

Book Review

The Golden Section

By Hans Walser

c. 2001 The Mathematical Association
of America

BY SUSAN PALMER SLATTERY

The phrase “the golden section” conjures up visions of ancient Greece, nature photos printed in high school geometry books, or even the Disney cartoon, *Donald Duck in Mathemagic Land*. In each of these, the golden section is viewed as a ratio that describes the proportions of physical beauty. But in each, the tone implies that this is an interesting, if not very useful, sideline in mathematics. Hans Walser barely mentions these ancient applications in *The Golden Section*; instead, he devotes his writing to developing the properties of the golden section and its usefulness in many areas of mathematics. While not a history à la E.T. Bell, this book, nonetheless, tells a story. It is not a story of antiquity, but a story of an enduring topic and the modern mathematics derived from it.

The golden section is introduced, followed by an extensive list of properties and extensions. Reading this book is a truly interactive experience as Walser poses questions that establish important properties and that challenge the reader to discover for him/herself the beauty and wide-ranging impact of the golden section. While many of these questions are of an elementary nature, some are quite challenging, and may pique the interest of the more advanced

reader. In fact, many readers may find it difficult to pick up this book without also picking up a pencil.

The list of topics mentioned in the book is quite long and includes generalized golden sections, golden geometry, golden trigonometry, fractals and dimension, sequences, solids, and topics from number theory. Sections on creating fractals and paper folding allow the reader to experience the topics in a hands-on manner, and are enjoyable recreations suitable for the high school geometry classroom. The final chapter is full of questions that will remind the reader of a mathematics competition.

Written in an informal style interspersed with numerous diagrams, Walser conveys a large amount of material in a friendly, engaging way. Students and teachers alike will find this book to be both interesting and challenging, and will come to view the golden section in a more modern light.

Department of Mathematics and Computer Science
Alabama State University
Montgomery, AL 36101