# The Biography of Numbers



## Tri State Young Adult Book Review Committee

Title: Numerals

Author: Kevin Cunningham Series: The Biography of Numbers

ISBN: 978-1-59935-396-8

\$27.45

Rating for this book: Excellent - Buy Now

**Summary**: A history of the counting and the visual representation of numbers through the centuries and various cultures. An engaging read that will provide even the well-read reader with new facts related to numbers. Grades 6-12.

Critical Annotation: The reader will become quickly engaged in reading about the usually dull, dry topic since the text is extremely well written with just enough fact interspersed within the human context of why we needed a system of counting that would allow us to go from none (zero) to millions and beyond and allow calculation using simple as well as complex math concepts. A fascination look at how written language preceded the written representation of how much and how many. By bringing in current examples of banking, calculation devices, calendars, and the building of large structures we see that we take for granted what ancient civilizations struggled to explain and calculate. The advances presented in this book that were made by ancient civilizations in the realm of mathematics make this book a perfect supplement for ancient history classes and studies of India and the Middle East. Colorful illustrations and examples of ancient writings help keep the reader focused. Outstanding short history of numbers.

**Series Comments**: The Biography of Numbers contains four titles written with engaging text and colorful illustrations. A quick history of mathematics and the use of numbers. Famous people who developed concepts, practical applications of numbers and timeline. Gr. 6-12.

**Recommendations**: Strongly recommended as a resource to support STEM initiatives in schools. A fascinating look at how numerals were developed and evolved through many civilizations and over time.

-Lois McNicol, May 2014



#### **Tri State Young Adult Book Review Committee**

Title: Measurement Author: Kevin Cunningham Series: The Biography of Numbers

ISBN: 978-1-59935-398-2

\$27.45

Rating for this book: Excellent - Buy Now

**Summary**: Provides the history of how civilizations developed the ability to measure volume, length, weight, why standardization of weights and measures was needed and why it involved such a long and difficult process to establish. Colorfully illustrated. Gr. 6-12. **Critical Annotation**: A wonderful presentation, filled with colorful illustrations, of how measurement systems developed and why they were needed. From ancient civilizations through contemporary efforts to standardize measurements worldwide, this book is engaging for the casual reader and filled with facts for the student researcher. Short biographies of famous people who influenced the progress toward standardization of measurements, a timeline, a glossary, further reading and the index are found in the back of the book. Traces the history of measurement and the impact of commerce and government on standardizing units of measure. Notes the reluctance of the United States to follow the metric system. Student might find it interesting that standardization was finalized less than 60 years ago with the adoption of the International System of Units to denote a common basis for measuring distance, mass, time, temperature, light, electric current, and chemical units. Outstanding! Only concern is the title of the first chapter "The Cun and the Cubit" will leave readers scrambling to other sources to find the definition of cun as the word does not appear in the book.

**Series Comments**: The Biography of Numbers contains four titles written with engaging text and colorful illustrations. A quick history of mathematics and the use of numbers. Famous people who developed concepts, practical applications of numbers and timeline. Gr. 6-12.

**Recommendations**: Strongly recommended as a resource to support to Stem initiatives in schools. A fascinating look at how we have arrived a thte units of measure that in current use around the world.

-Lois McNicol, May 2014



## **Tri State Young Adult Book Review Committee**

Title: Pi

Author: Kevin Cunningham Series: The Biography of Numbers

ISBN: 978-1-59935-394-4

\$27.45

Rating for this book: Excellent - Buy Now

Summary: A well documented account of the history, growth, and discoveries of Pi from 1680 until modern day.

**Critical Annotation**: The author has written a well documented account of the history, growth and discoveries of Pi. In 1680 B.C. Pi was first discovered in Sumer. Knowledge of Pi's properties developed slowly until recently when mathematicians utilized the computer.

The inclusion of photographs, several lists, where to obtain more information and a glossary / index makes this book a useful research tool. The inclusion of web sites for youngsters is also important in school classrooms today. The inclusion of up-to-date photographs and web sites further enhances the information in the book.

The flow and balance of both the text and full color visuals are integrated to present a very stimulating book for both young and reluctant readers.

**Series Comments**: This book is one in the Biography of Numbers series. The series consists of four books at this time. The general theme of the series is mathematics. The books include: Pi, Zero, Measurement, and Numerals.

**Recommendations**: This is a very well written book that will relate well to many young readers. It is recommended as a basic book for any upper elementary / middle school library. It would make a n excellent selection for a basic books list for elementary / middle school libraries.

-Linda McNeil, May 2014



#### Tri State Young Adult Book Review Committee

Title: Zero

Author: Kevin Cunningham Series: The Biography of Numbers

ISBN: 978-1-59935-392-0

\$27.45

Rating for this book: Excellent - Buy Now

**Summary**: The concept of nothing did not develop until man starting building complex societies. The first idea of nothing was probably put forth by the Egyptians. Without the concept of zero today's science and technology would not be possible.

**Critical Annotation**: The concept of nothing did not develop until man started building complex societies with a need to record how much property, how far, how heavy, or how much profit there was. The first idea of nothing was probably put forth by the Egyptians who used numbers to design the pyramids.

However, it wasn't until an Indian astronomer, born in 598 CE, finished his scientific masterpiece that zero was discussed as a number. This idea of zero and looking at numbers as an abstract concept allowed the development of positive and negative numbers. In 1200 Leonardo Pisano Bigollo published a book on mathematics that was based on nine Indian figures 9 8 7 6 5 4 3 2 1 and the sign 0. This changed Western mathematics. Fibonacci's practical examples of this system revolutionized commerce. "The concept of zero made today's science and technology possible."

The inclusion of photographs, several lists, where to obtain more information and a glossary / index makes this a useful research tool. The inclusion of web sites for youngsters is also important in school classrooms today. The inclusion of up-to-date photographs and web sites further enhances the information in the book.

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**Recommendations**: This is a very well written book that will relate well to many young readers. It is recommended as a basic book for any upper elementary / middle school library. It would make a n excellent selection for a basic books list for elementary / middle school libraries.

-Linda McNeil, May 2014

#### From the Midwest Book Review

The Biography of Numbers: Measurement Kevin Cunningham, author Morgan Reynolds Publishing 620 South Elm Street, Suite 387, Greensboro, North Carolina 27406 9781599353982, \$27.45, www.amazon.com

"The Biography of Numbers: Measurement" is a title in the mathematical concepts educational series, written for readers age 10 and up. Five far reaching chapters cover the history of measurement from pre-Biblical times to the present, touching on cubits, mysterious monuments and ways, the quest for a metric system, and the goal of a universal system. A helpful timeline accompanies "Measurement," as well as two pages of biographical sketches of important historical figures in the history of measurement, complete with thumbnail portraits. Finishing with a glossary, bibliography and web sites, "The Biography of Numbers: Measurement" is a stellar compendium of historical reconstruction of human attempts to quantify and measure. Attractive color illustrations, photos, and maps add interest and context to this exciting instructional series. Also highly recommended are the following titles form the Biography of Numbers series, all by the same author, Kevin Cunningham: "Numerals" (9781599353968, \$27.45)," "Zero" (9781599353920, \$27.45)," and "Pi (9781599353944, \$27.45).



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## Morgan Reynolds Reviews - SLJ January, 2014

CUNNINGHAM, Kevin. Pi. ISBN 9781599353944. LC 2013011595.

—. Zero. ISBN 9781599353920. LC 2013005809.

ea vol: 64p. (The Biography of Numbers Series). bibliog. chron. ebook available. glossary. index. photos. reprods. websites. Morgan Reynolds. 2013. lib. ed \$27.45.

Gr 5-8—These books cover the history of each number's use in mathematics, from early approximations and similar concepts in the ancient world up to and including contemporary thought. Brief chapters with large pictures on every spread contrast with sophisticated vocabulary, much of it not defined in the glossary. Cunningham names, but does not explain, several mathematical ideas such as calculus and transcendental numbers. While a few of the illustrations illuminate concepts or enrich the text, many seem barely relevant: a photograph of the Parthenon, for instance, in a section discussing ancient Greeks' astronomical calculations, or an image of a unicycle used to illustrate the scientific advances of the 19th century. Captions occasionally give insufficient or even incorrect information, as when an image of a pentagon is

labeled "six sides" in Pi. Without these errors Pi could support schools and libraries that host Pi Day (March 14th) celebrations. Back matter includes brief biographies of the eight mathematicians discussed per book.—Sarah Stone, San Francisco Public Library