

# Number Theory

Here is some blog for further reading

## SOME LINK

Progkriya - <http://www.progkriya.org/gyan/basic-number-theory.html>

Forthright48 - <https://forthright48.blogspot.com/p/cpps-101.html>

Yarin's optimized sieve:

<https://www.fmf.uni-lj.si/~lavric/Rosen%20-%20Elementary%20number%20theory%20and%20its%20applications.pdf>

Bitwise Sieve:

Part One - <http://zobayer.blogspot.com/2009/12/bitwise-operations-in-cc-part-1.html>

Part Two - <http://zobayer.blogspot.com/2009/12/bitwise-operations-in-c-part-2.html>

Part Three - <http://zobayer.blogspot.com/2009/12/bitwise-operations-in-c-part-3.html>

Powerful tricks with calculation modulo:

<https://www.hackerearth.com/practice/notes/powerful-tricks-with-calculation-modulo/>

Prime factorization: [http://www.lightoj.com/article\\_show.php?article=1002](http://www.lightoj.com/article_show.php?article=1002)

NOD SOD -

[http://www.lightoj.com/article\\_show.php?article=1003](http://www.lightoj.com/article_show.php?article=1003)

Prime factorize()

sqrt(n) ----- [http://www.lightoj.com/article\\_show.php?article=1002](http://www.lightoj.com/article_show.php?article=1002)

log(n) ----- <https://bit.ly/2nn9ZS9>

Number of divisor() [http://www.lightoj.com/article\\_show.php?article=1003](http://www.lightoj.com/article_show.php?article=1003)

Sum of divisor()

Bid mod() [https://www.youtube.com/watch?v=nO7\\_qu2kd1Q](https://www.youtube.com/watch?v=nO7_qu2kd1Q)

Powerful tricks with calculation modulo --- <https://bit.ly/2npas6h>

Huge Mod - <http://codeforces.com/contest/907/problem/E>  
<http://codeforces.com/problemset/problem/17/D>

Extended Euclid - <https://cp-algorithms.com/algebra/extended-euclid-algorithm.html>

Linear Diophantine Equation - <https://cp-algorithms.com/algebra/linear-diophantine-equation.html>

Euler Totient Function - [https://en.wikipedia.org/wiki/Euler%27s\\_totient\\_function](https://en.wikipedia.org/wiki/Euler%27s_totient_function)

Primality Test - [https://en.wikipedia.org/wiki/Primality\\_test](https://en.wikipedia.org/wiki/Primality_test)

$10^{18}$  Prime Factorization ? / Num of Divisor - <http://codeforces.com/blog/entry/22929>

${}^nC_r$  for large numbers ? -

<https://discuss.codechef.com/questions/3869/best-known-algos-for-calculating-ncr-m>

<https://www.spoj.com/problems/DCEPC13D/>

Chinese Remainder Theorem - [https://en.wikipedia.org/wiki/Chinese\\_remainder\\_theorem](https://en.wikipedia.org/wiki/Chinese_remainder_theorem)

Books :

Rosen Elementary Number Theory:

<https://www.fmf.uni-lj.si/~lavric/Rosen%20-%20Elementary%20number%20theory%20and%20its%20applications.pdf>

104 Number Theory Problems:

<https://drive.google.com/file/d/13DQ3kXNPT0fXrnQnE6pyhcU49nVpTChg/view?usp=sharing>