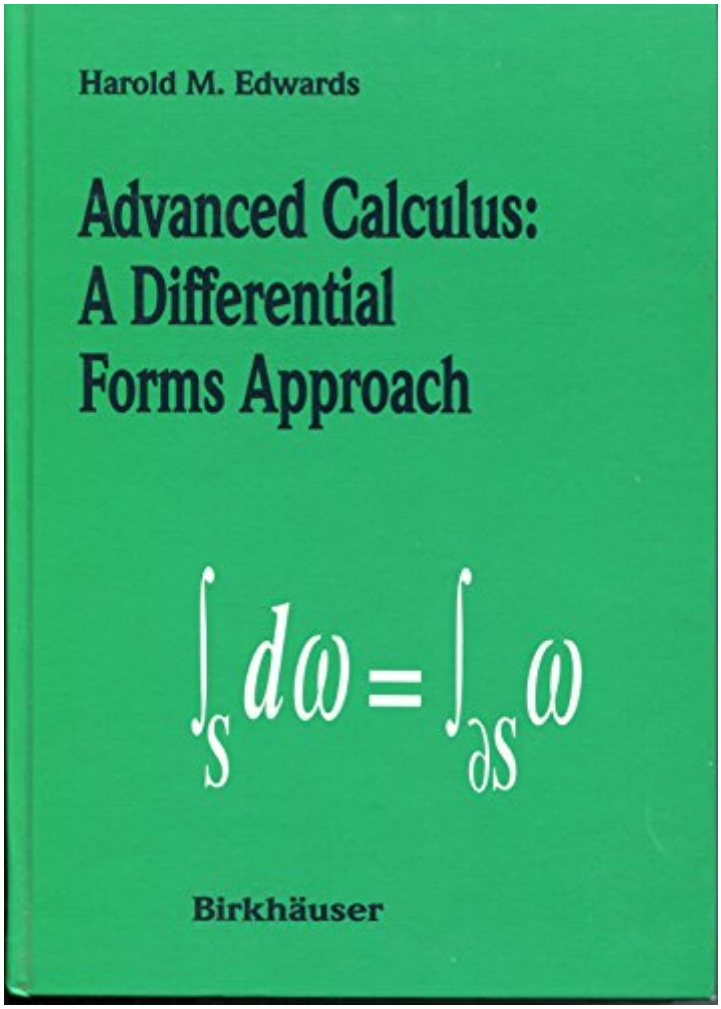
Advanced Calculus: A Differential Forms Approach PDF



Advanced Calculus: A Differential Forms Approach by Harold M. Edwards ISBN 3764337079
In a book written for mathematicians, teachers of mathematics, and highly motivated students, Harold Edwards has taken a bold and unusual the presentation of advanced calculus. He begins with a lucid discussion of differential forms and quickly moves to the fundamental theorems of calculus and Stokes' theorem. The result is genuine mathematics, both in spirit and content, and an exciting choice for an honours or graduate course or indeed for any mathematician in need of a refreshingly informal and flexible reintroduction to the subject. For all these potential readers, the author has made the approach work in the best tradition of creative mathematics. The diverse set of topics from which advanced calculus courses are created are presented here in beautiful unifying generalisation. The author emphasises the use of differential forms in linear algebra, implicit differentiation in higher dimensions using the calculus of differential forms, and the method

of Lagrange multipliers in a general but easy-to-use formulation. There are copious exercises to help guide the reader in testing understanding. The chapters can be read in almost any order, including beginning with the final chapter that contains some of the more traditional topics of advanced calculus courses. In addition, it is ideal for a course on vector analysis from the differential forms point of view. The American Mathematical Monthly Reviewer said 'The most important feature ...is that it is fun - it is fun to read the exercises, it is fun to read the comments printed in the margins, it is fun simply to pick a random spot in the book and begin reading. This is the way mathematics should be presented, with an excitement and liveliness that show why we are interested in the subject.' Other reviewers commented upon the re-release of this fascinating book.- 'An excellent idea!' 'Emphasizes mathematically important ideas and puts secondary points in their proper place.' 'The book is a gem!' 'Remains as fresh as when initially published.' 'Plenty of examples are provided and everything is well motivated.' 'Edwards opened the world of differential forms to me, and I am especially indebted to him for revealing the natural progress from the fundamental theorem of calculus to Maxwell's equations to special relativity.' The professional mathematician will find here a delightful example of mathematical literature; the student fortunate enough to have gone through this book will have a firm grasp of the nature of modern mathematics and a solid framework to continue to more advanced studies. This is a textbook, complete with examples, exercises, and solutions, for an advanced calculus course in which differential forms can be used to introduce the subject. Mathematicians who teach the subject will find it enriching reading for its modern viewpoint and techniques.

Advanced Calculus: A Differential Forms Approach Review

This Advanced Calculus: A Differential Forms Approach book is not really ordinary book, you have it then the world is in your hands. The benefit you get by reading this book is actually information inside this reserve incredible fresh, you will get information which is getting deeper an individual read a lot of information you will get. This kind of Advanced Calculus: A Differential Forms Approach without we recognize teach the one who looking at it become critical in imagining and analyzing. Don’t be worry Advanced Calculus: A Differential Forms Approach can bring any time you are and not make your tote space or bookshelves’ grow to be full because you can have it inside your lovely laptop even cell phone. This Advanced Calculus: A Differential Forms Approach having great arrangement in word and layout, so you will not really feel uninterested in reading.