

There Is No Largest Prime Number

With an introduction to a new proof technique

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1 Results

■ Proof of the Main Theorem

There Is No Largest Prime Number

The proof uses *reductio ad absurdum*.

There Is No
Largest Prime
Number

Euklid

Results

Proof of the Main
Theorem

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 . □