

## Fermat's Little Theorem

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04/29/2024

All numbers are positive:  $-c = a - b, b > a \leftrightarrow b - c = a$

$$a + 0 = a$$

$$a - a = 0$$

Every number is prime relative to its own base:  $a = a \left( \frac{a}{a} \right) := a(1_a)$

$$\frac{a}{a} := 1_a \text{ means there is no modulus, } a = a \leftrightarrow \frac{a}{a} = 1_a$$

The global "1" is misleading, since it omits any base reference.

If there is division with a modulus the number is not prime; it is a ratio of two primes which contradicts the definition of prime.

This has profound consequences in the Standard Model..

$a + a = 2a$  Goldbach's Conjecture "Every even number is the sum of two primes"; - now a theorem proved by me... :)

Fermat's Little Theorem

$$a^{(p-1)} \equiv 1[\text{mod}(p)]$$

However,

$$a^{(p-1)} = a^{(p-1)(\text{mod}0)}$$

$$a = a \left( \frac{a}{a} \right) = a(1_a)$$

$$(a)a^{(p-1)} = a^p = a^{(p \text{ mod } 0)} = [a(1_a)]^{(p \text{ mod } 0)}$$

, the generalized "1" in Fermat's Little Theorem is wrong, since it omits its base reference  $1_a$ .

Note that:

$$1_x := \frac{x}{x} = 1_a \leftrightarrow x = a$$

$$1_a = 1_1 \leftrightarrow a = 1$$

Conclusion: If every number is prime relative to its own base, then modular arithmetic is a fools' errand.... :)