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27th International Symposium of Prime Numbers



Outline



► 2 is prime (two divisors: 1 and 2).

► 3 is prime (two divisors: 1 and 3).



There Is No Largest Prime Number

The proof uses *reductio ad absurdum*.

Theorem

There is no largest prime number.

Proof.

1. Suppose p were the largest prime number.
2. Consider the number $q = p + 1$.
3. q is greater than 1, thus divisible by some prime number not in the first p numbers.
4. But $q + 1$ is greater than 1, thus divisible by some prime number not in the first p numbers. □



There Is No Largest Prime Number

The proof uses *reductio ad absurdum*.

Theorem

There is no largest prime number.

Proof.

1. Suppose p were the largest prime number.
2. Let q be the product of the first p numbers.
3. $q + 1$ is greater than 1, thus divisible by some prime number not in the first p numbers.



There Is No Largest Prime Number

The proof uses *reductio ad absurdum*.

Theorem

There is no largest prime number.

Proof.

1. Suppose p were the largest prime number.
2. Let q be the product of the first p numbers.
3. Then $q + 1$ is not divisible by any of them.
4. But $q + 1$ is greater than 1, thus divisible by some prime number not in the first p numbers. □



User guide

User guide

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Second

Second slider



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