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Chapter 1

Analytic Number Theory

1.1 Circle method

Chapter 2

Global Field

$$\lim_{s \rightarrow 1} (s-1)\zeta_K(s) = \frac{2^{r_1} \cdot (2\pi)^{r_2} \cdot R_K \cdot h_K}{w_K \cdot \sqrt{|d_K|}}$$

$$\sum_{n=-\infty}^{\infty} f(x+n) = \sum_{n=-\infty}^{\infty} \widehat{f}(n) e^{2\pi i n x}$$

Chapter 3

Local Field

3.1 Valuation

3.2 p-adic Analysis

Chapter 4

Class Field Theory

4.1 Local Cases

4.2 Global Cases

Chapter 5

L-function

Chapter 6

Modular Forms