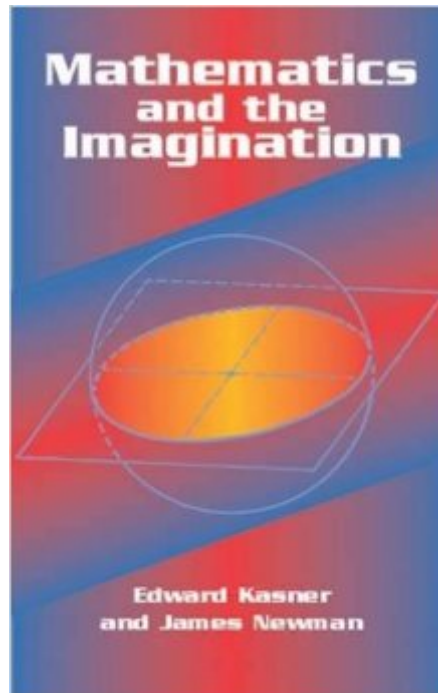# Mathematics And The Imagination (Dover Books On Mathematics)

Synopsis

You donâ ™t have to love math to enjoy a hand of cards, a night at the casino, or a puzzle. But your pleasure and prowess at games, gambling, and other numerically related pursuits can be heightened with this entertaining volume, in which the authors offer a fascinating view of some of the lesser-known and more imaginative aspects of mathematics.A brief and breezy explanation of the new language of mathematics precedes a smorgasbord of such thought-provoking subjects as the googolplex (the largest definite number anyone has yet bothered to conceive of); assorted geometries â " plane and fancy; famous puzzles that made mathematical history; and tantalizing paradoxes. Gamblers receive fair warning on the laws of chance; a look at rubber-sheet geometry twists circles into loops without sacrificing certain important properties; and an exploration of the mathematics of change and growth shows how calculus, among its other uses, helps trace the path of falling bombs.Written with wit and clarity for the intelligent reader who has taken high school and perhaps college math, this volume deftly progresses from simple arithmetic to calculus and non-Euclidean geometry. It â œlives up to its title in every way [and] might well have been merely terrifying, whereas it proves to be both charming and exciting." â " Saturday Review of Literature.

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Customer Reviews

This book is for very few as it is not for the following group of readers:a) only peripherally interested in math;b) interested in math but wanting to learn more in a concise manner and readily bored with

exhaustive math history and early 20th century verbosity;c) mathematicians who already know that stuff;d) interested in math but requiring well organized and structured material.If you do not belong to any of the above four groups of readers, you probably will like this book. You may even love it. To improve the probability you will like it you should not read chapters sequentially. This will bore you. Instead jump in directly to the mathematics domains you are familiar with and you like best. For instance, chapter VII covers Probability and chapter IX covers Calculus. If you like Geometry, you are in luck as the authors dedicate two chapters to it (IV and VIII).The chapter on calculus covers a lot of grounds including not only derivatives but also definite and indefinite integrals, calculus and the laws of motions, and trigonometry. Your head may spin after this broad and deep excursion into calculus. And, this may be one of the authors' most successful chapters.The authors divulge a lot of fascinating information even though the latter is not always easily extractable. This includes very intuitive explanations of the discovery and calculations of Pi, e, i, and logarithms. They explain how mathematicians leveraged those discoveries. The numbers Pi and e have so many applications that they suggest our civilization in terms of mathematical understanding and its practical application would be truly primitive if not for them (Pi, e).

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