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Dudley, Underwood (ed.)
Is mathematics inevitable? A miscellany.
Washington, DC: The Mathematical Association of America (MAA) (ISBN 978-0-88385-566-9/hbk). x, 324 p. (2008).

The book is a delightful mixture of mostly unrelated mathematical topics. It a collection chosen by the editor, the well known author of many popular math books, Underwood Dudley. Most of the charm of the book consists in the various article styles and subjects covered. Most of them are not often to be found in other popular mathematics books. What can the interested reader find in this book? Those more inclined to philosophical or otherwise humanistic inclinations can find descriptions of mathematicians, a discussion on the inevitability of mathematics, the story about how the number π landed in the legislature of Indiana... There are also lots of materials from history of mathematics, notably a short and clear description about the problems mathematicians had trying to prove Euclid's fifth postulate and an excerpt from Cardano's autobiography. Readers interested in teaching methods may find the article about Moore's method interesting - it is a method relatively rarely practiced, quite similar to the experiment oriented methods of teaching natural sciences, which can be described in short by "the only way to learn math is by doing it". On the other side, about half of the book consists of various popular math topics. Some of the particularly interesting ones are the following: An article about how misleading the first few induction steps can be, when one concludes a statement about natural numbers is true for all of them after being convinced that it works for the first few (there are 35 examples of such wrong conclusions based on intuition!); another article describes how "math can be made difficult" i.e. how a simple proof can be turned into a complicated one requiring graduate math knowledge; a proof that horses have an infinite number of legs; the proof of the (at least to some) surprising fact that there are three times as many obtuse-angled triangles than there are acute-angled ones; an explanation of the fact that the average is less than one should expect to meet; how administration sometimes uses more complicated math than one would expect (described through various schemes US-states have for assigning driver's license numbers); etc. The above mentioned topics are by no means all of the things this book offers. Although it is not very probable that many readers will find all the topics attractive, it is quite sure that in this book there is a little bit for everyone (or at least, everyone with some secondary math knowledge and/or interest on how mathematics works and how mathematians "tick"). *Franka Miriam Bruckler (Zagreb)*

Classification: A20 A38 E28 M98
Keywords: popular mathematics; mathematics miscellanea; history of mathematics; paradoxes; applied mathematics; philosophy of mathematics