There Is No Largest Prime Number With an introduction to a new proof technique

Euklid of Alexandria

Department of Mathematics University of Alexandria

27th International Symposium on Prime Numbers, -280

Results

Proof of the Main Theorem



Proof of the Main Theorem

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. Thus q + 1 is also prime and greater than p.

