

The Relation between Fibonacci Sequence and (9, 19, and 29) Numbers

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Abstract: *The Fibonacci sequence is a famous equation, because it's have amazing and great properties. In this study, we prove some of the interesting properties which include the relations between Fibonacci numbers and (9, 19, 29). We found a lot of connections and relations between them.*

1 INTRODUCTION

The Fibonacci sequence was given its name in May of 1876 by the outstanding French mathematician Francois Edouard Anatole Lucas, who had originally called it "the series of Lamé," after the French mathematician Gabriel Lamé [1-3] the applications of both Golden Section, and Fibonacci series takes a lot of interest in modernistic science, like biology, demography or economy, and recently used in high-energy physics, but there exist generalizations of these numbers given by scientist as Horadam [4-10].

The Fibonacci sequence F_n are

$$1, 1, 2, 3, 5, 8, 13, \dots, 144, 233, 377, \dots$$

Each number in Fibonacci sequence (as in previous equation) equals to the sum of the next two Fibonacci numbers. If n is any positive integer, so F_n is what we use to explain the n th Fibonacci number, then

$$F_n = F_{n-1} + F_{n-2}$$

Because of this sequence Ref. [11] starts with the values:

$$F_0 = 0, \text{ and } F_1 = 1$$

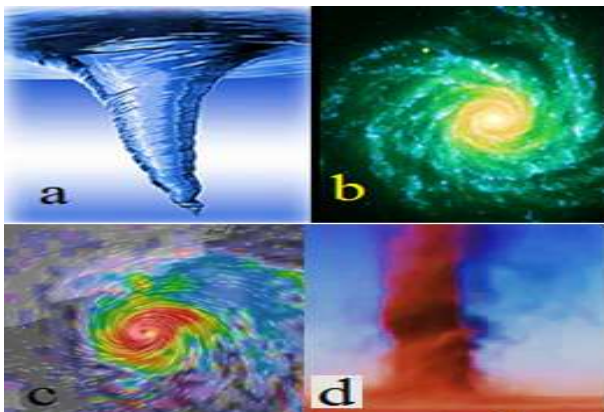


Fig.1. a. Whirlwind water, B. Galaxy heavenly, c. Tornado, d. Dust Whirls

On the other hand the ratio of two consecutive Fibonacci numbers converges to the Golden Mean or Golden Section [12-15] $\sin(2/\sqrt{5})/\sin(1/\sqrt{5}) = 1.618$.

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Figure (1) shows some of the natural phenomena of the energy giant, which is one of successive applications Fibonacci. The following table Fibonacci numbers, with dividing the output of each one of them with the number (19): sequence

Table 1 Fibonacci numbers dividing the output of each one (19)

No	Fibonacci number	dividing by (19)
1	0	0.0
2	1	0.1
3	1	0.1
4	2	0.1
5	3	0.2
6	5	0.3
7	8	0.4
8	13	0.7
9	21	1.1
10	34	1.8
11	55	2.9
12	89	4.7
13	144	7.6
14	233	12.3
15	377	19.8
16	610	32.1
17	987	51.9
18	1597	84.1
19	2584	136.0
...
37	14930352	785808
...
4540398488	86267571272	55

The summation of the first (19) numbers in the Fibonacci sequence is divisible by the number (19):

$$(0 + 1 + 1 + 2 + 3 + 5 + 8 + 13 + 21 + 34 + 55 + \dots + 2584) = 6764$$

$$6764 / 19 = 356$$

The resulting number is (6764), which is a unique feature. It is equal to: $19 \times 4 \times 89 = 76 \times 89$

This number (89) is the number of Fibonacci His status (11)! It reversed the wonder that is equal to: $1/89 = 0.01123595 \dots$ Webmasters and password in this inverted it is the only one

that includes in breaking the ten-year consecutive Fibonacci itself reverse this process and our destination because we reverse the first (19) a number in the Fibonacci sequence, so that it becomes the first to be the last and the last is first, here's the surprise [16-22]

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0, 0 1
0, 0 0 1
0, 0 0 0 2
0, 0 0 0 0 3
0, 0 0 0 0 0 5
0, 0 0 0 0 0 0 8
0, 0 0 0 0 0 0 1 3
0, 0 0 0 0 0 0 0 2 1...
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0, 0 1 1 2 3 5 9 5 ...
    
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Table 2 Fibonacci sequence and the inverse of it and divided by 19, part 1

Period	Fibo. sequence	Calculation	Fibo. inverse	result	Divided by 19
1	0	+	2584	2584	136
2	1	-	1597	-1596	-84
3	1	+	987	988	52
4	2	-	610	-608	-32
5	3	+	377	380	20
6	5	-	233	-228	-12
7	8	+	144	152	8
8	13	-	89	-76	-4
9	21	+	55	76	4
10	34	-	34	0	0
11	55	+	21	76	4
12	89	-	13	76	4
13	144	+	8	152	8
14	233	-	5	228	12
15	377	+	3	380	20
16	610	-	2	608	32
17	987	+	1	988	52
18	1597	-	1	1596	84
19	2584	+	0	2584	136

As shown from the Table 2 part 2, if we add no. (1) of the Fibonacci sequence to the offset by in the inverse sequence, the came out number is divisible by (19) . Also if this number rose from the number (2) of corresponding Fibonacci sequence also the came out number is divisible by (19). Then, if we add to the third issue in the corresponding successive reverse, once again came out number is divisible by (19) ... and so on until we reach the Fibonacci number (19)! It calculations alternately: time to add and subtract time, which is never left behind, and achieved only with the number (19)

[23-31]. Also, if the process has all the numbers that follow ranked number holder (19), found that the calculation between each number in the Fibonacci sequence and the corresponding sequence in reverse, the process is always put:

Table 3 Fibonacci sequence and the inverse of it and divided by 19, part 2

Period	Fibo.i sequence	Calculation	Fibonacci sequence	result	Divided by 19
19	2584	+	0	2584	136
20	4181	-	1	4180	220
21	6765	-	1	6764	356
22	10946	-	2	10944	576
23	17711	-	3	17708	932
24	28657	-	5	28652	1508
25	46368	-	8	46360	2440
26	75025	-	13	75012	3948
27	121393	-	21	121372	6388
28	196418	-	34	196384	10336
29	317811	-	55	317756	16724
30	514229	-	89	514140	27060
31	832040	-	144	831896	43784
32	1346269	-	233	1346036	70844
33	2178309	-	377	2177932	114628
34	3524578	-	610	3523968	185472
35	5702887	-	987	5701900	300100
36	9227465	-	1597	9225868	485572
37	14930352	-	2584	14927768	785672
38	24157817	-	4181	24153636	1271244
39	39088169	-	6765	39081404	2056916
40	63245986	-	10946	63235040	3328160

Look at how successive changed body and set aside, to be the location of number (19) directory location, and to suggest various images that the subject of this number (19) of which is destined recognition aesthetically surprising!

The aim of this study is to show the relation between Fibonacci sequence and (9, 19, and 29) numbers, and to prove that if the plants are a families, the animals and the entire component in our world as well as the numbers are families. This work is a part of continuous efforts in the Energy and Renewable Energies Technology Center to study the nature and find the best energy motivation for our live [32-55].

II RESULTS AND DISCUSSION

- If the first number is divided on the Fibonacci (19) is the owner of status (19), followed by the number that this feature is the number of Fibonacci His status (37), which is between him and the first (19) status exactly? Then the next is the owner of status (55), which is also the second (19) status.
- The sum of the preparation for the first nine successive preparation of any number from zero to 21 is the number 54 and this number is divisible by 9, and without rest, $54 \div 9 = 6$
- The sum of the preparation for the first 18 consecutive number from zero to the number 1597 is the number 4810 and this number is divisible by 19: $4810 \div 19 = 220$
The number 18, which refers to the first number is 18 ($9 * 2$) It is here shown that there is a relationship between the number 9 and number 19.
 - The number 19 is the same in successive number is 2584 divisible by 19: $2584 \div 19 = 136$
 - The number 29 is the same in successive number is 2584 divisible by 29: $317811 \div 29 = 10959$
- The total number of successive 29 for the first number from zero to number 317 811 is a number 832 039 and that number is divisible by 29, $832039 \div 29 = 28691$
- Total prepare for the first 36 consecutive any number from zero to number 9,227,465 is the number 24,157,816 and this number is divisible by 19, $24157816 \div 19 = 1271464$
And the number 36, which refers to the first number is 36 ($9 * 4$) and this again shows the relationship between the number 9 and number 19.
Since there is a relationship between the number 18, which is twice the number 9 and number 19, now we have to prove a relationship between the Number 19 and the next in the series after the 18 number that is $18 + 19 = 37$,
A number 14,930,352 and this number divisible by on 19 without rest: $14930352 \div 19 = 785808$.
- There is also a relationship between the number 37 and the next in the series after a number 18 or $18 + 37 = 55$, a number 86,267,571,272 and this number divisible by on without the rest of the 19:
 $86267571272 \div 19 = 4540398488$
- It is known that the sum of the numbers $9 + 19 + 29 = 57$ and this number is divisible by 19 without the rest of the $57 \div 19 = 3$. Now if we take the corresponding numbers in the sequence of the No. 9 and the two numbers 19 and 29, a 21 and 2584 and 317 811 does wonder if the sum of these numbers are accepted multiple of 19 as the corresponding numbers
 $21 + 2584 + 317811 = 320416$ and $320416 \div 19 = 16864$
To see consistency between successive sequence and corresponding of how to prepare in harmony with the number 19 in tune bizarre.
- The sum of the first 19, the result is divisible
 $(136-84 + 52-32 + 20-12 + 8-4 + 4 + 0 + 4 + 4 + 8 + 12 + 20 + 32 + 52 + 84 + 136 = 836)$

The number 836 is divisible by 19

$$836 \div 19 = 44$$

- When you multiply the following numbers among them
 $9 * 19 * 29 = 4959$

And when collecting the numbers of the last one:

$$4+9+5+9=27 \text{ the number is divisible by } 9$$

$$27 \div 9 = 3$$

And the last divided by the number 19 produces the following: $4959 \div 19 = 261$

Also, if we collecting the last numbers we will get:

$$1 + 6 + 2 = 9$$

III CONCLUSION

In this research we found and approved that there is a lot of relations between the numbers 9, 19, 29, and Fibonacci sequence and if we search more may be we will find more than this.

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