THERE IS NO LARGEST PRIME NUMBER WITH AN INTRODUCTION TO A NEW PROOF TECHNIQUE

Euklid of Alexandria

Department of Mathematics University of Alexandria

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RESULTS

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.