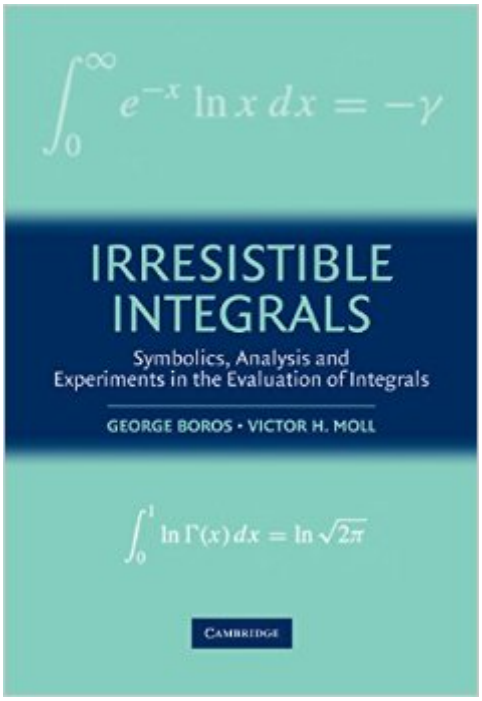
The book was found

Irresistible Integrals: Symbolics, Analysis And Experiments In The Evaluation Of Integrals



PDF
Adobe
DOWNLOAD EBOOK

Synopsis

The problem of evaluating integrals is well known to every student who has had a year of calculus. It was an especially important subject in 19th century analysis and it has now been revived with the appearance of symbolic languages. In this book, the authors use the problem of exact evaluation of definite integrals as a starting point for exploring many areas of mathematics. The questions discussed in this book, first published in 2004, are as old as calculus itself. In presenting the combination of methods required for the evaluation of most integrals, the authors take the most interesting, rather than the shortest, path to the results. Along the way, they illuminate connections with many subjects, including analysis, number theory, algebra and combinatorics. This will be a guided tour of exciting discovery for undergraduates and their teachers in mathematics, computer science, physics, and engineering.

Book Information

File Size: 5076 KB

Print Length: 322 pages

Simultaneous Device Usage: Up to 4 simultaneous devices, per publisher limits

Publisher: Cambridge University Press; 1 edition (June 21, 2004)

Publication Date: June 21, 2004

Sold by:Â Digital Services LLC

Language: English

ASIN: B00QIT3MRK

Text-to-Speech: Not enabled

X-Ray: Not Enabled

Word Wise: Not Enabled

Lending: Not Enabled

Enhanced Typesetting: Not Enabled

Best Sellers Rank: #128,307 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #2 inÂ Kindle Store > Kindle eBooks > Nonfiction > Science > Mathematics > Pure Mathematics > Algebra > Abstract #7 inÂ Kindle Store > Kindle eBooks > Nonfiction > Science > Mathematics > Applied > Differential Equations #15 inÂ Kindle Store > Kindle eBooks > Nonfiction > Science > Mathematics > Mathematical Analysis

Customer Reviews

Everyone who has touched calculus and analysis during the very first university years knows how

much time must be `lost' in the justification of quite clear facts (almost obvious to our intuition). At the same time, one becomes familiar with several tricky counterexamples to those clear facts if a condition (looking rather inessential!) is missed. Arriving then at the subject of definite and indefinite integration, one usually starts to think of calculus as a boring but unavoidable part of mathematics, and it is only on a higher level of university study when one may taste the real beauty of analysis by seeing so many wonderful applications of those boring statements.It is astonishing to see in the book "Irresistible integrals" that even the first steps in calculus may be full of an irresistible grace and that many contemporary beautiful results may become available so early. It is the task of the authors to introduce the reader to the subject of analysis by means of methods of definite integration and their applications to mathematical functions. The methods involved are not only classical (purely analytic) but also modern, like symbolic evaluation in computer algebra systems. An important novelty of the book is demonstrating the role of experiment in mathematics. This is really something that may help the beginner to understand the basic ideas of proofs and evaluations before doing the proofs rigorously and the evaluations formally. The book contains a lot of exercises, examples and computer algebra programs. Complex analysis is completely avoided to make the book as elementary as possible. Among the applications, the reader will find many results on special mathematical functions and mathematical constants.

Download to continue reading...

Irresistible Integrals: Symbolics, Analysis and Experiments in the Evaluation of Integrals Dad's Book of Awesome Science Experiments: From Boiling Ice and Exploding Soap to Erupting Volcanoes and Launching Rockets, 30 Inventive Experiments to Excite the Whole Family! Fourier Integrals in Classical Analysis (Cambridge Tracts in Mathematics) The Program Evaluation Standards: A Guide for Evaluators and Evaluation Users ISO 10993-1:2003, Biological evaluation of medical devices - Part 1: Evaluation and testing Inside Interesting Integrals: A Collection of Sneaky Tricks, Sly Substitutions, and Numerous Other Stupendously Clever, Awesomely Wicked, and ... (Undergraduate Lecture Notes in Physics) Pocket Book of Integrals and Mathematical Formulas, 5th Edition (Advances in Applied Mathematics) The Ark of Mathematics Part 4: Multivariable Calculus Integrals Math Shorts - Integrals Diseno Y Analisis De Experimentos/ Design and Analysis of Experiments (Spanish Edition) Likeable Social Media: How to Delight Your Customers, Create an Irresistible Brand, and Be Generally Amazing on Facebook (And Other Social Networks) Smoker Recipes: Irresistible Spicy Smoking Meat, Hamburger, Smoked Chicken and Pork for Your Best Barbecue (Smoking Meat & Barbecue Guide) The Braiser Cookbook: 22 irresistible recipes created just for your braiser-great for Le Creuset, Lodge, All-Clad, Staub, Tromantina, and all other braiser

pans. Design and Analysis of Reliability Studies: The Statistical Evaluation of Measurement Errors Irresistible APIs: Designing web APIs that developers will love Project Smoke: Seven Steps to Smoked Food Nirvana, Plus 100 Irresistible Recipes from Classic (Slam-Dunk Brisket) to Adventurous (Smoked Bacon-Bourbon Apple Crisp) Ketogenic Diet: Fat Bombs 100 Irresistible Sweet & Savory Snacks (Ketogenic Diet Fat Bomb, Fat Bombs Recipes, Low Carb Desserts) First Little Readers Parent Pack: Guided Reading Level C: 25 Irresistible Books That Are Just the Right Level for Beginning Readers Tempting Tropicals: 175 Irresistible Indoor Plants The Everything Big Book of Fat Bombs: 200 Irresistible Low-carb, High-fat Recipes for Weight Loss the Ketogenic Way

Dmca