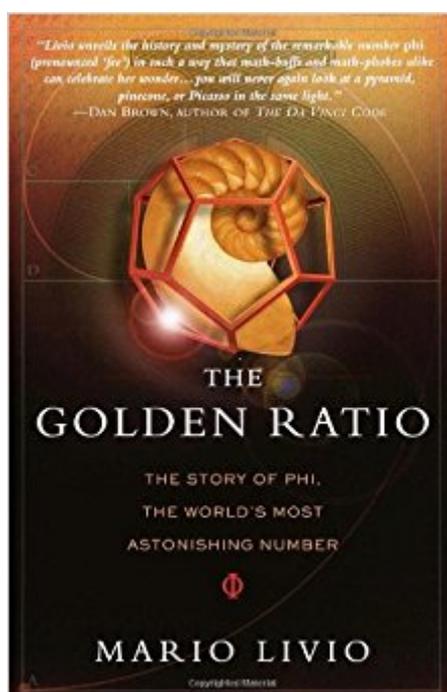The book was found

The Golden Ratio: The Story Of PHI, The World's Most Astonishing Number

Synopsis

Throughout history, thinkers from mathematicians to theologians have pondered the mysterious relationship between numbers and the nature of reality. In this fascinating book, Mario Livio tells the tale of a number at the heart of that mystery: phi, or 1.6180339887...This curious mathematical relationship, widely known as "The Golden Ratio," was discovered by Euclid more than two thousand years ago because of its crucial role in the construction of the pentagram, to which magical properties had been attributed. Since then it has shown a propensity to appear in the most astonishing variety of places, from mollusk shells, sunflower florets, and rose petals to the shape of the galaxy. Psychological studies have investigated whether the Golden Ratio is the most aesthetically pleasing proportion extant, and it has been asserted that the creators of the Pyramids and the Parthenon employed it. It is believed to feature in works of art from Leonardo da Vinci's Mona Lisa to Salvador Dali's The Sacrament of the Last Supper, and poets and composers have used it in their works. It has even been found to be connected to the behavior of the stock market!The Golden Ratio is a captivating journey through art and architecture, botany and biology, physics and mathematics. It tells the human story of numerous phi-fixated individuals, including the followers of Pythagoras who believed that this proportion revealed the hand of God; astronomer Johannes Kepler, who saw phi as the greatest treasure of geometry; such Renaissance thinkers as mathematician Leonardo Fibonacci of Pisa; and such masters of the modern world as Goethe, Cezanne, Bartok, and physicist Roger Penrose. Wherever his quest for the meaning of phi takes him, Mario Livio reveals the world as a place where order, beauty, and eternal mystery will always coexist.From the Hardcover edition.

Book Information

Customer Reviews

Are some numbers more important than others? Certainly numbers like the primes, pi and "e" have properties that make them interesting to mathematicians and physical scientists alike. Then there are numbers like 7, 13 and 666 that have other connotations for theologians, numerologists and the like. And yet, some numbers have not gotten their due in recent years. Phi--a number variously referred to as the golden ratio, golden section, and divine proportion among others--is one. But Mario Livio has written a book in an attempt to remedy this situation.Phi received its original definition from Euclid as an "extreme and mean ratio" when a straight line is cut so that the ratio of the entire line to the longer division of the segment is the same as the ratio of the longer division of the segment to the shorter. And yet, much like the better known geometrical example of pi, phi turns out to have many more applications beyond its simplest geometrical definition. Though measurable, phi is an irrational number with relationships to the Fibonacci sequence, fractals, the physical structure of things from plant growth and spiral shell development to the appearance of large-scale objects like galaxies, and more. And beyond this, phi has been used as a basis applications in numerology and aesthetics.Livio does a very good job of covering all this ground and more. He is especially good at giving us a historical overview of the development of our understanding of this important number as well as explaining the mathematics in a way that is complete but easy to understand.

Of all the irrational numbers, the best known is pi, which shows up all over the place. However, if you read _The Golden Ratio: The Story of Phi, The World's Most Astonishing Number_ (Broadway Books) by Mario Livio, you will gain an appreciation for the ubiquity of another irrational with all sorts of amazing properties. You can try this one on your calculator: Phi equals 1.6180339887... (As an irrational, its string of numbers goes infinitely beyond the decimal point, and you can be sure computers have calculated it to millions of places). Take the inverse of that number; that is, divide it into one. You will get 0.6180339887...; in other words, the inverse looks just like phi itself, but with a zero instead of one left of the decimal. Or try this: start with a 1, followed by a 1. The next number will be the two previous ones added together, which is 2; the next number, in turn, is again the two previous ones added together, which is 3. The series goes 1, 1, 2, 3, 5, 8, 13, 21, 34, 55... This is the famous Fibonacci sequence, and is investigated widely within this book as it is intimately connected to phi. Take any number in the series and divide it by the number before it, and you will get a number close to phi; the higher the number in the series, the closer the result comes. (13 / 8 = 1.615 ; 55 / 34 = 1.6176....).These sorts of number tricks abound in Livio's book, and the

mathematics is not daunting. It is also a history of phi, which turns out to be a representative slice of the history of mathematics. Euclid knew the number, but Leonardo Fibonacci in the twelfth century developed the series with its ratio. It shows up in breeding rabbits; spirals in pine cones, sunflowers, galaxies, and hurricanes; tilings and fractals; and many more surprising places.

The Golden Ratio: The Story of PHI, the World's Most Astonishing Number Phi Moo Contemporary's Number Power 6: Real World Approach to Math : Word Problems (The number power series) The Lost Dinosaurs of Egypt: The Astonishing and Unlikely True Story of One of the Twentieth Century's Greatest Paleontological Discoveries Ratio: The Simple Codes Behind the Craft of Everyday Cooking Ketogenic Recipes Box Set: 40 Low-Carb Breakfast Recipes To Reduce Your Weight plus Ketogenic Diet Plan to Improve the Ratio of HDL/LDL Cholesterol and ... Recipes books, Ketogenic Diet Books) El Concepto De Bien JurÃƒÂdico Como Instrumento De CrÃƒÂtica Legislativa Sometido A Examen: Acerca De La Ratio Del Privilegio Del Desistimiento En Derecho Penal (Spanish Edition) Drug Calculations: Ratio and Proportion Problems for Clinical Practice, 10e Drug Calculations: Ratio and Proportion Problems for Clinical Practice Color-by-Number: Butterflies: 30+ fun & relaxing color-by-number projects to engage & entertain Color-by-Number: Animals: 30+ fun & relaxing color-by-number projects to engage & entertain Number, Shape, & Symmetry: An Introduction to Number Theory, Geometry, and Group Theory A Friendly Introduction to Number Theory (4th Edition) (Featured Titles for Number Theory) The Sixteenth Round: From Number 1 Contender to Number 45472 The Secret Garden: Dawn to Dusk in the Astonishing Hidden World of the Garden The Fourth Part of the World: An Astonishing Epic of Global Discovery, Imperial Ambition, and the Birth of America Here's Looking at Euclid: A Surprising Excursion Through the Astonishing World of Math The Golden Number: Pythagorean Rites and Rhythms in the Development ofÃ‚Â Western Civilization Inside Charlie's Chocolate Factory: The Complete Story of Willy Wonka, the Golden Ticket, and Roald Dahl's Most Famous Creation. Everything I Need To Know I Learned From a Little Golden Book (Little Golden Books (Random House))