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THE FIRST RESOURCE FOR MATHEMATICS

Acheson, David

The spirit of mathematics. Algebra and all that. (English) Zbl 07645440

Oxford: Oxford University Press (ISBN 978-0-19-284508-5/hbk). vi, 178 p. (2023)

David Acheson, former president of the MAA is known for his popularization of mathematics through his public lecturing on mathematics to young children and a general public. This book is a collection of mathematical curiosities and puzzles that are easily understood by his target readership. It is a sequel to his 2010 illustrated edition of [*D. Acheson*, 1089 and all that. A journey into mathematics. Oxford: Oxford University Press (2002; Zbl 1043.00003)]. The intension is to change the mindset of the readers into a positive attitude towards mathematics: the essence of mathematics is not the dull manipulation of abstract formulas, but on the contrary, one should accept mathematical thinking as part of our life and it is even fun to play with while solving puzzles, designing magic tricks, etc.

These fun facts are introduced in 30, amply illustrated, short chapters of less than 5 pages. Some have a challenge for the reader with solutions provided at the end of the book. Several of these illustrations are well known, involving the usual mathematical suspects (π, golden ratio, etc.), while others have more historical aspects. They involve logic, numbers, geometry, or physics problems.

There are many books published containing similar collections with the same intention to reach out to school children and the non-mathematicians. This book is distinct because the chapters can be read in random order, they are really short with many illustrations and hence, like a mathematical snack, it is easy to grasp the content in a relatively short time, which may depend on the mathematical skills of the reader.

Reviewer: Adhemar Bultheel (Leuven)

MSC:

00A09 Popularization of mathematics
13-01 Introductory exposition (textbooks, tutorial papers, etc.) pertaining to commutative algebra
97Hxx Algebra education

Keywords:

mathematical outreach; popularization; puzzles; history

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