Special Numbers Among Natural Numbers And Riemann Hypothesis

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Abstract

This article proves that there are special numbers among the natural numbers and proves the Riemann Hypothesis and its possible flaws and errors.

Keywords: Prime Numbers; Riemann Hypothesis; Natural Numbers; Special Numbers

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1. Reasoning and proof

According to mathematical research, the number of prime numbers is infinite and prime numbers are infinite. Therefore, the numbers in each digit of the prime number must have endless changes and derivatives between 0 and 9.[1] Assuming S(∞) is the sum of all prime numbers, and $(S_a(\infty) a \in \{0,1,2,3,...,9\})$ represents the number of times the number a appears among all prime numbers. According to known mathematical laws and theorems, the number of occurrences of each digit from 0 to 9 on every digit in mathematics is positively infinite, and the number of prime numbers in mathematics is positively infinite. Therefore, we obtain the following formula:

$$\sum_{a=0}^{9} S_a(\infty) = Q(\infty)$$

We can further conclude that if the sum of the infinite powers of each number from 0 to 9 can be expressed as $\sum_{a=0}^{9} S_a(\infty)$ we can calculate that the infinite power of each number from 0 to 9 is actually the sum of the infinite powers of 2 to 9, and the final calculation result is the sum of 9 positive infinity, the calculation result is positive infinity. However, the calculation result of the infinite power of the number 1 is 1. Therefore, we derive the following formula:

$$\sum_{a=0}^{9} S_a(\infty) - Q(\infty) = 1^{\infty}$$

According to the above calculation formula, we can obtain the difference between the total number of each digit of all prime numbers and the number of digits from 0 to 9, and this difference is $1^{\infty}=1$,We can obtain the following formula:

$$\sum_{a=0}^{9} S_a(\infty) - Q(\infty) = 1$$

Based on the above calculations and formulas, we can conclude that there is a special mathematical relationship between prime numbers and numbers from 0 to 9, and the final calculation result is 1. Therefore, our calculation results may not conform to the prime number distribution pattern stipulated by Riemann's conjecture, and the ζ function of Riemann's conjecture cannot include this special number that is both a prime and a composite, and we speculate that the Riemann hypothesis may have shortcomings and deficiencies.[2,3]

2. Conclusion

The mathematical derivation in this article suggests that there may be a special number in natural numbers that is both prime and composite. This special number will be a very unique figure within the natural numbers, apart from 0, 1, prime numbers, and composite numbers. This special number might violate the current mathematical laws and theorems regarding natural numbers, and it could also affect the prime number distribution pattern and the ζ function of Riemann's conjecture. Therefore, the ζ function of Riemann's conjecture cannot include this special number that is both a prime and a composite. Thus, Riemann's conjecture has flaws and errors.

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