

Correlation of Farey Fractions

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Abstract

Let Q be a positive integer and denote by \mathcal{F}_Q the set of irreducible fractions in $(0, 1]$ whose denominator does not exceed Q . The sequence \mathcal{F}_Q is known as the Farey sequence (series) of order Q . In this talk, first, we will discuss the significance of Farey fractions and their relation to the Riemann Hypothesis, and then we will discuss the distribution of Farey fractions by studying the correlation of Farey fractions with some congruence conditions on the denominators. Also, we will study the generalized Farey fractions.