Vantieghem, E.
On a congruence only holding for primes. (English) [Zbl 0734.11003]

The author proves, by using a property of cyclotomic polynomials, the following: If $p > 2$ is a positive integer, then $p$ is a prime if and only if
\[ \prod_{1 \leq k \leq p-1} (2^k - 1) \equiv p \text{mod}(2^p - 1). \]

Reviewer: J. Sándor (Jud.Harghita)

MSC:

- 11A07 Congruences; primitive roots; residue systems
- 11A41 Primes
- 11C08 Polynomials in number theory

Keywords:
congruences for primes; cyclotomic polynomials

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References:


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