



# A Transition to Advanced Mathematics: A Survey Course

By William Johnston, Alex McAllister



**A Transition to Advanced Mathematics: A Survey Course** By William Johnston, Alex McAllister

A *Transition to Advanced Mathematics: A Survey Course* promotes the goals of a "bridge" course in mathematics, helping to lead students from courses in the calculus sequence (and other courses where they solve problems that involve mathematical calculations) to theoretical upper-level mathematics courses (where they will have to prove theorems and grapple with mathematical abstractions). The text simultaneously promotes the goals of a "survey" course, describing the intriguing questions and insights fundamental to many diverse areas of mathematics, including Logic, Abstract Algebra, Number Theory, Real Analysis, Statistics, Graph Theory, and Complex Analysis.

The main objective is "to bring about a deep change in the mathematical character of students -- how they think and their fundamental perspectives on the world of mathematics." This text promotes three major mathematical traits in a meaningful, transformative way: to develop an ability to communicate with precise language, to use mathematically sound reasoning, and to ask probing questions about mathematics. In short, we hope that working through *A Transition to Advanced Mathematics* encourages students to become mathematicians in the fullest sense of the word.

A Transition to Advanced Mathematics has a number of distinctive features that enable this transformational experience. Embedded Questions and Reading Questions illustrate and explain fundamental concepts, allowing students to test their understanding of ideas independent of the exercise sets. The text has extensive, diverse Exercises Sets; with an average of 70 exercises at the end of section, as well as almost 3,000 distinct exercises. In addition, every chapter includes a section that explores an application of the theoretical ideas being studied. We have also interwoven embedded reflections on the history, culture, and philosophy of mathematics throughout the text.



Read Online A Transition to Advanced Mathematics: A Survey C ...pdf

### A Transition to Advanced Mathematics: A Survey Course

By William Johnston, Alex McAllister

A Transition to Advanced Mathematics: A Survey Course By William Johnston, Alex McAllister

A *Transition to Advanced Mathematics: A Survey Course* promotes the goals of a "bridge" course in mathematics, helping to lead students from courses in the calculus sequence (and other courses where they solve problems that involve mathematical calculations) to theoretical upper-level mathematics courses (where they will have to prove theorems and grapple with mathematical abstractions). The text simultaneously promotes the goals of a "survey" course, describing the intriguing questions and insights fundamental to many diverse areas of mathematics, including Logic, Abstract Algebra, Number Theory, Real Analysis, Statistics, Graph Theory, and Complex Analysis.

The main objective is "to bring about a deep change in the mathematical character of students -- how they think and their fundamental perspectives on the world of mathematics." This text promotes three major mathematical traits in a meaningful, transformative way: to develop an ability to communicate with precise language, to use mathematically sound reasoning, and to ask probing questions about mathematics. In short, we hope that working through *A Transition to Advanced Mathematics* encourages students to become mathematicians in the fullest sense of the word.

A Transition to Advanced Mathematics has a number of distinctive features that enable this transformational experience. Embedded Questions and Reading Questions illustrate and explain fundamental concepts, allowing students to test their understanding of ideas independent of the exercise sets. The text has extensive, diverse Exercises Sets; with an average of 70 exercises at the end of section, as well as almost 3,000 distinct exercises. In addition, every chapter includes a section that explores an application of the theoretical ideas being studied. We have also interwoven embedded reflections on the history, culture, and philosophy of mathematics throughout the text.

### A Transition to Advanced Mathematics: A Survey Course By William Johnston, Alex McAllister Bibliography

Sales Rank: #920608 in BooksPublished on: 2009-07-27Original language: English

• Number of items: 1

• Dimensions: 7.10" h x 1.50" w x 10.10" l, 3.20 pounds

• Binding: Hardcover

• 768 pages

**Download** A Transition to Advanced Mathematics: A Survey Cou ...pdf

Read Online A Transition to Advanced Mathematics: A Survey C ...pdf

### Download and Read Free Online A Transition to Advanced Mathematics: A Survey Course By William Johnston, Alex McAllister

#### **Editorial Review**

Review

"A readable, comprehensive resource for transitioning to higher mathematical thinking. A valuable feature is the different types of questions and exercises. Professors will benefit from each chapter's optional application section, offering flexibility for teaching purposes."--*Choice* 

About the Author

**William Johnston** is Professor of Mathematics at Butler University. He has been teaching mathematics to undergraduates since 1983.

#### **Books by the Same Author:**

An Introduction to Statistical Inference

**Alex M. McAllister** is an Associate Professor of Mathematics at Centre College. Over the past fifteen years, Alex has taught mathematics to undergraduates at the University of Notre Dame, Dartmouth College, and Centre College.

#### **Users Review**

#### From reader reviews:

#### Jeffery Harman:

What do you regarding book? It is not important to you? Or just adding material if you want something to explain what your own problem? How about your extra time? Or are you busy individual? If you don't have spare time to do others business, it is make you feel bored faster. And you have spare time? What did you do? Everybody has many questions above. They must answer that question due to the fact just their can do which. It said that about e-book. Book is familiar in each person. Yes, it is appropriate. Because start from on guardería until university need that A Transition to Advanced Mathematics: A Survey Course to read.

#### **David George:**

The reason? Because this A Transition to Advanced Mathematics: A Survey Course is an unordinary book that the inside of the e-book waiting for you to snap the item but latter it will jolt you with the secret this inside. Reading this book beside it was fantastic author who else write the book in such awesome way makes the content within easier to understand, entertaining approach but still convey the meaning fully. So , it is good for you because of not hesitating having this any longer or you going to regret it. This excellent book will give you a lot of gains than the other book possess such as help improving your skill and your critical thinking method. So , still want to hold off having that book? If I were being you I will go to the book store

hurriedly.

#### **Christopher McCormick:**

This A Transition to Advanced Mathematics: A Survey Course is great guide for you because the content which can be full of information for you who have always deal with world and have to make decision every minute. This specific book reveal it information accurately using great plan word or we can say no rambling sentences included. So if you are read the idea hurriedly you can have whole information in it. Doesn't mean it only provides you with straight forward sentences but tough core information with wonderful delivering sentences. Having A Transition to Advanced Mathematics: A Survey Course in your hand like having the world in your arm, info in it is not ridiculous one. We can say that no guide that offer you world in ten or fifteen tiny right but this guide already do that. So , it is good reading book. Heya Mr. and Mrs. active do you still doubt this?

#### **Arthur Fabry:**

What is your hobby? Have you heard that question when you got pupils? We believe that that concern was given by teacher to their students. Many kinds of hobby, Everyone has different hobby. And also you know that little person such as reading or as examining become their hobby. You have to know that reading is very important and book as to be the factor. Book is important thing to increase you knowledge, except your personal teacher or lecturer. You find good news or update in relation to something by book. Amount types of books that can you choose to use be your object. One of them is actually A Transition to Advanced Mathematics: A Survey Course.

Download and Read Online A Transition to Advanced Mathematics: A Survey Course By William Johnston, Alex McAllister #Z6WDM0P5YJN

## Read A Transition to Advanced Mathematics: A Survey Course By William Johnston, Alex McAllister for online ebook

A Transition to Advanced Mathematics: A Survey Course By William Johnston, Alex McAllister Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read A Transition to Advanced Mathematics: A Survey Course By William Johnston, Alex McAllister books to read online.

## Online A Transition to Advanced Mathematics: A Survey Course By William Johnston, Alex McAllister ebook PDF download

A Transition to Advanced Mathematics: A Survey Course By William Johnston, Alex McAllister Doc

A Transition to Advanced Mathematics: A Survey Course By William Johnston, Alex McAllister Mobipocket

A Transition to Advanced Mathematics: A Survey Course By William Johnston, Alex McAllister EPub