Elementary Analytic Number Theory

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Notations

$\tau(n)$ Number of divisors of n

$\tau(n)$ Sum of divisors of n

$\varphi(n)$ Euler's totient function of n

Chapter 1

Introduction

For an introduction, see Apostol.[1] check Mőbius function. Also, see
Euler's totient function.

Bibliography

Apostol, Tom M.: *Introduction to analytic number theory.* In: *Undergraduate Texts in Mathematics* (1976). DOI: 10.1007/978-1-4757-5579-4.

Chapter 2

Dirichlet Convolution and Generalization

We can write the number of divisor function as the following.

$$\tau(n) = \sum_{d|n} 1$$

See Apostol[1]

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[1]Tom M. Apostol: *Introduction to analytic number theory.* In: *Undergraduate Texts in Mathematics* (1976). DOI: 10.1007/978-1-4757-5579-4.

Bibliography

Apostol, Tom M.: *Introduction to analytic number theory.* In: *Undergraduate Texts in Mathematics* (1976). DOI: 10.1007/978-1-4757-5579-4.

List of Acronyms

$\varphi(n)$ Euler's totient function

Glossary

Mőbius function $\mu(n)$ is a very important function in number theory.