

## There Is No Largest Prime Number

## Theorem

There is no largest prime number.

- 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. But q+1 is greater than 1, thus divisible by some prime number not in the first p numbers.



