23 + 23 + 23 + 24 + 25 + 25 + 26 + 32 + 32 + 34.$$

$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 = 23 + 23 + 24 + 24 + 25 + 25 + 27 + 32 + 32 + 32.$$

$$269 := 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 = 22 + 23 + 23 + 25 + 25 + 25 + 26 + 26 + 32 + 42.$$

$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 = 22 + 23 + 24 + 24 + 25 + 25 + 25 + 25 + 34 + 42.$$

$$:= 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 = 22 + 23 + 24 + 25 + 25 + 25 + 26 + 33 + 33 + 33.$$

$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 4^3 = 22 + 24 + 24 + 24 + 24 + 25 + 25 + 26 + 32 + 43.$$

$$:= 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 = 23 + 23 + 24 + 25 + 25 + 26 + 26 + 32 + 32 + 33.$$

$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 3^4 = 23 + 24 + 24 + 24 + 25 + 25 + 25 + 32 + 33 + 34.$$

$$270 := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 3^2 + 3^4 + 4^3 = 22 + 22 + 22 + 22 + 22 + 25 + 26 + 32 + 34 + 43.$$

$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 3^4 + 4^2 = 22 + 22 + 22 + 23 + 23 + 23 + 27 + 32 + 34 + 42.$$

$$271 := 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 = 22 + 24 + 24 + 25 + 25 + 25 + 25 + 26 + 33 + 42.$$

$$:= 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 = 24 + 24 + 24 + 25 + 25 + 25 + 26 + 32 + 33 + 33.$$

$$272 := 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^7 + 4^2 + 4^3 = 22 + 22 + 22 + 22 + 24 + 24 + 24 + 27 + 42 + 43.$$

$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^6 + 2^7 + 3^2 + 3^3 + 4^2 = 22 + 22 + 22 + 23 + 23 + 26 + 27 + 32 + 33 + 42.$$

$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^7 + 3^3 + 3^3 + 3^3 + 3^3 = 22 + 22 + 22 + 23 + 24 + 27 + 33 + 33 + 33 + 33.$$

$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^4 + 3^4 = 22 + 22 + 22 + 24 + 25 + 25 + 32 + 32 + 34 + 34.$$

$$:= 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 = 22 + 22 + 22 + 25 + 26 + 27 + 32 + 32 + 32 + 32.$$

$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 3^3 + 3^3 + 3^4 + 3^4 = 22 + 22 + 23 + 23 + 24 + 24 + 33 + 33 + 34 + 34.$$

$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 3^3 + 4^3 = 22 + 23 + 23 + 23 + 23 + 23 + 27 + 32 + 33 + 43.$$

$$\begin{aligned}
274 &:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 2^7 + 3^3 + 3^3 + 4^2 = 22 + 22 + 22 + 24 + 24 + 25 + 27 + 33 + 33 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^4 + 4^2 = 22 + 22 + 23 + 23 + 24 + 26 + 26 + 32 + 34 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 4^3 = 22 + 22 + 23 + 23 + 25 + 25 + 25 + 32 + 34 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 3^4 + 3^4 + 4^2 = 22 + 22 + 23 + 24 + 24 + 24 + 25 + 34 + 34 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 4^2 = 22 + 22 + 23 + 24 + 24 + 26 + 27 + 32 + 32 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 3^4 = 22 + 22 + 23 + 24 + 24 + 26 + 33 + 33 + 33 + 34. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 = 22 + 22 + 24 + 24 + 24 + 27 + 32 + 33 + 33 + 33. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 3^4 = 22 + 23 + 24 + 24 + 24 + 24 + 32 + 33 + 34 + 34. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 3^2 + 3^4 + 4^3 = 23 + 23 + 23 + 23 + 23 + 24 + 26 + 32 + 34 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 4^3 = 23 + 23 + 23 + 23 + 24 + 24 + 27 + 32 + 32 + 43.
\end{aligned}$$

$$\begin{aligned}
276 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 2^6 + 2^6 + 4^2 + 4^2 = 22 + 22 + 22 + 23 + 25 + 26 + 26 + 26 + 42 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^3 + 4^2 = 22 + 22 + 23 + 24 + 26 + 26 + 26 + 32 + 33 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 4^3 = 22 + 22 + 23 + 25 + 25 + 25 + 26 + 32 + 33 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 = 22 + 22 + 24 + 24 + 24 + 25 + 26 + 33 + 34 + 42. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 = 22 + 22 + 24 + 24 + 26 + 26 + 33 + 33 + 33 + 33. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 2^6 + 4^2 + 4^3 = 22 + 23 + 23 + 23 + 23 + 25 + 26 + 26 + 42 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 4^3 + 4^3 = 22 + 23 + 23 + 24 + 24 + 24 + 24 + 26 + 43 + 43. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 = 22 + 24 + 24 + 24 + 24 + 26 + 32 + 33 + 33 + 34. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 4^3 = 23 + 23 + 23 + 23 + 24 + 26 + 26 + 32 + 33 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 = 23 + 23 + 23 + 23 + 25 + 25 + 27 + 32 + 33 + 42. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 3^3 + 3^4 + 4^3 = 23 + 23 + 23 + 24 + 24 + 24 + 25 + 33 + 34 + 43. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 = 23 + 23 + 25 + 25 + 25 + 27 + 32 + 32 + 32 + 32. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^2 + 3^2 + 3^4 + 3^4 = 24 + 24 + 24 + 24 + 24 + 24 + 32 + 32 + 34 + 34.
\end{aligned}$$

$$\begin{aligned}
278 &:= 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 4^2 = 22 + 23 + 25 + 25 + 25 + 25 + 25 + 32 + 34 + 42. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 4^2 = 22 + 24 + 24 + 24 + 26 + 26 + 26 + 32 + 32 + 42. \\
&:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 4^3 = 22 + 24 + 24 + 25 + 25 + 25 + 26 + 32 + 32 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 3^3 + 4^3 = 23 + 23 + 24 + 24 + 24 + 25 + 26 + 33 + 33 + 43. \\
&:= 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 = 23 + 24 + 25 + 25 + 25 + 25 + 32 + 32 + 33 + 34.
\end{aligned}$$

$$\begin{aligned}
279 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^7 + 3^2 + 3^3 + 3^3 + 4^3 = 22 + 22 + 22 + 22 + 23 + 27 + 32 + 33 + 33 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 3^2 + 3^4 + 3^4 + 4^3 = 22 + 22 + 22 + 23 + 23 + 24 + 32 + 34 + 34 + 43.
\end{aligned}$$

$$\begin{aligned}
280 &:= 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 4^2 = 22 + 25 + 25 + 25 + 25 + 25 + 26 + 32 + 33 + 42. \\
&:= 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 = 23 + 23 + 23 + 25 + 25 + 25 + 26 + 26 + 42 + 42. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 4^2 + 4^3 = 23 + 24 + 24 + 24 + 24 + 25 + 25 + 26 + 42 + 43. \\
&:= 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 = 24 + 25 + 25 + 25 + 25 + 26 + 32 + 32 + 33 + 33.
\end{aligned}$$

$$\begin{aligned}
281 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 3^4 + 4^2 + 4^3 = 22 + 22 + 22 + 22 + 23 + 25 + 26 + 34 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^7 + 3^2 + 4^2 + 4^3 = 22 + 22 + 22 + 22 + 24 + 25 + 27 + 32 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 3^2 + 3^3 + 3^4 + 4^3 = 22 + 22 + 22 + 23 + 24 + 26 + 32 + 33 + 34 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 4^3 = 22 + 22 + 22 + 24 + 24 + 27 + 32 + 32 + 33 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 3^4 + 4^3 + 4^3 = 22 + 22 + 23 + 23 + 23 + 23 + 25 + 34 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 3^4 + 4^2 + 4^2 = 22 + 22 + 23 + 23 + 23 + 23 + 27 + 34 + 42 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 3^2 + 3^3 + 3^3 + 3^4 + 3^4 = 22 + 22 + 23 + 23 + 25 + 32 + 33 + 33 + 34 + 34. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 = 22 + 23 + 23 + 23 + 26 + 32 + 32 + 32 + 34 + 34. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 = 22 + 23 + 23 + 24 + 27 + 32 + 32 + 32 + 32 + 34.
\end{aligned}$$

$$\begin{aligned}
283 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 2^6 + 3^3 + 4^2 + 4^3 = 22 + 22 + 22 + 22 + 25 + 26 + 26 + 33 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 4^3 = 22 + 22 + 22 + 24 + 26 + 26 + 32 + 33 + 33 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 2^7 + 3^2 + 3^3 + 3^3 + 4^2 = 22 + 22 + 22 + 25 + 25 + 27 + 32 + 33 + 33 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 3^3 + 4^3 + 4^3 = 22 + 22 + 23 + 23 + 23 + 25 + 26 + 33 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^6 + 2^7 + 3^3 + 4^2 + 4^2 = 22 + 22 + 23 + 23 + 23 + 26 + 27 + 33 + 42 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 3^2 + 3^4 + 3^4 + 4^2 = 22 + 22 + 23 + 24 + 25 + 25 + 32 + 34 + 34 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 = 22 + 22 + 23 + 25 + 26 + 27 + 32 + 32 + 32 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 = 22 + 22 + 23 + 25 + 26 + 32 + 33 + 33 + 33 + 34. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 4^3 = 22 + 22 + 24 + 24 + 24 + 26 + 32 + 32 + 34 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 = 22 + 22 + 24 + 25 + 27 + 32 + 32 + 33 + 33 + 33. \\
&:= 2^2 + 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 = 22 + 23 + 23 + 26 + 26 + 32 + 32 + 32 + 33 + 34. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 = 22 + 23 + 24 + 24 + 25 + 32 + 32 + 33 + 34 + 34. \\
&:= 2^2 + 2^3 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 = 22 + 23 + 24 + 26 + 27 + 32 + 32 + 32 + 32 + 33. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 3^3 + 4^2 + 4^3 = 23 + 23 + 23 + 23 + 23 + 23 + 27 + 33 + 42 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 4^3 = 23 + 23 + 23 + 23 + 25 + 27 + 32 + 32 + 32 + 43.
\end{aligned}$$

$$\begin{aligned}
285 &:= 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 3^4 + 4^2 + 4^2 = 22 + 22 + 22 + 25 + 25 + 25 + 26 + 34 + 42 + 42. \\
&:= 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 3^4 + 4^2 = 22 + 22 + 24 + 25 + 25 + 26 + 32 + 33 + 34 + 42. \\
&:= 2^2 + 2^2 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 = 22 + 22 + 25 + 26 + 26 + 32 + 33 + 33 + 33 + 33. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^4 + 4^2 + 4^2 = 22 + 23 + 23 + 23 + 24 + 26 + 26 + 34 + 42 + 42. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 4^3 = 22 + 23 + 23 + 23 + 25 + 25 + 25 + 34 + 42 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 4^3 + 4^3 = 22 + 23 + 23 + 24 + 24 + 25 + 26 + 32 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 2^7 + 3^2 + 4^2 + 4^2 = 22 + 23 + 23 + 24 + 24 + 26 + 27 + 32 + 42 + 42. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^7 + 3^3 + 3^3 + 3^3 + 4^2 = 22 + 23 + 24 + 24 + 24 + 27 + 33 + 33 + 33 + 42. \\
&:= 2^2 + 2^3 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 = 22 + 23 + 26 + 26 + 26 + 32 + 32 + 32 + 33 + 33. \\
&:= 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 = 22 + 24 + 24 + 25 + 26 + 32 + 32 + 33 + 33 + 34. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 3^2 + 3^3 + 3^4 + 4^3 = 23 + 23 + 23 + 24 + 25 + 25 + 32 + 33 + 34 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 3^3 + 3^4 + 3^4 + 4^2 = 23 + 23 + 24 + 24 + 24 + 24 + 33 + 34 + 34 + 42. \\
&:= 2^3 + 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 = 23 + 24 + 24 + 26 + 26 + 32 + 32 + 32 + 32 + 34. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 = 24 + 24 + 24 + 24 + 25 + 32 + 32 + 32 + 34 + 34. \\
&:= 2^4 + 2^4 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 = 24 + 24 + 24 + 26 + 27 + 32 + 32 + 32 + 32 + 32.
\end{aligned}$$

$$286 := 2^2 + 2^2 + 2^2 + 2^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 3^4 = 22 + 22 + 22 + 22 + 32 + 32 + 32 + 34 + 34 + 34.$$

$$\begin{aligned}
287 &:= 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 2^6 + 3^3 + 4^2 + 4^2 = 22 + 23 + 23 + 24 + 26 + 26 + 26 + 33 + 42 + 42. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 4^3 = 22 + 23 + 23 + 25 + 25 + 25 + 26 + 33 + 42 + 43. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 3^3 + 4^3 + 4^3 = 22 + 24 + 24 + 24 + 24 + 25 + 25 + 33 + 43 + 43. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 = 22 + 24 + 24 + 24 + 24 + 25 + 27 + 33 + 42 + 42. \\
&:= 2^2 + 2^4 + 2^5 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 4^2 = 22 + 24 + 25 + 26 + 26 + 26 + 32 + 32 + 32 + 42. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 4^3 = 22 + 25 + 25 + 25 + 25 + 26 + 32 + 32 + 32 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 4^3 = 23 + 23 + 24 + 25 + 25 + 26 + 32 + 33 + 33 + 43. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^3 + 3^3 + 3^4 + 4^2 = 23 + 24 + 24 + 24 + 24 + 26 + 33 + 33 + 34 + 42. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 4^2 = 24 + 24 + 24 + 24 + 24 + 27 + 32 + 33 + 33 + 42. \\
&:= 2^4 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 = 24 + 24 + 26 + 26 + 26 + 32 + 32 + 32 + 32 + 33.
\end{aligned}$$

$$\begin{aligned}
288 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 3^3 + 3^4 + 4^3 + 4^3 = 22 + 22 + 22 + 22 + 22 + 25 + 33 + 34 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^7 + 3^3 + 3^4 + 4^2 + 4^2 = 22 + 22 + 22 + 22 + 22 + 27 + 33 + 34 + 42 + 42.
\end{aligned}$$

$$\begin{aligned}
289 &:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 4^2 = 23 + 23 + 25 + 25 + 25 + 25 + 25 + 34 + 42 + 42. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 4^2 + 4^2 = 23 + 24 + 24 + 24 + 26 + 26 + 26 + 32 + 42 + 42. \\
&:= 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 4^2 + 4^3 = 23 + 24 + 24 + 25 + 25 + 25 + 26 + 32 + 42 + 43. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^4 + 4^2 + 4^2 = 24 + 24 + 24 + 24 + 24 + 25 + 26 + 34 + 42 + 42. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 4^2 = 24 + 24 + 24 + 24 + 26 + 26 + 33 + 33 + 33 + 42. \\
&:= 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 3^3 + 4^3 = 24 + 24 + 24 + 25 + 25 + 25 + 33 + 33 + 33 + 43.
\end{aligned}$$

$$\begin{aligned}
290 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 22 + 22 + 22 + 24 + 26 + 34 + 34 + 42 + 42. \\
&:= 2^2 + 2^2 + 2^2 + 2^2 + 2^6 + 2^6 + 3^2 + 3^2 + 4^3 + 4^3 = 22 + 22 + 22 + 22 + 26 + 26 + 32 + 32 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^7 + 3^3 + 3^3 + 4^2 + 4^3 = 22 + 22 + 22 + 23 + 23 + 27 + 33 + 33 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 4^3 = 22 + 22 + 22 + 25 + 27 + 32 + 32 + 32 + 33 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 3^4 + 3^4 + 4^2 + 4^3 = 22 + 22 + 23 + 23 + 23 + 24 + 34 + 34 + 42 + 43.
\end{aligned}$$

$$291 := 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 4^2 = 23 + 25 + 25 + 25 + 25 + 25 + 26 + 33 + 42 + 42.$$

$$\begin{aligned}
292 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 23 + 24 + 25 + 25 + 43 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^7 + 4^2 + 4^2 + 4^3 = 22 + 22 + 22 + 23 + 24 + 25 + 27 + 42 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 3^3 + 3^4 + 4^2 + 4^3 = 22 + 22 + 23 + 23 + 24 + 26 + 33 + 34 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 + 4^2 + 4^3 = 22 + 22 + 23 + 24 + 24 + 27 + 32 + 33 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 + 4^3 = 22 + 22 + 24 + 25 + 26 + 32 + 32 + 32 + 34 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 = 22 + 23 + 23 + 23 + 25 + 33 + 33 + 34 + 34 + 42. \\
&:= 2^2 + 2^3 + 2^3 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 = 22 + 23 + 23 + 27 + 32 + 33 + 33 + 33 + 33 + 33. \\
&:= 2^2 + 2^3 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 = 22 + 23 + 25 + 25 + 32 + 32 + 32 + 33 + 34 + 34. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 3^3 + 3^4 + 4^3 + 4^3 = 23 + 23 + 23 + 23 + 23 + 24 + 33 + 34 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 = 23 + 23 + 23 + 23 + 26 + 32 + 32 + 34 + 34 + 42. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 = 23 + 23 + 23 + 24 + 27 + 32 + 32 + 32 + 34 + 42. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 = 23 + 23 + 23 + 24 + 32 + 33 + 33 + 33 + 34 + 34.
\end{aligned}$$

$$\begin{aligned}
294 &:= 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 + 4^3 = 22 + 22 + 23 + 24 + 26 + 26 + 33 + 33 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 4^3 + 4^3 = 22 + 22 + 23 + 25 + 25 + 25 + 33 + 33 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 2^7 + 3^3 + 3^3 + 4^2 + 4^2 = 22 + 22 + 23 + 25 + 25 + 27 + 33 + 33 + 42 + 42. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 23 + 23 + 24 + 25 + 25 + 34 + 34 + 42 + 42. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 4^3 + 4^3 = 22 + 23 + 23 + 25 + 25 + 26 + 32 + 32 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 = 22 + 23 + 23 + 25 + 26 + 27 + 32 + 32 + 42 + 42. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 = 22 + 23 + 23 + 25 + 26 + 33 + 33 + 33 + 34 + 42. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^4 + 4^2 + 4^3 = 22 + 23 + 24 + 24 + 24 + 26 + 32 + 34 + 42 + 43. \\
&:= 2^2 + 2^3 + 2^4 + 2^5 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 = 22 + 23 + 24 + 25 + 27 + 32 + 33 + 33 + 33 + 42. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 4^2 + 4^3 = 22 + 24 + 24 + 24 + 24 + 27 + 32 + 32 + 42 + 43. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 24 + 24 + 24 + 24 + 33 + 33 + 33 + 34 + 43. \\
&:= 2^2 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 = 22 + 25 + 25 + 26 + 32 + 32 + 32 + 33 + 33 + 34. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 3^3 + 3^3 + 4^3 + 4^3 = 23 + 23 + 23 + 23 + 24 + 26 + 33 + 33 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 = 23 + 23 + 23 + 26 + 26 + 32 + 32 + 33 + 34 + 42. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 = 23 + 23 + 24 + 24 + 25 + 32 + 33 + 34 + 34 + 42. \\
&:= 2^3 + 2^3 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 4^2 = 23 + 23 + 24 + 26 + 27 + 32 + 32 + 32 + 33 + 42. \\
&:= 2^3 + 2^3 + 2^4 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 = 23 + 23 + 24 + 26 + 32 + 33 + 33 + 33 + 33 + 34. \\
&:= 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 = 23 + 24 + 24 + 27 + 32 + 32 + 33 + 33 + 33 + 33. \\
&:= 2^3 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 = 23 + 25 + 26 + 26 + 32 + 32 + 32 + 32 + 32 + 34. \\
&:= 2^4 + 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 = 24 + 24 + 25 + 25 + 32 + 32 + 32 + 32 + 34 + 34. \\
&:= 2^4 + 2^5 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 = 24 + 25 + 26 + 27 + 32 + 32 + 32 + 32 + 32 + 32.
\end{aligned}$$

$$\begin{aligned}
296 &:= 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 4^3 = 22 + 22 + 24 + 24 + 25 + 26 + 26 + 42 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 4^2 + 4^3 + 4^3 = 22 + 22 + 24 + 25 + 25 + 25 + 25 + 42 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^7 + 4^2 + 4^2 + 4^2 = 22 + 22 + 24 + 25 + 25 + 25 + 27 + 42 + 42 + 42. \\
&:= 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 4^2 = 22 + 23 + 24 + 25 + 25 + 26 + 33 + 34 + 42 + 42. \\
&:= 2^2 + 2^3 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 = 22 + 23 + 25 + 26 + 26 + 33 + 33 + 33 + 33 + 42. \\
&:= 2^2 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 4^2 + 4^3 = 22 + 24 + 24 + 24 + 26 + 26 + 32 + 33 + 42 + 43. \\
&:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 4^3 + 4^3 = 22 + 24 + 24 + 25 + 25 + 25 + 32 + 33 + 43 + 43. \\
&:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 = 22 + 24 + 24 + 25 + 25 + 27 + 32 + 33 + 42 + 42. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 4^2 + 4^3 + 4^3 = 23 + 23 + 23 + 24 + 24 + 25 + 26 + 42 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 2^7 + 4^2 + 4^2 + 4^2 = 23 + 23 + 23 + 24 + 24 + 26 + 27 + 42 + 42 + 42. \\
&:= 2^3 + 2^3 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 = 23 + 23 + 26 + 26 + 26 + 32 + 32 + 33 + 33 + 42. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 4^3 + 4^3 + 4^3 = 23 + 24 + 24 + 24 + 24 + 24 + 24 + 43 + 43 + 43. \\
&:= 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 = 23 + 24 + 24 + 25 + 26 + 32 + 33 + 33 + 34 + 42. \\
&:= 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 = 23 + 24 + 26 + 26 + 32 + 33 + 33 + 33 + 33 + 33. \\
&:= 2^4 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 = 24 + 24 + 24 + 25 + 27 + 32 + 32 + 33 + 33 + 42. \\
&:= 2^4 + 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 = 24 + 24 + 24 + 25 + 33 + 33 + 33 + 33 + 33 + 34. \\
&:= 2^5 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 = 25 + 26 + 26 + 26 + 32 + 32 + 32 + 32 + 32 + 33.
\end{aligned}$$

$$297 := 2^2 + 2^2 + 2^2 + 2^3 + 3^2 + 3^2 + 3^4 + 3^4 + 3^4 + 4^2 = 22 + 22 + 22 + 23 + 32 + 32 + 34 + 34 + 34 + 42.$$

$$\begin{aligned}
298 &:= 2^2 + 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 + 4^2 = 22 + 24 + 25 + 25 + 26 + 26 + 33 + 33 + 42 + 42. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 4^2 + 4^3 = 22 + 25 + 25 + 25 + 25 + 25 + 33 + 33 + 42 + 43. \\
&:= 2^3 + 2^4 + 2^5 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 4^2 + 4^2 = 23 + 24 + 25 + 26 + 26 + 26 + 32 + 32 + 42 + 42. \\
&:= 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 4^2 + 4^3 = 23 + 25 + 25 + 25 + 25 + 26 + 32 + 32 + 42 + 43. \\
&:= 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^4 + 4^2 + 4^2 = 24 + 24 + 24 + 25 + 25 + 26 + 32 + 34 + 42 + 42. \\
&:= 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 = 24 + 24 + 25 + 26 + 26 + 32 + 33 + 33 + 33 + 42. \\
&:= 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 = 24 + 25 + 25 + 25 + 25 + 32 + 33 + 33 + 33 + 43.
\end{aligned}$$

$$\begin{aligned}
299 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 = 22 + 22 + 22 + 23 + 24 + 33 + 33 + 34 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 = 22 + 22 + 22 + 26 + 32 + 32 + 33 + 34 + 34 + 42. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^3 = 22 + 23 + 23 + 23 + 32 + 32 + 33 + 34 + 34 + 43.
\end{aligned}$$

$$\begin{aligned}
301 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 = 22 + 22 + 22 + 23 + 26 + 26 + 32 + 42 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 22 + 22 + 24 + 24 + 25 + 34 + 42 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^7 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 22 + 22 + 24 + 24 + 27 + 34 + 42 + 42 + 42. \\
&:= 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 22 + 22 + 22 + 24 + 26 + 33 + 33 + 33 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 = 22 + 22 + 23 + 25 + 27 + 32 + 32 + 33 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^5 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 22 + 23 + 25 + 33 + 33 + 33 + 33 + 34 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 4^3 + 4^3 = 22 + 22 + 24 + 24 + 24 + 32 + 33 + 34 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 4^3 + 4^3 + 4^3 = 22 + 23 + 23 + 23 + 23 + 26 + 32 + 43 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 23 + 23 + 26 + 32 + 32 + 33 + 33 + 34 + 43. \\
&:= 2^2 + 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 = 22 + 23 + 24 + 27 + 32 + 32 + 32 + 33 + 33 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^3 = 23 + 23 + 24 + 24 + 32 + 32 + 32 + 34 + 34 + 43.
\end{aligned}$$

$$\begin{aligned}
303 &:= 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 22 + 22 + 24 + 25 + 25 + 33 + 33 + 34 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 = 22 + 22 + 25 + 26 + 33 + 33 + 33 + 33 + 33 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 23 + 24 + 24 + 25 + 33 + 43 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^7 + 3^3 + 4^2 + 4^2 + 4^3 = 22 + 23 + 23 + 24 + 24 + 27 + 33 + 42 + 42 + 43. \\
&:= 2^2 + 2^3 + 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 = 22 + 23 + 24 + 25 + 26 + 32 + 32 + 34 + 42 + 43. \\
&:= 2^2 + 2^3 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 = 22 + 23 + 26 + 26 + 32 + 32 + 33 + 33 + 33 + 43. \\
&:= 2^2 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 4^3 = 22 + 24 + 24 + 25 + 27 + 32 + 32 + 32 + 42 + 43. \\
&:= 2^2 + 2^4 + 2^4 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 24 + 24 + 25 + 32 + 33 + 33 + 33 + 34 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^7 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 = 23 + 23 + 23 + 27 + 33 + 33 + 33 + 33 + 33 + 42. \\
&:= 2^3 + 2^3 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 = 23 + 23 + 25 + 25 + 32 + 32 + 33 + 34 + 34 + 42. \\
&:= 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 = 23 + 24 + 24 + 26 + 32 + 32 + 32 + 33 + 34 + 43. \\
&:= 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 = 23 + 25 + 27 + 32 + 32 + 32 + 33 + 33 + 33 + 33. \\
&:= 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 4^3 = 24 + 24 + 24 + 27 + 32 + 32 + 32 + 32 + 33 + 43. \\
&:= 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 = 25 + 25 + 25 + 32 + 32 + 32 + 32 + 32 + 34 + 34.
\end{aligned}$$

$$\begin{aligned}
305 &:= 2^2 + 2^2 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 + 4^2 + 4^3 = 22 + 22 + 25 + 25 + 26 + 26 + 32 + 42 + 42 + 43. \\
&:= 2^2 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 = 22 + 24 + 25 + 26 + 26 + 32 + 32 + 33 + 42 + 43. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 4^3 + 4^3 = 22 + 25 + 25 + 25 + 25 + 32 + 32 + 33 + 43 + 43. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 + 4^2 = 22 + 25 + 25 + 25 + 27 + 32 + 32 + 33 + 42 + 42. \\
&:= 2^2 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 = 22 + 25 + 25 + 25 + 33 + 33 + 33 + 33 + 34 + 42. \\
&:= 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 = 23 + 23 + 23 + 25 + 25 + 26 + 32 + 42 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 = 23 + 23 + 23 + 25 + 26 + 27 + 32 + 42 + 42 + 42. \\
&:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 3^4 + 4^2 + 4^2 + 4^3 = 23 + 23 + 24 + 24 + 24 + 26 + 34 + 42 + 42 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 23 + 23 + 24 + 25 + 25 + 33 + 33 + 33 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 2^7 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 = 23 + 23 + 24 + 25 + 27 + 33 + 33 + 33 + 42 + 42. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 4^3 + 4^3 + 4^3 = 23 + 24 + 24 + 24 + 24 + 25 + 32 + 43 + 43 + 43. \\
&:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 4^2 + 4^2 + 4^3 = 23 + 24 + 24 + 24 + 24 + 27 + 32 + 42 + 42 + 43. \\
&:= 2^3 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 = 23 + 25 + 25 + 26 + 32 + 32 + 33 + 33 + 34 + 42. \\
&:= 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 = 24 + 24 + 26 + 26 + 32 + 32 + 32 + 33 + 33 + 43. \\
&:= 2^4 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 = 24 + 25 + 25 + 27 + 32 + 32 + 32 + 33 + 33 + 42. \\
&:= 2^4 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 = 24 + 25 + 25 + 32 + 33 + 33 + 33 + 33 + 33 + 34.
\end{aligned}$$

$$306 := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 3^2 + 3^4 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 22 + 23 + 32 + 34 + 43 + 43 + 43.$$

$$\begin{aligned}
307 &:= 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 3^3 + 4^2 + 4^2 + 4^3 = 23 + 24 + 24 + 24 + 26 + 26 + 33 + 42 + 42 + 43. \\
&:= 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^3 + 4^2 + 4^3 + 4^3 = 23 + 24 + 24 + 25 + 25 + 25 + 33 + 42 + 43 + 43. \\
&:= 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 = 23 + 24 + 24 + 25 + 25 + 27 + 33 + 42 + 42 + 42. \\
&:= 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 = 24 + 25 + 25 + 25 + 26 + 32 + 32 + 34 + 42 + 42. \\
&:= 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 = 25 + 25 + 26 + 26 + 32 + 32 + 33 + 33 + 33 + 42.
\end{aligned}$$

$$\begin{aligned}
308 &:= 2^2 + 2^2 + 2^2 + 2^2 + 2^6 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 22 + 26 + 32 + 33 + 43 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^3 + 2^3 + 3^2 + 3^4 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 22 + 23 + 23 + 32 + 34 + 34 + 34 + 42 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 = 22 + 22 + 23 + 27 + 32 + 32 + 32 + 32 + 43 + 43. \\
&:= 2^2 + 2^4 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 3^4 = 22 + 24 + 32 + 32 + 32 + 32 + 32 + 34 + 34 + 34.
\end{aligned}$$

$$\begin{aligned}
310 &:= 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 3^2 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 22 + 22 + 25 + 25 + 32 + 34 + 42 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 2^5 + 2^7 + 3^2 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 22 + 22 + 25 + 27 + 32 + 34 + 42 + 42 + 42. \\
&:= 2^2 + 2^2 + 2^3 + 2^6 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 22 + 23 + 26 + 32 + 33 + 34 + 34 + 42 + 42. \\
&:= 2^2 + 2^2 + 2^4 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 + 4^3 = 22 + 22 + 24 + 25 + 32 + 32 + 33 + 34 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 = 22 + 22 + 24 + 27 + 32 + 32 + 33 + 34 + 42 + 42. \\
&:= 2^2 + 2^2 + 2^4 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 = 22 + 22 + 24 + 33 + 33 + 33 + 33 + 34 + 34 + 42. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^3 = 23 + 23 + 23 + 23 + 32 + 33 + 34 + 34 + 42 + 43. \\
&:= 2^3 + 2^3 + 2^5 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^3 = 23 + 23 + 25 + 32 + 32 + 32 + 32 + 34 + 34 + 43.
\end{aligned}$$

$$\begin{aligned}
312 &:= 2^2 + 2^2 + 2^3 + 2^3 + 2^6 + 2^6 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 22 + 23 + 23 + 26 + 26 + 42 + 42 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 = 22 + 22 + 26 + 26 + 32 + 33 + 33 + 34 + 42 + 42. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 23 + 25 + 25 + 32 + 33 + 43 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 = 22 + 23 + 23 + 25 + 27 + 32 + 33 + 42 + 42 + 43. \\
&:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 23 + 24 + 24 + 24 + 33 + 34 + 42 + 43 + 43. \\
&:= 2^2 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 24 + 24 + 26 + 32 + 32 + 34 + 34 + 42 + 42. \\
&:= 2^2 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 = 22 + 24 + 26 + 26 + 32 + 32 + 32 + 32 + 43 + 43. \\
&:= 2^2 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 4^2 + 4^3 = 22 + 25 + 25 + 27 + 32 + 32 + 32 + 32 + 42 + 43. \\
&:= 2^2 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 25 + 25 + 32 + 32 + 33 + 33 + 33 + 34 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 23 + 23 + 23 + 23 + 26 + 42 + 43 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 23 + 23 + 23 + 26 + 32 + 33 + 33 + 34 + 42 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 + 4^3 = 23 + 23 + 24 + 27 + 32 + 32 + 33 + 33 + 42 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 = 23 + 23 + 24 + 33 + 33 + 33 + 33 + 33 + 34 + 43. \\
&:= 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 = 23 + 25 + 26 + 32 + 32 + 32 + 32 + 33 + 34 + 43. \\
&:= 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 4^3 = 24 + 25 + 27 + 32 + 32 + 32 + 32 + 32 + 33 + 43.
\end{aligned}$$

$$\begin{aligned}
314 &:= 2^2 + 2^4 + 2^4 + 2^4 + 2^6 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 = 22 + 24 + 24 + 24 + 26 + 33 + 33 + 42 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 = 23 + 23 + 24 + 25 + 26 + 32 + 34 + 42 + 42 + 43. \\
&:= 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 = 23 + 23 + 26 + 26 + 32 + 33 + 33 + 33 + 42 + 43. \\
&:= 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 = 23 + 24 + 24 + 25 + 25 + 32 + 32 + 43 + 43 + 43. \\
&:= 2^3 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 = 23 + 24 + 24 + 25 + 27 + 32 + 32 + 42 + 42 + 43. \\
&:= 2^3 + 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 23 + 24 + 24 + 25 + 33 + 33 + 33 + 34 + 42 + 43. \\
&:= 2^3 + 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 = 23 + 24 + 26 + 33 + 33 + 33 + 33 + 33 + 43. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^2 + 3^4 + 4^2 + 4^3 + 4^3 = 24 + 24 + 24 + 24 + 24 + 32 + 34 + 42 + 43 + 43. \\
&:= 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 = 25 + 26 + 26 + 32 + 32 + 32 + 32 + 33 + 33 + 43.
\end{aligned}$$

$$\begin{aligned}
316 &:= 2^2 + 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 23 + 25 + 25 + 26 + 26 + 42 + 42 + 42 + 43. \\
&:= 2^3 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 = 23 + 24 + 25 + 26 + 26 + 32 + 33 + 42 + 42 + 43. \\
&:= 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 = 23 + 25 + 25 + 25 + 25 + 32 + 33 + 42 + 43 + 43. \\
&:= 2^3 + 2^5 + 2^5 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 4^2 = 23 + 25 + 25 + 25 + 27 + 32 + 33 + 42 + 42 + 42. \\
&:= 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 = 24 + 24 + 24 + 25 + 25 + 33 + 34 + 42 + 42 + 43. \\
&:= 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 = 24 + 24 + 25 + 26 + 33 + 33 + 33 + 33 + 42 + 43.
\end{aligned}$$

$$\begin{aligned}
317 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 3^4 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 23 + 23 + 34 + 42 + 43 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^2 + 3^2 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^3 = 22 + 22 + 22 + 32 + 33 + 33 + 34 + 34 + 42 + 43.
\end{aligned}$$

$$\begin{aligned}
319 &:= 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 23 + 26 + 33 + 42 + 43 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 3^3 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 23 + 23 + 23 + 33 + 43 + 43 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 2^3 + 3^4 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 23 + 23 + 23 + 34 + 34 + 34 + 42 + 42 + 42. \\
&:= 2^2 + 2^3 + 2^3 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 = 22 + 23 + 23 + 27 + 32 + 32 + 32 + 42 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^3 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 = 22 + 23 + 23 + 32 + 33 + 33 + 33 + 34 + 43 + 43. \\
&:= 2^2 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 = 22 + 27 + 32 + 32 + 32 + 32 + 33 + 33 + 34 + 42. \\
&:= 2^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 = 22 + 32 + 32 + 33 + 33 + 33 + 33 + 33 + 34 + 34. \\
&:= 2^3 + 2^4 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 3^4 + 4^2 = 23 + 24 + 32 + 32 + 32 + 32 + 34 + 34 + 34 + 42.
\end{aligned}$$

$$320 := 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 4^2 + 4^2 = 25 + 25 + 25 + 25 + 26 + 26 + 42 + 42 + 42 + 42.$$

$$321 := 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 22 + 23 + 25 + 25 + 34 + 42 + 42 + 43 + 43.$$

$$:= 2^2 + 2^2 + 2^3 + 2^5 + 2^7 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 = 22 + 22 + 23 + 25 + 27 + 34 + 42 + 42 + 42 + 42.$$

$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 22 + 24 + 24 + 26 + 32 + 42 + 43 + 43 + 43.$$

$$:= 2^2 + 2^3 + 2^3 + 2^6 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 23 + 23 + 26 + 33 + 34 + 34 + 42 + 42 + 42.$$

$$:= 2^2 + 2^3 + 2^4 + 2^5 + 3^2 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 23 + 24 + 25 + 32 + 33 + 34 + 42 + 43 + 43.$$

$$:= 2^2 + 2^3 + 2^4 + 2^7 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 23 + 24 + 27 + 32 + 33 + 34 + 42 + 42 + 42.$$

$$:= 2^2 + 2^3 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 22 + 23 + 26 + 32 + 33 + 33 + 33 + 33 + 43 + 43.$$

$$:= 2^2 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 25 + 26 + 32 + 32 + 32 + 34 + 34 + 42 + 42.$$

$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 = 23 + 23 + 23 + 24 + 24 + 32 + 43 + 43 + 43 + 43.$$

$$:= 2^3 + 2^4 + 2^4 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 = 23 + 24 + 24 + 32 + 32 + 33 + 33 + 34 + 43 + 43.$$

$$:= 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 = 24 + 26 + 32 + 32 + 32 + 32 + 33 + 34 + 34 + 42.$$

$$323 := 2^2 + 2^2 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 22 + 25 + 25 + 26 + 33 + 42 + 42 + 43 + 43.$$

$$:= 2^2 + 2^2 + 2^5 + 2^6 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 = 22 + 22 + 25 + 26 + 27 + 33 + 42 + 42 + 42 + 42.$$

$$:= 2^2 + 2^3 + 2^6 + 2^6 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 23 + 26 + 26 + 33 + 33 + 34 + 42 + 42 + 42.$$

$$:= 2^2 + 2^4 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 = 22 + 24 + 25 + 26 + 32 + 33 + 33 + 42 + 43 + 43.$$

$$:= 2^2 + 2^4 + 2^6 + 2^7 + 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 = 22 + 24 + 26 + 27 + 32 + 33 + 33 + 42 + 42 + 42.$$

$$:= 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 23 + 23 + 25 + 25 + 33 + 42 + 43 + 43 + 43.$$

$$:= 2^3 + 2^3 + 2^3 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 = 23 + 23 + 23 + 25 + 27 + 33 + 42 + 42 + 42 + 43.$$

$$:= 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 23 + 24 + 24 + 26 + 32 + 34 + 34 + 42 + 42 + 42.$$

$$:= 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 = 23 + 24 + 26 + 26 + 32 + 32 + 32 + 42 + 43 + 43.$$

$$:= 2^3 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 = 23 + 25 + 25 + 25 + 32 + 32 + 32 + 43 + 43 + 43.$$

$$:= 2^3 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 = 23 + 25 + 25 + 27 + 32 + 32 + 32 + 42 + 42 + 43.$$

$$:= 2^3 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 23 + 25 + 25 + 32 + 33 + 33 + 33 + 34 + 42 + 43.$$

$$:= 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 + 4^3 = 24 + 24 + 24 + 25 + 32 + 32 + 34 + 42 + 43 + 43.$$

$$:= 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 4^2 = 24 + 24 + 24 + 27 + 32 + 32 + 34 + 42 + 42 + 42.$$

$$:= 2^4 + 2^4 + 2^4 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 = 24 + 24 + 24 + 33 + 33 + 33 + 34 + 34 + 42 + 42.$$

$$:= 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 24 + 24 + 26 + 32 + 32 + 33 + 33 + 33 + 43 + 43.$$

$$325 := 2^2 + 2^4 + 2^5 + 2^6 + 2^6 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 = 22 + 24 + 25 + 26 + 26 + 34 + 42 + 42 + 42 + 42.$$

$$:= 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 25 + 25 + 25 + 25 + 34 + 42 + 42 + 42 + 43.$$

$$:= 2^2 + 2^6 + 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 = 22 + 26 + 26 + 26 + 33 + 33 + 33 + 42 + 42 + 42.$$

$$:= 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 = 24 + 24 + 26 + 26 + 32 + 33 + 34 + 42 + 42 + 42.$$

$$:= 2^4 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 = 24 + 25 + 25 + 25 + 32 + 33 + 34 + 42 + 42 + 43.$$

$$:= 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 = 25 + 25 + 26 + 32 + 33 + 33 + 33 + 33 + 42 + 43.$$

$$326 := 2^2 + 2^2 + 2^2 + 2^2 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 22 + 33 + 33 + 43 + 43 + 43 + 43.$$

$$328 := 2^2 + 2^2 + 2^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^3 = 22 + 22 + 23 + 33 + 33 + 34 + 34 + 42 + 42 + 43.$$

$$:= 2^2 + 2^3 + 2^4 + 3^2 + 3^2 + 3^2 + 3^4 + 4^3 + 4^3 + 4^3 = 22 + 23 + 24 + 32 + 32 + 32 + 34 + 43 + 43 + 43.$$

$$\begin{aligned}
330 &:= 2^2 + 2^2 + 2^4 + 2^5 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 22 + 24 + 25 + 34 + 34 + 42 + 42 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^5 + 2^6 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 22 + 25 + 26 + 32 + 32 + 42 + 43 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^6 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 22 + 26 + 27 + 32 + 32 + 42 + 42 + 42 + 43. \\
&:= 2^2 + 2^2 + 2^6 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 = 22 + 22 + 26 + 33 + 33 + 33 + 34 + 42 + 42 + 43. \\
&:= 2^2 + 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^3 = 22 + 24 + 24 + 32 + 33 + 34 + 34 + 42 + 42 + 43. \\
&:= 2^2 + 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 24 + 26 + 32 + 32 + 32 + 33 + 43 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^5 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 = 23 + 23 + 23 + 25 + 32 + 32 + 43 + 43 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 = 23 + 23 + 23 + 27 + 32 + 32 + 42 + 42 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 = 23 + 23 + 23 + 33 + 33 + 33 + 34 + 42 + 43 + 43. \\
&:= 2^3 + 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 = 23 + 25 + 32 + 32 + 32 + 33 + 33 + 34 + 43 + 43. \\
&:= 2^3 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 = 23 + 27 + 32 + 32 + 32 + 33 + 33 + 34 + 42 + 42. \\
&:= 2^3 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 = 23 + 32 + 33 + 33 + 33 + 33 + 33 + 34 + 34 + 42.
\end{aligned}$$

$$\begin{aligned}
332 &:= 2^2 + 2^3 + 2^4 + 2^4 + 2^6 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 23 + 24 + 24 + 26 + 42 + 42 + 43 + 43 + 43. \\
&:= 2^2 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 25 + 25 + 33 + 33 + 34 + 34 + 42 + 42 + 42. \\
&:= 2^3 + 2^3 + 2^4 + 2^5 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 = 23 + 23 + 24 + 25 + 33 + 34 + 42 + 42 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 2^7 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 = 23 + 23 + 24 + 27 + 33 + 34 + 42 + 42 + 42 + 42. \\
&:= 2^3 + 2^3 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 = 23 + 23 + 26 + 33 + 33 + 33 + 33 + 42 + 43 + 43. \\
&:= 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 23 + 25 + 26 + 32 + 32 + 34 + 34 + 42 + 42 + 42. \\
&:= 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 + 4^3 = 24 + 25 + 25 + 32 + 32 + 32 + 34 + 42 + 43 + 43. \\
&:= 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 4^2 = 24 + 25 + 27 + 32 + 32 + 32 + 34 + 42 + 42 + 42. \\
&:= 2^4 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 = 24 + 25 + 32 + 33 + 33 + 33 + 34 + 34 + 42 + 42. \\
&:= 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 25 + 26 + 32 + 32 + 32 + 33 + 33 + 33 + 43 + 43. \\
&:= 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 = 26 + 27 + 32 + 32 + 32 + 33 + 33 + 33 + 42 + 42. \\
&:= 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 = 26 + 32 + 33 + 33 + 33 + 33 + 33 + 33 + 34 + 42.
\end{aligned}$$

$$333 := 2^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^5 + 4^2 + 4^2 = 22 + 32 + 32 + 32 + 32 + 32 + 32 + 35 + 42 + 42.$$

$$\begin{aligned}
334 &:= 2^3 + 2^4 + 2^5 + 2^6 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 = 23 + 24 + 25 + 26 + 33 + 33 + 42 + 42 + 43 + 43. \\
&:= 2^3 + 2^4 + 2^6 + 2^7 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 = 23 + 24 + 26 + 27 + 33 + 33 + 42 + 42 + 42 + 42. \\
&:= 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 = 25 + 26 + 26 + 32 + 32 + 33 + 34 + 42 + 42 + 42.
\end{aligned}$$

$$\begin{aligned}
336 &:= 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 24 + 24 + 25 + 25 + 26 + 42 + 42 + 42 + 43 + 43. \\
&:= 2^4 + 2^4 + 2^5 + 2^6 + 2^7 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 24 + 24 + 25 + 26 + 27 + 42 + 42 + 42 + 42 + 42.
\end{aligned}$$

$$\begin{aligned}
339 &:= 2^2 + 2^2 + 2^4 + 2^4 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 22 + 24 + 24 + 33 + 42 + 43 + 43 + 43 + 43. \\
&:= 2^2 + 2^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 33 + 33 + 33 + 33 + 33 + 43 + 43 + 43. \\
&:= 2^2 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^3 = 22 + 25 + 32 + 32 + 33 + 34 + 34 + 42 + 42 + 43. \\
&:= 2^3 + 2^3 + 2^4 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 23 + 24 + 32 + 32 + 34 + 42 + 43 + 43 + 43. \\
&:= 2^4 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^3 = 24 + 32 + 32 + 32 + 33 + 33 + 34 + 34 + 42 + 43.
\end{aligned}$$

$$\begin{aligned}
341 &:= 2^2 + 2^3 + 2^5 + 2^6 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 23 + 25 + 26 + 32 + 42 + 42 + 43 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^6 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 23 + 26 + 27 + 32 + 42 + 42 + 42 + 42 + 43. \\
&:= 2^2 + 2^4 + 2^5 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 24 + 25 + 33 + 33 + 33 + 42 + 43 + 43 + 43. \\
&:= 2^2 + 2^4 + 2^7 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 24 + 27 + 33 + 33 + 33 + 42 + 42 + 42 + 43. \\
&:= 2^3 + 2^4 + 2^4 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 = 23 + 24 + 24 + 33 + 34 + 34 + 42 + 42 + 42 + 43. \\
&:= 2^3 + 2^4 + 2^6 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 24 + 26 + 32 + 32 + 33 + 42 + 43 + 43 + 43. \\
&:= 2^4 + 2^4 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 = 24 + 24 + 32 + 33 + 33 + 33 + 33 + 43 + 43 + 43. \\
&:= 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 = 26 + 26 + 32 + 32 + 32 + 32 + 34 + 42 + 42 + 43. \\
343 &:= 2^4 + 2^4 + 2^6 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 = 24 + 24 + 26 + 33 + 33 + 34 + 42 + 42 + 42 + 43. \\
&:= 2^5 + 2^5 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 = 25 + 25 + 33 + 33 + 33 + 33 + 33 + 42 + 43 + 43. \\
&:= 2^5 + 2^7 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 = 25 + 27 + 33 + 33 + 33 + 33 + 33 + 42 + 42 + 42. \\
344 &:= 2^3 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^5 + 4^2 + 4^2 + 4^2 = 23 + 32 + 32 + 32 + 32 + 32 + 35 + 42 + 42 + 42. \\
345 &:= 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 24 + 26 + 26 + 26 + 32 + 42 + 42 + 42 + 42 + 43. \\
&:= 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 25 + 25 + 25 + 26 + 32 + 42 + 42 + 42 + 43 + 43. \\
&:= 2^5 + 2^5 + 2^6 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 25 + 25 + 26 + 27 + 32 + 42 + 42 + 42 + 42 + 42. \\
346 &:= 2^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 32 + 32 + 32 + 32 + 34 + 34 + 42 + 43 + 43. \\
348 &:= 2^2 + 2^2 + 2^5 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 22 + 25 + 32 + 33 + 42 + 43 + 43 + 43 + 43. \\
&:= 2^2 + 2^2 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 22 + 27 + 32 + 33 + 42 + 42 + 42 + 43 + 43. \\
&:= 2^2 + 2^4 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 24 + 32 + 32 + 33 + 33 + 43 + 43 + 43 + 43. \\
350 &:= 2^2 + 2^4 + 2^6 + 3^2 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 24 + 26 + 32 + 34 + 42 + 42 + 42 + 43 + 43. \\
&:= 2^3 + 2^5 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 = 23 + 25 + 32 + 33 + 34 + 34 + 42 + 42 + 42 + 43. \\
&:= 2^5 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 = 25 + 32 + 32 + 33 + 33 + 33 + 33 + 43 + 43 + 43. \\
&:= 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 = 27 + 32 + 32 + 33 + 33 + 33 + 33 + 42 + 42 + 43. \\
&:= 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 33 + 33 + 33 + 33 + 33 + 33 + 33 + 34 + 42 + 43. \\
352 &:= 2^3 + 2^3 + 2^5 + 2^6 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 23 + 25 + 26 + 42 + 42 + 42 + 43 + 43 + 43. \\
&:= 2^3 + 2^3 + 2^6 + 2^7 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 23 + 23 + 26 + 27 + 42 + 42 + 42 + 42 + 42 + 43. \\
&:= 2^4 + 2^4 + 2^4 + 2^4 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 24 + 24 + 24 + 24 + 42 + 42 + 43 + 43 + 43 + 43. \\
&:= 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 = 25 + 26 + 32 + 33 + 33 + 34 + 42 + 42 + 42 + 43. \\
355 &:= 2^2 + 2^2 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 22 + 32 + 32 + 32 + 43 + 43 + 43 + 43 + 43. \\
357 &:= 2^3 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 = 23 + 32 + 32 + 32 + 34 + 34 + 42 + 42 + 43 + 43. \\
359 &:= 2^2 + 2^3 + 2^5 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 25 + 33 + 42 + 42 + 43 + 43 + 43 + 43. \\
&:= 2^2 + 2^3 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 23 + 27 + 33 + 42 + 42 + 42 + 42 + 43 + 43. \\
&:= 2^2 + 2^5 + 3^4 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 22 + 25 + 34 + 34 + 34 + 42 + 42 + 42 + 42 + 42. \\
&:= 2^3 + 2^4 + 3^2 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 23 + 24 + 32 + 33 + 33 + 42 + 43 + 43 + 43 + 43. \\
&:= 2^4 + 3^2 + 3^3 + 3^4 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 = 24 + 32 + 33 + 34 + 34 + 34 + 42 + 42 + 42 + 42. \\
&:= 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 = 26 + 32 + 32 + 32 + 33 + 34 + 42 + 42 + 43 + 43.
\end{aligned}$$

$$\begin{aligned}
361 &:= 2^3 + 2^4 + 2^6 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 23 + 24 + 26 + 34 + 42 + 42 + 42 + 42 + 43 + 43. \\
&:= 2^4 + 2^4 + 2^5 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 24 + 24 + 25 + 32 + 42 + 42 + 43 + 43 + 43 + 43. \\
&:= 2^4 + 2^4 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 24 + 24 + 27 + 32 + 42 + 42 + 42 + 42 + 43 + 43.
\end{aligned}$$

$$362 := 2^2 + 2^2 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^4 = 22 + 22 + 32 + 32 + 42 + 42 + 42 + 42 + 42 + 44.$$

$$\begin{aligned}
363 &:= 2^4 + 2^6 + 2^6 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 24 + 26 + 26 + 33 + 42 + 42 + 42 + 42 + 43 + 43. \\
&:= 2^5 + 2^5 + 2^5 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 25 + 25 + 25 + 33 + 42 + 42 + 42 + 43 + 43 + 43. \\
&:= 2^5 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 25 + 25 + 27 + 33 + 42 + 42 + 42 + 42 + 42 + 43.
\end{aligned}$$

$$366 := 2^2 + 2^3 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 32 + 32 + 42 + 43 + 43 + 43 + 43 + 43.$$

$$368 := 2^2 + 2^4 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 24 + 33 + 34 + 42 + 42 + 42 + 43 + 43 + 43.$$

$$\begin{aligned}
370 &:= 2^5 + 2^5 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 25 + 25 + 32 + 32 + 42 + 42 + 43 + 43 + 43 + 43. \\
&:= 2^5 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 25 + 27 + 32 + 32 + 42 + 42 + 42 + 42 + 43 + 43. \\
&:= 2^5 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 25 + 33 + 33 + 33 + 34 + 42 + 42 + 42 + 43 + 43. \\
&:= 2^7 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 27 + 27 + 32 + 32 + 42 + 42 + 42 + 42 + 42 + 42. \\
&:= 2^7 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 27 + 33 + 33 + 33 + 34 + 42 + 42 + 42 + 42 + 42.
\end{aligned}$$

$$373 := 2^2 + 2^3 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^4 = 22 + 23 + 32 + 42 + 42 + 42 + 42 + 42 + 42 + 44.$$

$$375 := 2^2 + 2^4 + 3^5 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 22 + 24 + 35 + 42 + 42 + 42 + 42 + 42 + 42 + 42.$$

$$\begin{aligned}
377 &:= 2^3 + 2^3 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 4^3 = 23 + 23 + 32 + 42 + 42 + 43 + 43 + 43 + 43 + 43. \\
&:= 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 32 + 32 + 33 + 33 + 34 + 42 + 42 + 43 + 43 + 43.
\end{aligned}$$

$$379 := 2^6 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 26 + 32 + 34 + 34 + 42 + 42 + 42 + 42 + 42 + 43.$$

$$\begin{aligned}
384 &:= 2^3 + 2^3 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^4 = 23 + 23 + 42 + 42 + 42 + 42 + 42 + 42 + 42 + 44. \\
&:= 3^2 + 3^2 + 3^3 + 3^5 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 32 + 32 + 33 + 35 + 42 + 42 + 42 + 42 + 42 + 42.
\end{aligned}$$

$$386 := 2^8 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 28 + 32 + 32 + 42 + 42 + 42 + 42 + 42 + 42 + 42.$$

$$388 := 2^2 + 2^6 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 26 + 42 + 42 + 42 + 42 + 43 + 43 + 43 + 43.$$

$$397 := 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 33 + 34 + 34 + 42 + 42 + 42 + 42 + 42 + 43 + 43.$$

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