estimate of the probability concerned, then the probability calculus is certainly inapplicable here. If one speaks of the sun's rise as an event which is uncertain (like everything else) and therefore as an event which has a probability number, just what physical meaning has such a number? A short review, however, is no place to take issue with Borel's subjectivism; even a reader who disagrees with much of the material can not deny its thought provoking character, and such a reader will very probably enthusiastically endorse some interesting remarks by Darmois in an appended note.

J. L. DOOB

Partielle Differentialgleichungen und ihre Anwendungen auf physikalische Fragen. By B. Riemann. (Edited by K. Hattendorff, with introduction by F. Emde.) Braunschweig, Vieweg, 1938. 12+325 pp.

It is a tribute to Georg Friedrich Behrnard Riemann to have his book written in 1882, itself only a slight revision of the first edition of 1869, reprinted unaltered in 1938. The following explanation is given by Fritz Emde:

"In the course of time a very detailed two volume work on which many authors have cooperated has grown out of Riemann's lectures on partial differential equations (for review of the eighth edition see this Bulletin, vol. 37 (1931), p. 333). The original edition looks quite modest in comparison with this revision. In spite of this engineers and physicists have repeatedly asked for this book which has been out of print for some time, and were justified in doing so since it is a book in which Riemann introduces his readers to the fundamental mathematical ideas in an excellent way and teaches them the methods of solution. For the beginner even today there is hardly a more convenient approach to this subject.

"May Riemann's lectures show their old virtues anew. They will be a credit to any collection of books."

The reviewer cannot, however, refrain from warning against some concepts, for example (see page 9) dx is considered an "infinitely small" quantity.

J. F. RANDOLPH

Geometrie der Gewebe. By W. Blaschke and G. Bol. Berlin, Springer, 1938. 8+339 pp.

During the years 1927 to 1938 there appeared, mostly in the Hamburg Abhandlungen, a series of papers under the general title, "Topologische Fragen der Differentialgeometrie." The authors of "Geometrie der Gewebe" have been the most frequent contributors to this series, and in this book they have systematized and amplified the theory that was built up in these papers.

The basic concept in web geometry is the *sheaf of curves*, a topological image of the portion of a pencil of parallel lines contained in a bounded convex region of the plane of the pencil. An *n-web* is a set of n sheaves of curves, the points on each sheaf constituting the same point set G, such that no two curves of different sheaves have more than one common point. The property of being an n-web is evidently preserved under any topological transformation of G, and the theory of webs concerns itself largely with properties of webs which are invariant under such transformations. The central problem is this: Under what conditions can an n-web be mapped topologically into a set of line segments in a plane, and how can these webs of lines be characterized?

These considerations can easily be extended to configurations of higher dimensionality. Thus in three dimensions we may have a sheaf of surfaces which is the topological image of the intersection of a pencil of parallel planes with a convex region