Título: Unknown Quantity

Autor: Derbyshire, John

Precio: $393.65

Editorial:

Año: 2006

Tema:

Edición: 1ª

Sinopsis

ISBN: 9780309096577

Prime Obsession taught us not to be afraid to put the math in a math book. Unknown Quantity heeds the lesson well. So grab your graphing calculators, slip out the slide rules, and buckle up! John Derbyshire is introducing us to algebra through the ages -- and it promises to be just what his die-hard fans have been waiting for. "Here is the story of algebra." With this deceptively simple introduction, we begin our journey. Flanked by formulae, shadowed by roots and radicals, escorted by an expert who navigates unerringly on our behalf, we are guaranteed safe passage through even the most treacherous mathematical terrain. Our first encounter with algebraic arithmetic takes us back 38 centuries to the time of Abraham and Isaac, Jacob and Joseph, Ur and Haran, Sodom and Gomorrah. Moving deftly from Abel's proof to the higher levels of abstraction developed by Galois, we are eventually introduced to what algebraists have been focusing on during the last century. As we travel through the ages, it becomes apparent that the invention of algebra was more than the start of a specific discipline of mathematics -- it was also the birth of a new way of thinking that clarified both basic numeric concepts as well as our perception of the world around us. Algebraists broke new ground when they discarded the simple search for solutions to equations and concentrated instead on abstract groups. This dramatic shift in thinking revolutionized mathematics. Written for those among us who are unencumbered by a fear of formulae, Unknown Quantity delivers on its promise to present a history of algebra. Astonishing in its bold presentation of the math and graced with narrative authority, our journey through the world of algebra is at once intellectually satisfying and pleasantly challenging.

This book's title is deceiving, for Derbyshire offers a very real and very entertaining survey of the development of algebra. "Real" and "imaginary" refer to types of numbers, and Derbyshire (Prime Obsession) opens with a basic primer on the various flavors of numbers and polynomials before looking at algebra's development over 3,000 years. As he explains how algebraic notation wended its way from Sumerian scratches on clay to such contemporary mathematical structures as Calabi-Yau manifolds (used by Andrew Wiles to solve Fermat's Last Theorem), Derbyshire introduces readers to the colorful figures who made contributions: Hypatia, whose death in Alexandria at the hands of an angry Christian mob marked the end of mathematics in the ancient world; 19th-century mathematician Hermann Grassmann, who published a 3,000-page translation

of the ancient Hindu text the Rig Veda after his work on vector spaces was ignored; and Emanuel Lasker, more famous as the longest-reigning world chess champion than for his contributions to ring theory. This book will appeal to readers who relished the rigorous mathematical discursions interspersed with informal historical vignettes of David Berlinski's A Tour of the Calculus, but less mathematically inclined readers more interested in the history of science will also enjoy it.