Non-deterministic Primality Testing

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Deterministic Primality Test A primality test which tests a number n is prime or not with 100% accuracy

Non-Deterministic Primality Test A primality test which tests a number n is prime or not with a small error (like fermat's primality test)

Need for Non Deterministic Algorithms

Given $Q(Q \le 10^5)$ queries, in each query you are given $N(N \le 10^{12})$ print whether the N is prime or not.

1 Fermat's Primality Test