# Vector Calculus (3rd Edition)



By Susan J. Colley



Vector Calculus (3rd Edition) By Susan J. Colley

This text uses the language and notation of vectors and matrices to clarify issues in multivariable calculus. Accessible to anyone with a good background in single-variable calculus, it presents more linear algebra than usually found in a multivariable calculus book. Colley balances this with very clear and expansive exposition, many figures, and numerous, wide-ranging exercises. Instructors will appreciate Colley's writing style, mathematical precision, level of rigor, and full selection of topics treated.

Vectors: Vectors in Two and Three Dimensions. More About Vectors. The Dot Product. The Cross Product. Equations for Planes; Distance Problems. Some n-Dimensional Geometry. New Coordinate Systems. Differentiation in Several Variables: Functions of Several Variables; Graphing Surfaces. Limits. The Derivative. Properties; Higher-Order Partial Derivatives; Newton's Method. The Chain Rule. Directional Derivatives and the Gradient. Vector-Valued Functions: Parametrized Curves and Kepler's Laws. Arclength and Differential Geometry. Vector Fields: An Introduction. Gradient, Divergence, Curl, and the Del Operator. Maxima and Minima in Several Variables: Differentials and Taylor's Theorem. Extrema of Functions. Lagrange Multipliers. Some Applications of Extrema. Multiple Integration: Introduction: Areas and Volumes. Double Integrals. Changing the Order of Integration. Triple Integrals. Change of Variables. Applications of Integration. Line Integrals: Scalar and Vector Line Integrals. Green's Theorem. Conservative Vector Fields. Surface Integrals and Vector Analysis: Parametrized Surfaces. Surface Integrals. Stokes's and Gauss's Theorems. Further Vector Analysis; Maxwell's Equations. Vector Analysis in Higher Dimensions: An Introduction to Differential Forms. Manifolds and Integrals of k-forms. The Generalized Stokes's Theorem.

For all readers interested in multivariable calculus.

**Download** Vector Calculus (3rd Edition) ...pdf

**Read Online** Vector Calculus (3rd Edition) ...pdf

# Vector Calculus (3rd Edition)

By Susan J. Colley

### Vector Calculus (3rd Edition) By Susan J. Colley

This text uses the language and notation of vectors and matrices to clarify issues in multivariable calculus. Accessible to anyone with a good background in single-variable calculus, it presents more linear algebra than usually found in a multivariable calculus book. Colley balances this with very clear and expansive exposition, many figures, and numerous, wide-ranging exercises. Instructors will appreciate Colley's writing style, mathematical precision, level of rigor, and full selection of topics treated.

**Vectors:** Vectors in Two and Three Dimensions. More About Vectors. The Dot Product. The Cross Product. Equations for Planes; Distance Problems. Some *n*-Dimensional Geometry. New Coordinate Systems. **Differentiation in Several Variables:** Functions of Several Variables; Graphing Surfaces. Limits. The Derivative. Properties; Higher-Order Partial Derivatives; Newton's Method. The Chain Rule. Directional Derivatives and the Gradient. **Vector-Valued Functions:** Parametrized Curves and Kepler's Laws. Arclength and Differential Geometry. Vector Fields: An Introduction. Gradient, Divergence, Curl, and the Del Operator. **Maxima and Minima in Several Variables:** Differentials and Taylor's Theorem. Extrema of Functions. Lagrange Multipliers. Some Applications of Extrema. **Multiple Integration:** Introduction: Areas and Volumes. Double Integrals. Changing the Order of Integration. Triple Integrals. Change of Variables. Applications of Integration. **Line Integrals:** Scalar and Vector Line Integrals. Green's Theorem. Conservative Vector Fields. **Surface Integrals and Vector** Analysis; Maxwell's Equations. **Vector Analysis in Higher Dimensions:** An Introduction to Differential Forms. Manifolds and Integrals of *k*-forms. The Generalized Stokes's Theorem.

For all readers interested in multivariable calculus.

### Vector Calculus (3rd Edition) By Susan J. Colley Bibliography

- Sales Rank: #792109 in Books
- Published on: 2005-03-26
- Original language: English
- Number of items: 1
- Dimensions: 10.24" h x .95" w x 8.19" l, 2.70 pounds
- Binding: Hardcover
- 576 pages

**Download** Vector Calculus (3rd Edition) ...pdf

Read Online Vector Calculus (3rd Edition) ...pdf

## **Editorial Review**

#### About the Author

Susan Colley is the Andrew and Pauline Delaney Professor of Mathematics at Oberlin College and currently Chair of the Department, having also previously served as Chair. She received S.B. and Ph.D. degrees in mathematics from the Massachusetts Institute of Technology prior to joining the faculty at Oberlin in 1983. Her research focuses on enumerative problems in algebraic geometry, particularly concerning multiple-point singularities and higher-order contact of plane curves. Professor Colley has published papers on algebraic geometry and commutative algebra, as well as articles on other mathematical subjects. She has lectured internationally on her research and has taught a wide range of subjects in undergraduate mathematics. Professor Colley is a member of several professional and honorary societies, including the American Mathematical Society, the Mathematical Association of America, Phi Beta Kappa, and Sigma Xi.

#### **Users Review**

#### From reader reviews:

#### Jeanne Gonzales:

Book is to be different per grade. Book for children until finally adult are different content. As it is known to us that book is very important usually. The book Vector Calculus (3rd Edition) had been making you to know about other understanding and of course you can take more information. It doesn't matter what advantages for you. The book Vector Calculus (3rd Edition) is not only giving you considerably more new information but also being your friend when you sense bored. You can spend your personal spend time to read your e-book. Try to make relationship while using book Vector Calculus (3rd Edition). You never experience lose out for everything in case you read some books.

#### **Andrew Schulz:**

Here thing why this kind of Vector Calculus (3rd Edition) are different and reputable to be yours. First of all looking at a book is good but it really depends in the content of it which is the content is as tasty as food or not. Vector Calculus (3rd Edition) giving you information deeper and in different ways, you can find any reserve out there but there is no e-book that similar with Vector Calculus (3rd Edition). It gives you thrill reading journey, its open up your personal eyes about the thing in which happened in the world which is might be can be happened around you. It is easy to bring everywhere like in area, café, or even in your technique home by train. In case you are having difficulties in bringing the branded book maybe the form of Vector Calculus (3rd Edition) in e-book can be your choice.

#### **Priscilla Jefferson:**

Hey guys, do you really wants to finds a new book to see? May be the book with the name Vector Calculus (3rd Edition) suitable to you? The book was written by renowned writer in this era. Often the book untitled Vector Calculus (3rd Edition) is one of several books in which everyone read now. This book was inspired a lot of people in the world. When you read this publication you will enter the new way of measuring that you

ever know before. The author explained their thought in the simple way, and so all of people can easily to recognise the core of this book. This book will give you a great deal of information about this world now. To help you to see the represented of the world with this book.

#### **Anthony Bankston:**

Is it anyone who having spare time in that case spend it whole day by simply watching television programs or just lying down on the bed? Do you need something new? This Vector Calculus (3rd Edition) can be the respond to, oh how comes? A book you know. You are so out of date, spending your extra time by reading in this brand new era is common not a nerd activity. So what these publications have than the others?

# Download and Read Online Vector Calculus (3rd Edition) By Susan J. Colley #TC1BRE324FA

# **Read Vector Calculus (3rd Edition) By Susan J. Colley for online ebook**

Vector Calculus (3rd Edition) By Susan J. Colley 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 Vector Calculus (3rd Edition) By Susan J. Colley books to read online.

## Online Vector Calculus (3rd Edition) By Susan J. Colley ebook PDF download

Vector Calculus (3rd Edition) By Susan J. Colley Doc

Vector Calculus (3rd Edition) By Susan J. Colley Mobipocket

Vector Calculus (3rd Edition) By Susan J. Colley EPub

TC1BRE324FA: Vector Calculus (3rd Edition) By Susan J. Colley