

Euklid

## 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

<ロ> <同> <目> <目> <目> <目> <目> <目> <目> <目</p>

There Is No Largest Prime Number Euklid 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.

◆□▶ ◆□▶ ▲□▶ ▲□▶ □ のQ@