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

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.