

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.

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 . □