This is heavy going—a formidable exercise in analytic number theory! The result is due to Walfisz.

Chapter 9: $\int_0^X P_k^2(y)dy$ (Jarnik).

Chapter 10: Development of $P_k(t)$ in Bessel function series.

The author remarks that the study of ellipsoids: $\alpha_1 y_1^2+\alpha_2 y_2^2+\cdots+\alpha_k y_k^2\leqq X$ (with positive irrational coefficients α_j) would require a separate monograph. The reviewer would also like to mention in this connection the striking recent work of Davenport, Heilbronn, G. L. Watson on irrational indefinite quadratic forms and that of Birch and D. J. Lewis (Mathematika, December, 1957) on the nontrivial representation of 0 by "mixed" cubic forms (with coefficients in any algebraic number field) with a sufficient number of variables.

S. CHOWLA

Lectures on ordinary differential equations. By Witold Hurewicz. The Technology Press of the Massachusetts Institute of Technology, and John Wiley, New York, 1958. 17+122 pp. $5.00.

We quote from the Preface. "This book is a reprinting, with minor revisions and one correction, of notes originally prepared by John P. Brown from the lectures given in 1943 by the late Professor Witold Hurewicz at Brown University. They were first published in mimeographed form by Brown University in 1943, and were reissued by the Mathematics Department of the Massachusetts Institute of Technology in 1956. . . . An appreciation of Witold Hurewicz by Professor Solomon Lefschetz, which first appeared in the *Bulletin of the American Mathematical Society*, is included in this book, together with a bibliography of his published works."

The book consists of five short chapters. The first presents the existence and uniqueness results for the equation $y'=f(x, y)$ with f continuous and satisfying a Lipschitz condition. The existence result under the assumption of continuity alone is proved using the Weierstrass approximation theorem and equicontinuous sequences. The dependence of solutions on initial conditions and parameters, and the continuation of solutions, are also treated here. In Chapter 2 it is indicated how all these results carry over to systems. Chapter 3 is concerned with elementary properties of linear systems, and in particular linear systems with constant coefficients. The last two chapters deal with the more geometric aspects of the subject. In Chapter 4 is discussed the behavior of solutions in the vicinity of an isolated singularity of a system $x'=P(x, y)$, $y'=Q(x, y)$ by considering it as a perturbation of a linear system. Chapter 5 is devoted to a proof of the Poincaré-Bendixson Theorem, and a short discussion of orbital stability.