

Synchronization of Riemann Zeros and Prime Numbers

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Abstract

The purpose of this paper is to show how Riemann Zeros and Prime Numbers synchronize at $N+6$ and why there are no Riemann Zeros smaller than 14.

I.

Riemann Zeros are generated by a Hexagon that is numbered $N+6$. The progression starts with 1, adds 6 and then repeats or cycles to $N+6$ again.

II.

Prime numbers are generated by a Hexagon that is numbered $N+1, N+2, N+3, N+4, N+5, N+6$. The progression starts with 1 and continues to 6 and then repeats or cycle back to $N+1$. (See Figure 2 & 2A.)

III.

Synchronization of Prime Numbers and Riemann Zeros begin at $1+6=7$ & $32+6-1=37$ in Riemann Zeros (Figure 1) and at $5+4-2=7$ & $31+6-1=37$ in the Prime Numbers Progression (Figure 2 & 2A). The synchronization occurs because the Prime Number Progression and Riemann Zero Progression are at $N+6$. (See figure 1&2)

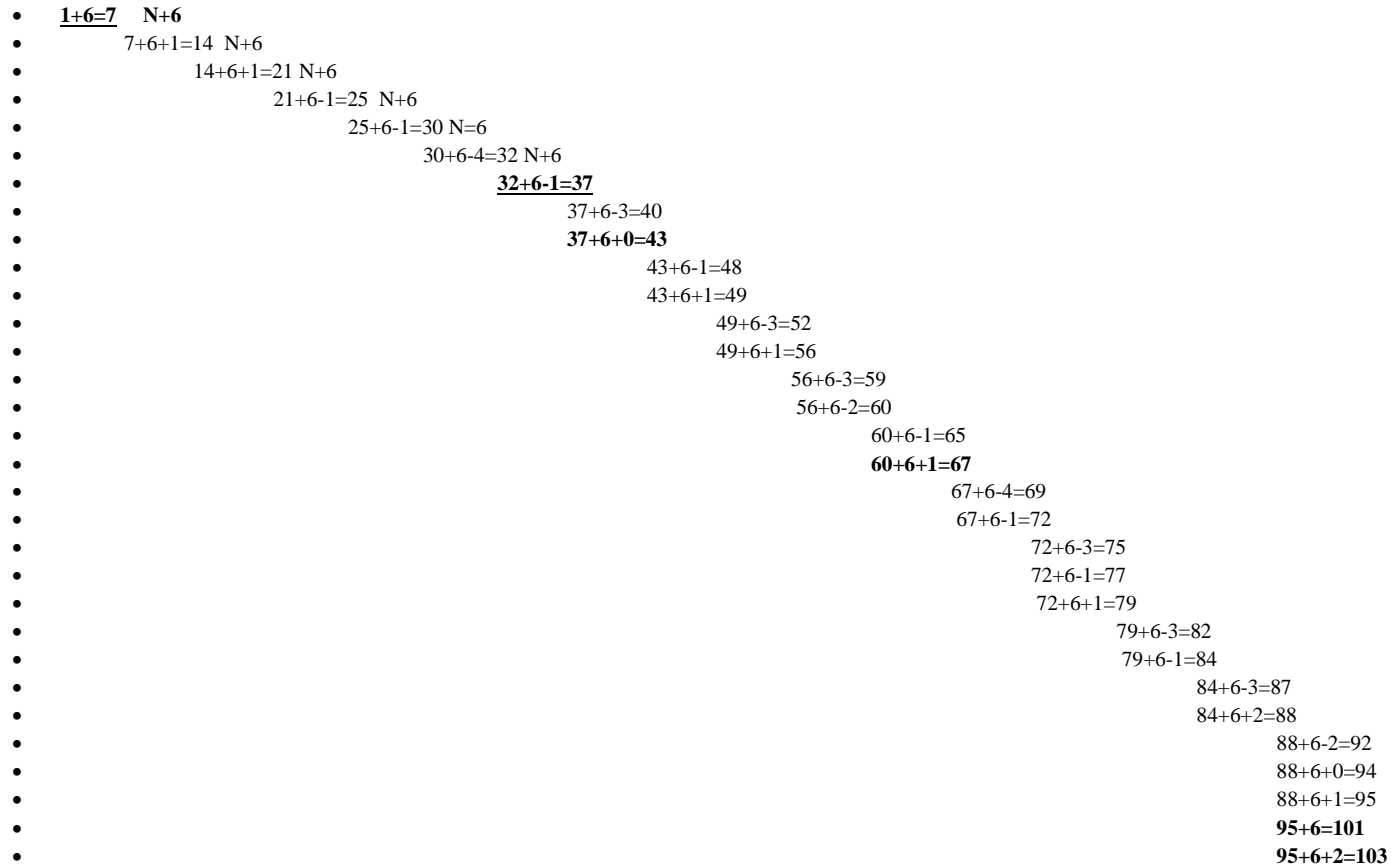
Conclusion

“**Goldbach's conjecture** is one of the oldest and best-known [unsolved problems](#) in [number theory](#) and all of [mathematics](#). It states: Every [even integer](#) greater than 2 can be expressed as the sum of two [primes](#)”, Wikipedia. In the Riemann Zero Progression $N+1=7$. It is odd integer and prime. While it can be written as $2+5=7$ it is not the 1st number that satisfies the Goldbach's conjecture because it is not even. The first number in the Riemann Zero Progression that satisfies Goldbach's Conjecture is 14. 14 is $N+2$ in the Riemann Zero Progression (See Figure 1) and can be written as the sum of $7+7=14$ (two primes) and $2+5+7=14$ (three primes). 14 is an even number. This is the reason that there are no Riemann Zeros smaller than 14. Simply, $N+1$ or $6+1=7$ is prime (odd) and $N+2$ or $7+6+1=14$ (even). Again in the Riemann Zero Progression 14 is the 1st number that satisfies Goldbach's Conjecture but it is $N+2$ (See Figure 1). It is an even number that can be written as the sum of two primes, $7+7=14$ & three primes $2+5+7=14$.

Riemann Zero is a Hexagon with the N+6 progression

(Synchronization of Prime Numbers and Riemann Zeros begin at $1+6=7$ & $32+6-1=37$)

Figure 1.



$A+B=C$

$A=\text{Riemann } 0=N$

$B=6$

$C=\text{Riemann } 0=N+6$

Prime Number Progression is a Hexagon $N+1, N+2, N+3, N+4, N+5, N+6$.

(Synchronization of Prime Numbers and Riemann Zeros begin at $5+4-2=7$ & $31+6-1=37$)

Figure 2

$$1+1+0=2 \quad N+1$$

$$2+2-1=3 \quad N+2$$

$$3+3-1=5 \quad N+3$$

$$\underline{5+4-2=7} \quad N+4$$

$$7+5-1=11 \quad N+5$$

$$11+6-4=13 \quad N+6$$

$$13+1+3=17$$

$$17+2+0=19$$

$$19+3+1=23$$

$$23+4+2=29$$

$$29+5-3=31$$

$$\underline{31+6-1=37}$$

$$37+1+4=41$$

$$41+2+0=43$$

$$43+3+1=47$$

$$47+4+2=53$$

$$53+5+1=59$$

$$59+6-4=61$$

$$61+1+5=67$$

$$67+2+2=71$$

Prime Number Progression is a Hexagon $N+1, N+2, N+3, N+4, N+5, N+6$.

(Synchronization of Prime Numbers and Riemann Zeros begins at $31+6-1=37$)

Figure 2A

$$71+3-1=73$$

$$73+4+2=79$$

$$79+5-1=83$$

$$89+6+2=97$$

$$97+1+3=101$$

$$97+2+2=103$$

$$A+B=C$$

$$A=\text{Prime number}=N$$

$$B=1,2,3,4,5,6.$$

$$C=\text{Prime Number}=N+1, N+2, N+3, N+4, N+5, N+6.$$

#Riemann Zeros

Composition of Riemann Zeros with Prime Numbers (Only with addition and subtraction)

Figure 3

A=(3-2)	#1
B=(5+3-2)	#6
C=(7+5+3-2)+1	#14
f=(11+7+5-3+2)-1	#21
D=(11+7+5+3-2)+1	#25
E=(13+11+7+5-3-2)-1	#30
F=(17+13-11+7+5+3-2)+0	#32
G=(19+17-13+11-7+5+3+2)+0	#37
H=(23+19-17-13+11+7+5+3+2)+0	#40
I=(29-23+19-17+13+11+7+5-3+2)+0	#43
J=(31+29-23+19-17-13+11+7+5-3+2)+0	#48
K=(31+29-23+19-17-13+11+7+5+3-2)-1	#49
L=(37+31-29+23+19-17-13-11+7+5+3-2)-1	#52
M=(43+41-37-31+29+23+19-17-13-11+7+5-3+2)-1	#56
N=(47+43+41-37+31+29-23-19-17-13-11-7-5-3+2)+1	#59
O=(53+47+43+41-37+31-29-23-19-17-13-11-7-5+3+2)+1	#60
P=(59+53+47+43-41+37-31-29-23-19-17-13-11+7+5-3+2)-1	#65
Q=(61+59+53-47+43-41-37-31+29+23-19-17-13+11-7-5+3+2)+0	#67
R=(67+61+59+53-47-43-41-37+31+29-23-19-17-13+11+7-5-3-2)+1	#69
S=(71+67+61+59-53-47-43-41+37+31-29-23+19-17-13-11+7-5+3-2)+1	#72
T=(71+67+61+59-53-47+43+41-37-31-29-23-19-17-13-11+7+5+3-2)+0	#75
U=(71+67+61+59-53-47+43+41-37-31-29-23-19-17-13+11-7-5+3+2)+0	#77
V=(79+73+71+67+61+59-53-47-43-41-37-31-29-23-19-17+13-11+7+5-3-2)+0	#79
W=(79+73+71+67+61+59-53-47-43-41-37-31-29-23-19-17-13+11+7+5+3-2)+1	#82
X=(83+79+73+71+67+61-59-53-47-43-41-37-31-29-23-19+17+13-11+7+5+3-2)+0	#84
Y=(83+79+73+71+67+61-59-53-47-43-41-37-31-29-23-19+17+13-11+7+5+3+2)-1	#87
Z=(83+79+73+71+67+61-59-53-47-43-41-37-31-29-23-19+17+13-11+7+5+3+2)+0	#88
a=(89+83+79+73+71+67+61-59-53-47-43-41-37-31-29-23-19-17-13-11-7-5+3+2)-1	#92
b=(89+83+79+73+71+67+61-59-53-47-43-41-37-31-29-23-19-17-13-11-7+5-3-2)+1	#94
c=(89+83+79+73+71+67-61-59-53-47+43-41-37-31-29-23-19-17+13+11-7-5-3-2)+0	#95
d=(97+89+83+79+73+71+67-61-59-53-47-43-41-37-31-29-23-19-17+13-11-7+5-3+2)+0	#98
e=(97+89+83+79+73+71+67-61-59-53-47-43-41-37-31-29-23-19-17+13-11-7+5+3-2)+1	#101

print (A,B,C,f,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S,T,U,V,W,X,Y,Z,a,b,c,d,e)

1 6 14 21 25 30 32 37 40 43 48 49 52 56 59 60 65 67 69 72 75 77 79 82 84 87 88 92 94 95 98 101

*1 and 6 are not Riemann Zeros

Riemann Zeros & Pseudo Random Composition of Prime Numbers

(Synchronization in bold)

Figure 4

A +B(+/-1) = C	Riemann Zeros
1+1=2	
2+2-1=3	
3+3-1=5	
5+3-1=7	5+4-2=7 Not a Riemann Zero because it does not satisfy Goldbach's Conjecture.
7+5-1=11	
7+5+1=13	7+5+2=14
7+11-1=17	
7+13-1=19	7+13+1=21
11+13-1=23	11+13+1=25
11+19-1=29	11+19+0=30
13+17+1=31	13+17+2=32
19+17+1=37	19+17+1=37 12th prime 37=6*6+1
19+23-1=41	19+23-2=40
19+23+1=43	19+23+1=43 14th prime 43=6*7+1
19+29-1=47	19+29+0=48
	19+29+1=49
	23+31+0=52
23+31-1=53	
23+37-1=59	23+37+0=60
23+37+1=61	23+43-1=65
23+43+1=67	23+43+1=67 19th prime 67=6*11+1
	23+47-1=69
23+47+1=71	29+43+0=72
29+43+1+73	29+43+3=75
	31+47-1=77
31+47+1=79	37+47-2=82
37+47-1=83	34+47+0=84
	37+53-3=87

$$37+53-1=89$$

$$43+53+1=97$$

$$47+53+1=101$$

$$47+57-1=103$$

$$37+53-2=88$$

$$37+53+2=92$$

$$43+53-2=94$$

$$43+53-1=95$$

$$43+53+2=98$$

$$47+53+1=101 \quad 26^{\text{th}} \text{ prime} \quad 101=16*6+5$$

$$47+57-1=103 \quad 27^{\text{th}} \text{ prime} \quad 103=16*6+7$$

$$47+57+1=105$$