

## Infinity of Mersenne prime number.

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The Mersenne prime number exists in infinity.

Because Mersenne prime number is prime number that is Mersenne number.

Mersenne prime number exists in infinity in the field of mathematics though Mersenne prime number is limited in the field of the computer. Because Mersenne prime number is a prime number that is Mersenne number, and the register of an infinite bit cannot be made in the field of the computer, it is limited. On the other hand, it is infinity in the field of mathematics because it can think about the register of an infinite bit in the imagination. In a word, Mersenne number and Mersenne prime number exist in infinity if there is no limitation in the digit number.

"The Prime number exists in infinity" and "The number of Palindromic exists in infinity" exist in grounds and Mersenne prime number, Palindromic prime number, Repunit prime number, and a Perfect number exist in infinity.

It exists in infinity if there is no limitation in the digit number because a special prime number is a prime number.

A Perfect number of even numbers exists in infinity.

A Perfect number of odd numbers doesn't exist.

$$2^{n-1} \times M_n = \text{Perfect number} \rightarrow \text{Even number} \times \text{Odd number} = \text{Even number}$$

Product set

