

XIII gives a brief discussion of positive quadratic forms in  $n$  variables.

In Chapters VI and VII Dickson has considered universal theorems involving cubes and sums of nine values of a cubic function. He says that "simplifications are made in the present exposition which also obtains more than 6000 universal forms, each a sum of 9 products of a cube by a positive integer." Here and in Chapter XII are proved particular cases of Waring's problem.

The conditions for the solution of a quadratic and linear function in 4, 5, 6, 7 and 8 variables are found in Chapter X and theorems on polygonal numbers.

Chapter IX gives a general theory of homogeneous, quadratic diophantine equations. This is a new topic and many exercises are given.

In the appendix, after a brief study of infinite series is a proof of the infinitude of primes in an arithmetical progression. This theorem is assumed in some of the earlier chapters.

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*Principles of the Mathematical Theory of Correlation.* By A. A. Tschuprow. Translated by M. Kantorowitsch. London, Hodge; New York, Nordemann, 1939. 10 + 194 pp.

In 1925 Tschuprow published his *Grundbegriffe und Grundprobleme der Korrelationstheorie*. The foundation of the book was a series of lectures given in the insurance seminar of the University of Christiania (now Oslo). It was not intended to be a guide to the calculation of measures of relationship but to provide a logical foundation for the theory of correlation, to clarify fundamental notions and assumptions and to link up the theory of correlation with the theory of probability.

This German edition, which has since become a very well known work, was reviewed in the *Bulletin* in 1926 (vol. 32, p. 561), so we are concerned here only with the translation into English. It is a straightforward translation with the exception of the "Notes and Bibliography." Here the translator substituted a survey of contemporary English literature on correlation for the author's introductory notes. One may question the advisability of a translation of a 15 year old book on a statistical subject, but the modern student after reading a random sample of the chapters on correlation in our recent text books will find the reading of Tschuprow's book a real tonic. The translation is very well done, accurate but not too literal. Though it is regrettable that the translation was so long in coming, the book will fill a real need, even if it does not contain more recent developments.

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