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

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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.

- Suppose p were the largest prime number.
- Let q be the product of the first p numbers.
- ① Then q + 1 is not divisible by any of them.
- 4 Thus q + 1 is also prime and greater than p.