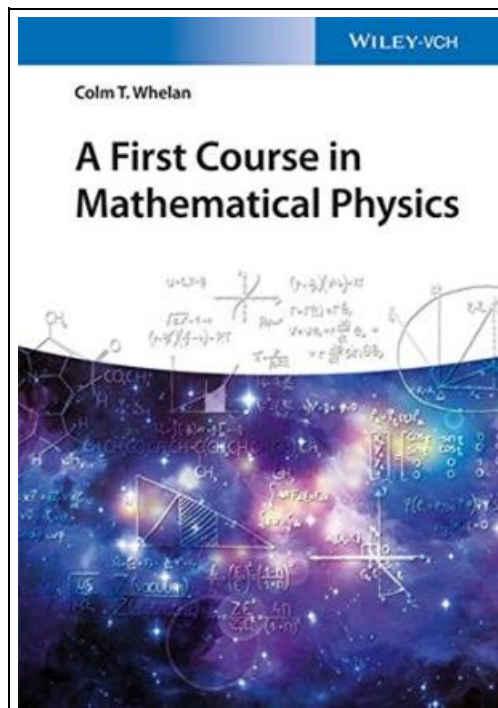


## A first Course in Mathematical Physics



Filesize: 6.77 MB

### **Reviews**

*The ebook is simple in go through safer to understand. I could possibly comprehended every thing out of this composed e pdf. Its been designed in an exceptionally basic way in fact it is only soon after i finished reading this pdf by which actually altered me, modify the way i really believe.*

*(Ms. Kellie O'Hara I)*

## A FIRST COURSE IN MATHEMATICAL PHYSICS



To download **A first Course in Mathematical Physics** eBook, you should click the link under and save the ebook or have accessibility to other information that are highly relevant to A FIRST COURSE IN MATHEMATICAL PHYSICS book.

Condition: New. Publisher/Verlag: Wiley-VCH | Assuming next to no prior knowledge of the topic, this is a much needed introduction to mathematical physics for freshmen students in Physical Sciences and Engineering to learn simply and easily the underlying mathematics and its applications. | The book assumes next to no prior knowledge of the topic. The first part introduces the core mathematics, always in conjunction with the physical context. In the second part of the book, a series of examples showcases some of the more conceptually advanced areas of physics, the presentation of which draws on the developments in the first part. A large number of problems helps students to hone their skills in using the presented mathematical methods. Solutions to the problems are available to instructors on an associated password-protected website for lecturers. | Preface page ix  
 Part I: Mathematics 11 Functions of one variable 21.1 Limits 21.2 Elementary Calculus 61.2.1 Chain Rule 71.2.2 Differentiation products and quotients 81.2.3 Inverse Functions 91.3 Integration 101.4 The Binomial Expansion 131.5 Taylor's series 151.6 Extrema 171.7 Power Series 181.8 Basic Functions 191.8.1 Exponential 191.8.2 Logarithm 231.9 1st order ordinary differential equations 241.10 Trigonometric Functions 261.10.1 L'Hopital's rule 281.11 Problems 302 Complex numbers 332.1 Exponential function of a complex variable 342.2 Argand Diagrams and the Complex Plane 362.3 Hyperbolic functions 382.4 The simple harmonic oscillator 402.4.1 Mechanics in one dimension 422.5 Problems 453 Functions of Several Variables 483.1 Partial derivatives 483.1.1 Definition of the partial derivative 483.1.2 Total derivatives 513.1.3 Some relations 533.1.4 Change of variables 553.1.5 Mechanics again 563.1.6 Exact differentials and thermodynamics 583.2 Extrema under constraint 603.3 Multiple Integrals 623.3.1 Triple Integrals 663.3.2 Change of variables 673.4 Problems 694 Vectors in  $\mathbb{R}^3$  724.1 Basic operation 724.1.1 scalar triple product 794.1.2 Vector equations of lines and planes 804.2 Kinematics in three dimensions 814.2.1 Differentiation...



[Read A first Course in Mathematical Physics Online](#)



[Download PDF A first Course in Mathematical Physics](#)

## Related eBooks



[PDF] **Too Old for Motor Racing: A Short Story in Case I Didnt Live Long Enough to Finish Writing a Longer One**

Access the web link under to get "Too Old for Motor Racing: A Short Story in Case I Didnt Live Long Enough to Finish Writing a Longer One" PDF document.

[Save Document »](#)



[PDF] **Christmas Elf: Christmas Stories, Christmas Coloring Book, Jokes, Games, and More!**

Access the web link under to get "Christmas Elf: Christmas Stories, Christmas Coloring Book, Jokes, Games, and More!" PDF document.

[Save Document »](#)



[PDF] **Klara the Cow Who Knows How to Bow (Fun Rhyming Picture Book/Bedtime Story with Farm Animals about Friendships, Being Special and Loved. Ages 2-8) (Friendship Series Book 1)**

Access the web link under to get "Klara the Cow Who Knows How to Bow (Fun Rhyming Picture Book/Bedtime Story with Farm Animals about Friendships, Being Special and Loved. Ages 2-8) (Friendship Series Book 1)" PDF document.

[Save Document »](#)



[PDF] **Childrens Educational Book Junior Vincent van Gogh A Kids Introduction to the Artist and his Paintings. Age 7 8 9 10 year-olds SMART READS for . - Expand Inspire Young Minds Volume 1**

Access the web link under to get "Childrens Educational Book Junior Vincent van Gogh A Kids Introduction to the Artist and his Paintings. Age 7 8 9 10 year-olds SMART READS for . - Expand Inspire Young Minds Volume 1" PDF document.

[Save Document »](#)



[PDF] **The Trouble with Trucks: First Reading Book for 3 to 5 Year Olds**

Access the web link under to get "The Trouble with Trucks: First Reading Book for 3 to 5 Year Olds" PDF document.

[Save Document »](#)



[PDF] **What is Love A Kid Friendly Interpretation of 1 John 311, 16-18 1 Corinthians 131-8 13**

Access the web link under to get "What is Love A Kid Friendly Interpretation of 1 John 311, 16-18 1 Corinthians 131-8 13" PDF document.

[Save Document »](#)