**CHOICE** *connect*

A publication of the Association of College and Research Libraries
A division of the American Library Association
Editorial Offices: 575 Main Street, Suite 300, Middletown, CT 06457-3445
Phone: (860) 347-6933
Fax: (860) 704-0465
October 2017 Vol. 55 No. 2

## Johns Hopkins University Press

*The following review will appear in the October 2017 issue of CHOICE. The review is for your internal use only until our publication date of 01 October 2017*

**Mathematics**

**55-0659** QA300 MARC
Hahn, Alexander J. **Calculus in context: background, basics, and applications**. Johns Hopkins, 2017. 692p bibl index ISBN 9781421422305, $95.00.

There is no question that this book addresses the age-old mantra “What is this good for?” Part 1 starts off with ancient Greek astronomy, a motivating force for the development of early mathematics. Anchored to the historical underpinnings of these investigations, Hahn (Univ. of Notre Dame) presents the necessary geometry, trigonometry, and algebra to explore these problems. The historical thread continues through the next three chapters, ultimately leading to separate chapters on the calculus of Leibniz and Newton. Problem sets include applied investigations and pure mathematical considerations throughout. Part 2 introduces definitions and procedures found in single variable calculus, but even here the presentation is not traditional. The author avoids focusing on content and techniques that are rarely used in applied settings. Instead he provides succinct coverage of necessary calculus principles, leading to additional problems and projects drawn from those physics settings that directly connect to these mathematical concepts. In the end, a brief presentation of first- and second-order differential equations supports the final applications including, appropriately, astronomical considerations, which nicely counterbalance the start of the book. Overall, this text effectively lives up to its promise of “calculus in context.”

*--N. W. Schillow, Lehigh Carbon Community College*

Summing Up: Recommended. Lower-division undergraduates.