the convergence abscissa (not necessarily positive) of a simple Dirichlet series.

Extensions of theorems of Vitali on sequences of analytic functions are given as Theorems VII and VIII. Theorem IX, concerning uniform convergence in a finite region and the consequent analyticity of the function represented, is essentially duplicated by Theorem 1, part 2, of L, but is less general than Theorem 2 of AII on uniform convergence for an infinite region. Theorem X asserts that if the coefficients in (1) are all positive, (S, T) is a singular place for the function represented. Theorem XI, on simple Dirichlet series, is a preliminary to the proof of Theorem XII on the convergence of (1) in the region $\mathfrak{R}(s)=S$, $\mathfrak{R}(t)=T$.

Theorem XIII, on regular convergence of a double factorial series, is slightly less general than Theorem 1 of AI as supplemented by remarks on page 70 of AI and strengthened on page 407 of AII. Theorem XIV, on the identity of the related half-planes of regular convergence for a factorial series and its associated special Dirichlet series, is duplicated by Theorem 3 of AII. Theorem XV, on uniform convergence of a factorial series in a finite region, is slightly less general than the similar Theorem 2 of AI and much less general than Theorem 7 of AI (supplemented by footnote 12 of AII) on uniform convergence for an infinite region. Theorems XVI, XVII, and XVIII are respective analogs for binomial coefficient series of the preceding three theorems on factorial series.

BROWN UNIVERSITY

A CENSUS OF SQUARES OF ORDER 4, MAGIC IN ROWS, COLUMNS, AND DIAGONALS*

BY D. N. LEHMER

This census was made by Frenicle in 1693 who found 880 fundamental squares which with their rotations and reflections gave 7,040 squares of this sort. A study of the transformations which throw a square of this type into another of the same type shows that Frenicle need not have listed more than 220 fundamental squares. Besides his transformations, which were a rotation R of order 4 of the square in its plane about a right angle,

* Presented to the Society, December 2, 1933.