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★**Épistémologie mathématique. (French)** [**Mathematical epistemology**]
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This book offers a comprehensive view of mathematics for undergraduate students and also for teachers of science in high schools or universities. The main intention of the author is to reflect on what it means to do mathematics, and to analyze the relationship between this practice and the practice of other sciences. This he calls mathematical epistemology. The book covers key issues, such as the meaning of mathematics; what a mathematical object is, such as an integer, a real number, a real function, a vector space, or a space of functions; and objects of a geometric nature, such as points, lines, planes, and figures. But it also discusses statements about mathematical objects, such as theorems, and about strategies of validation and concepts of legitimacy and truth. The book covers, nonlinearly, the basic contents of arithmetic, algebra, analysis, geometry, and deeper topics such as the nature of mathematical infinity, formalism, and Gödel's incompleteness theorem, addressed from various angles. The author even discusses topics such as Turing machines and constructive logics and analysis. The exposition flows smoothly and it is friendly for readers without sophisticated mathematical knowledge. A very interesting feature of the book is the use of historical texts to illustrate the exposition. In every section, the presentation is illustrated by the insertion of excerpts from the classics of mathematics. The excerpts are very well chosen and fit well in the author's exposition. The appeal to history is absolutely coherent with what seems to be the objective of presenting mathematics as a living subject, in permanent evolution. A very interesting and original book. *U. D'Ambrosio*