**# Fermet’s Little Theorem**

**Fermat's little theorem** states that if *p* is a prime number, then for any integer *a*, the number *ap* − *a* is an integer multiple of *p*. In the notation of modular arithmetic, this is expressed as



If *a* is not divisible by *p*, Fermat's little theorem is equivalent to the statement that *ap*− 1 − 1 is an integer multiple of *p*, or in symbols



{\displaystyle a^{p-1}\equiv 1{\pmod {p}}.}

This theorem is a special case of Euler’s Theorem



**# To compute Modular Inverse by this Theorem-**



This equation can be rewritten as



From above equation we can see that modInverse of a is .

**# Computation of **

We know that 

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Here modInverse() means modular inverse under modulo p. p is prime number greater than n.

Mostly p = 1000000007