Title: 17-Golden Pattern
Author: Gabriel Martin Zeolla
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gabrielzvirgo@hotmail.com

Abstract: This paper develops the divisibility of the so-called **Simple Primes numbers-17**, th
demonstration of the inharmonics that are 2,3,5,7,11,13,17 and the harmony of 1. The disco
fractal numbers and patterns. This is a family before the prime numbers. This paper develop
17 and simple composite number-17
The simple prime numbers-17 are known as the **19-rough numbers**.

Keywords: Golden Pattern, 19-Rough number, divisibility, Prime number, composite num

Simple Prime Number-13

In order to understand how simple Primes numbers work in this text, the approach is partial, only use divisib
considered Simple Prime number-17 by dividing it by 2, 3, 4, 5,6,7,8,9,10,11,12,13,14,15,16,17 must give a
Simple Prime numbers-17 are those that are only divisible by themselves and by unity. Those that can be di
called Simple composite number-17
Positive integers that have no prime factors less than 19.

Simple Prime Number $\in \mathbb{Z}$
The simple prime numbers-17 maintain equivalent proportions in the positive numbers and also in the negat
In this paper the demonstrations are made with numbers $\in \mathbb{N}$

Introduction

This work is the continuation of the **Golden Pattern** papers published in http://vixra.org/abs/1801.0064, in w
prime numbers has been demonstrated (For a number to be considered Simple Prime number-7 by dividing
result.). If it resulted in integers numbers, it would be simple composite number-7.
Reference A008364 The On-Line Encyclopedia of Integer Sequences.

In this paper we continue to develop demonstrations in which it is easy to see and with very simple account
Golden Pattern maintain impressive proportions and equivalences.
All the numbers are kept in a precise order, forming equivalent sums and developing an infinite harmony.

Special cases

In this text the N ° 2, 3, 5, 7, 11,13, 17 are not Simple Prime number-17. The calculations and proportions p
in the table that these numbers are simple composite number-17 since in the following patterns they work in

The number 1 is a Simple prime number-17. It is a number that generates balance and harmony, it is a nece
pattern, but it is also the representative of the first number of each pattern to infinity.

17-Golden Pattern

The pattern found is from 1 to 1.531.530. It repeats itself to infinity respecting that proportion every 1.531.53
by a rectangle of 6 columns x 255.255 rows.
The simple prime numbers-17 fall in only two columns in the one of the 1 (Column A) and the one of the (co
the columns are simple composite numbers-17. These are painted by red color.

The 17-Golden Pattern is divided into three Triplet Sectors. From 1 to 510.510, from 510.511 to 1.021.020 a
These are identical, the only variable are their reductions. Which combine to the left in combinations of 1,4,7
can see that each sector works as a pattern with the following. The same happens with the 17-Golden Patte

Example:

17-Golden Pattern (1 to 1.531.530)

Sector 1 (1 to 510.510)
Sector 2 (510.511 to 1.021.020)
Sector 3 (1.021.021 to 1.531.530)

Red: Reduction (sum of the digits of simple prime numbers-17)

	Sector 1 (1 to 510.510)						
Red	A				B		Red
1	1	2	3	4	5	6	
	7	8	9	10	11	12	
	13	14	15	16	17	18	
1	19	20	21	22	23	24	5
	25	26	27	28	29	30	2
4	31	32	33	34	35	36	
1	37	38	39	40	41	42	5
7	43	44	45	46	47	48	2
	49	50	51	52	53	54	8
	55	56	57	58	59	60	5
7	61	62	63	64	65	66	
4	67	68	69	70	71	72	8
1	73	74	75	76	77	78	
7	79	80	81	82	83	84	2
	85	86	87	88	89	90	8
	91	92	93	94	95	96	
7	97	98	99	100	101	102	2
4	103	104	105	106	107	108	8
1	109	110	111	112	113	114	5
	115	116	117	118	119	120	
	Continue						

	Sector 2 (510.511 to 1.021.020)						
Red	A				B		Red
4	510511	510512	510513	510514	510515	510516	
	510517	510518	510519	510520	510521	510522	
	510523	510524	510525	510526	510527	510528	
4	510529	510530	510531	510532	510533	510534	8
	510535	510536	510537	510538	510539	510540	5
7	510541	510542	510543	510544	510545	510546	
4	510547	510548	510549	510550	510551	510552	8
1	510553	510554	510555	510556	510557	510558	5
	510559	510560	510561	510562	510563	510564	2
	510565	510566	510567	510568	510569	510570	8
1	510571	510572	510573	510574	510575	510576	
7	510577	510578	510579	510580	510581	510582	2
4	510583	510584	510585	510586	510587	510588	
1	510589	510590	510591	510592	510593	510594	5
	510595	510596	510597	510598	510599	510600	2
	510601	510602	510603	510604	510605	510606	
1	510607	510608	510609	510610	510611	510612	5
7	510613	510614	510615	510616	510617	510618	2
4	510619	510620	510621	510622	510623	510624	8
	510625	510626	510627	510628	510629	510630	
	Continue						

Graph table 1

$$Sector\ 2 \sum_{Nps \geq 510.511}^{1.021.020} 92.160\ Simple\ \text{prime}\ numbers - 17 = 70.572.902.400$$ Diff

$$Sector\ 3 \sum_{Nps \geq 1.021.021}^{1.531.530} 92.160\ Simple\ \text{prime}\ numbers - 17 = 117.621.504.000$$ I

Total

$$17 - Golden\ Pattern \sum_{Nps \geq 1}^{1.531.530} 276.480\ Simple\ Prime\ numbers - 17 \quad = 211.718.707.200$$

Conclusion 1

Each SECTOR is multiple x3, x5 with respect to the first. Also to infinity if we are adding 510.510 next numb

The differences $47.048.601.600$ are repeated for every 510.510 numbers. The difference is equal to the s by two.

The total is equal to the sum of **simple prime number-17 of Sector 1** by 9.

Total $211.718.707.200$=$23.524.300.800 * 9$

Diff $47.048.601.600$=510.510 * 92160

2) Addition of Composite numbers-17 by Sector (only composite numbers divisible by

Nc= Composite Numbers-17

$$Sector\ 1 \sum_{Nc \geq 1}^{510.510} 78.010\ \text{Composite}\ numbers - 17 = \quad 19.912.442.550$$

$$Sector\ 2 \sum_{Nc \geq 510.511}^{1.021.020} 78.010\ \text{Composite}\ numbers - 17 = 59.737.327.650$$

$$Sector\ 3 \sum_{Nc \geq 1.021.021}^{1.531.530} 78.010\ \text{Composite}\ numbers - 17 = 99.562.212.750$$

Total

$$17 - Golden\ Pattern \sum_{Nc \geq 1}^{1.531.530} 234.030\ Composite\ numbers - 17 = 179.211.982.950$$

Conclusion 2

Each SECTOR is multiple x3, x5 with respect to the first. Also to infinity if we are adding 510.510 next numb

The difference $39.824.885.100$ are repeated for every 510.510 numbers. The difference is equal to the su

Sector 1 by 2.

Red	17-golden Pattern (1 to 1.531.530) A				B		Red
1	1	2	3	4	5	6	
	7	8	9	10	11	12	
	13	14	15	16	17	18	
1	19	20	21	22	23	24	5
	25	26	27	28	29	30	2
4	31	32	33	34	35	36	
1	37	38	39	40	41	42	5
7	43	44	45	46	47	48	2
	49	50	51	52	53	54	8
	55	56	57	58	59	60	5
7	61	62	63	64	65	66	
4	67	68	69	70	71	72	8
1	73	74	75	76	77	78	
7	79	80	81	82	83	84	2
	85	86	87	88	89	90	8
	91	92	93	94	95	96	
7	97	98	99	100	101	102	2
4	103	104	105	106	107	108	8
1	109	110	111	112	113	114	5
	115	116	117	118	119	120	

Red	Next Pattern (1.5 A		
1	1531531	1531532	153153
	1531537	1531538	153153
	1531543	1531544	153154
1	1531549	1531550	153155
	1531555	1531556	153155
4	1531561	1531562	153156
1	1531567	1531568	153156
7	1531573	1531574	153157
	1531579	1531580	153158
	1531585	1531586	153158
7	1531591	1531592	153159
4	1531597	1531598	153159
1	1531603	1531604	153160
7	1531609	1531610	153161
	1531615	1531616	153161
	1531621	1531622	153162
7	1531627	1531628	153162
4	1531633	1531634	153163
1	1531639	1531640	153164
	1531645	1531646	153164

Continue

Graph table 2

Reference A166061The On-Line Encyclopedia of Integer Sequences

The product of two 17simple prime numbers is always a 17-simple prime numbers. Located within the seque

3) <u>Simple Prime Numbers-17 by Pattern</u>

Nps= Simple Prime Numbers-17

$$17 - \text{Golden Pattern} \sum_{Nps \geq 1}^{1.531.530} 276.480 \; Simple \; Prime \; numbers - 17$$

$$Pattern \; 2 \sum_{Nps \geq 1}^{3.063.060} 552.960 \; Simple \; Prime \; numbers - 17$$

$$Pattern \; 3 \sum_{Nps \geq 1}^{4.594.590} 829.440 \; Simple \; Prime \; Numbers - 17$$

<u>Conclusion 3</u>

It is repeated to infinity every 1.531.530 numbers. The 17-Golden Pattern is multiplied by x2, x3, x4, x5, etc

Conclusion 4

The model continues to multiply and is repeated to infinity every 1.531.530 numbers. (Odd Multiples for total
The difference is repeated for every 1.531.530 numbers.
The difference is equal to the sum of simple prime number-17 of **17-Golden Pattern** by two.
Diff=1.531.530*276.480=423.437.414.400

5) Addition Simple Primes Numbers-17 by Pattern in total

Nps= Simple Prime Numbers-17

$$276.480 \text{ simple prime number in } 17-\text{Golden Pattern} \sum_{Nps\geq 1}^{1.531.530} = 211.718.707.200$$

Diff. 211.718.707.20

$$552.960 \text{ simple prime number} - 17 \ \ to\ Pattern\ 2 \sum_{Nps\geq 1}^{3.063.060} = 846.874.828.800$$

Difference with the **17 − Golden Pattern** is **x 4**

Diff. 211.718.707.20

$$829.440 \text{ simple prime number} - 17 \ \ to\ Pattern\ 3 \sum_{Nps\geq 1}^{4.594.590} = 1.905.468.364.800$$

Difference with the **17 − Golden Pattern** is **x 9**

Diff. 211.718.707.20

$$1.105.920 \text{ simple prime number} - 13 \ \ to\ Pattern\ 4 \sum_{Nps\geq 1}^{6.126.120} = 3.387.499.315.200$$

Difference with the **17 − Golden Pattern** is **x 16**

Conclusion 5

The model continues to multiply and is repeated to infinity every 1.531.530 numbers. (Odd Multiples for total
The differences work with the formula x^2

Example

17-Golden Pattern $1^2 = \mathbf{1}$
Pattern 2= 2^2=**4**
Pattern 3= $3^2 = \mathbf{9}$
Pattern 4= $4^2 = \mathbf{16}$
Pattern 5= 5^2= **25**

7) Addition of composite Numbers-17 by Pattern in total, (only composite numbers divi

Nc= Composite Numbers-17

$$234.030 \text{ Composite number in } 17-\text{Golden Pattern} \sum_{Nc\geq 1}^{1.531.530} = 179.211.982.950$$

Diff $179.211.982.950 * 3 =$ 537.635

$$468.060\ Composite\ number - 17\ \ to\ Pattern\ 2 \sum_{Nc\geq 1}^{3.063.060} = 716.847.931.800$$

Difference with the **17 – Golden Pattern** is **x 4**

Diff $179.211.982.950 * 5$=896.059.

$$702.090\ Composite\ number - 17\ \ to\ Pattern\ 3 \sum_{Nc\geq 1}^{4.594.590} = 1.612.907.846.550$$

Difference with the **17 – Golden Pattern** is **x 9**

Diff $179.211.982.950 * 7$=1.254.48

$$936.120\ Composite\ number - 17\ \ to\ Pattern\ 4 \sum_{Nc\geq 1}^{6.126.120} = 2.867.391.727.200$$

Difference with the **17 – Golden Pattern** is **x 16**

Conclusion 7

The number of composite number-17 is related to the next pattern every 1.531.530 more numbers.

The model continues to multiply and is repeated to infinity every 1.531.530 numbers. (Odd Multiples for total

The differences work with the formula x^2

Example

17-Golden Pattern $1^2 = \mathbf{1}$

Pattern 2= 2^2=**4**

Pattern 3= $3^2 = \mathbf{9}$

Pattern 4= $4^2 = \mathbf{16}$

Pattern 5= 5^2= **25**

Demonstration 1

Formula to get simple prime number-17

Example and demonstration of the formula is divided into 2 columns.

On the left we will calculate the simple prime number-17 located in (A), on the right we will calculate the pri

$P_{17\ (A)}$= $S.Prime\ numbers - 17\ in\ column(A)$ $Z = numbers \geq 0$	$P_{17\ (B)}$ = $S.Prime\ numbers - 17\ i$ $Z = numbers \geq 0$

Formula to get simple composite number-17

Example and demonstration of the formula is divided into 2 columns.

On the left we will calculate the simple composite number-17 located in (A), on the right we will calculate th

$Nc_{17\ (A)}$= $S.Composite\ numbers - 17\ in\ column(A)$ $Z = numbers \geq 0$	$Nc_{17\ (B)}$= $S.Composite\ numbe$ $Z = numbers \geq 0$
$$Nc_{17\ (A)} = (6 * n \underset{\substack{n=1\\n=2\\n=4+5*Z\\n=8+7*Z\\n=9+11*Z\\n=15+13*Z\\n=14+17*Z}}{} + 1)$$ $n = 1,2,4,8,9,14,15,19, \ldots.$ **We get the following S. Composite numbers-17.** $Nc_{17\ (A)} = 7,13,25,49,55,85,91,115, \ldots.$	$$Nc_{17\ (B)} = (6 * n$$ n n n n n $n = 1,2,6,11,13,16,20,21, \ldots \ldots$ **We get the following S. Composite** $Nc_{17\ (B)} = 5,11,17,35,65,77,95,$

The formula for calculating the Simple composite numbers-17 is based on Zeolla Gabriel's paper on how to numbers. http://vixra.org/abs/1801.0093

Final conclusion

The 17-Golden Pattern is the confirmation of an order to infinity in equilibrium, each column is in harmony ar the inharmony of 2, 3, 5, 7, 11, 13, 17 is very great. The number 1 is necessary and generates balance. Sim Classical Prime Numbers.

The sum of the composite numbers-17 and the simple prime numbers-17 demonstrate incredible proportions behavior.

The reductions of the 17-Golden Pattern are infinitely repeated every 1.531.530 numbers.

The proportions of the 17-Golden pattern are exactly equal and proportional to the 7-golden pattern. (http://v with different prime numbers, 3-Golden Pattern, 5-Golden Pattern, 11-Golden Pattern, 13-Golden Pattern, e

The formula for obtaining the simple Prime numbers-17 and composite number-17 works successfully, we o expected results.

I can affirm that there are infinite different patterns with different prime divisors, which maintain a great harm balance, they present infinite proportions, fractal symmetries, All patterns have the same procedure. They a