



Multidimensional Analysis

By Hart, George W.

Book Condition: New. Publisher/Verlag: Springer, Berlin | Algebras and Systems for Science and Engineering | This book deals with the mathematical properties of dimensioned quantities, such as length, mass, voltage, and viscosity. Beginning with a careful examination of how one expresses the numerical results of a measurement and uses these results in subsequent manipulations, the author rigorously constructs the notion of dimensioned numbers and discusses their algebraic structure. The result is a unification of linear algebra and traditional dimensional analysis that can be extended from the scalars to which the traditional analysis is perforce restricted to multidimensional vectors of the sort frequently encountered in engineering, systems theory, economics, and other applications.

| 0. Introductory.- 0.1 Physical Dimensions.- 0.2 Mathematical Dimensions.- 0.3 Overview.- Exercises.- 1. The Mathematical Foundations of Science and Engineering.- 1.1 The Inadequacy of Real Numbers.- 1.1.1 The Error of Substitution.- 1.1.2 The Problem with Linear Spaces.- 1.1.3 Nondimensionalization.- 1.1.3 Dimensioned Algebras.- 1.2 The Mathematics of Dimensioned Quantities.- 1.2.1 Axiomatic Development.- 1.2.2 Constructive Approach.- 1.2.3 Constraints on Exponentiation.- 1.2.4 The Dimensional Basis.- 1.2.5 Dimensional Logarithms.- 1.2.6 The Basis-Independence Principle.- 1.2.7 Symmetries of Dimensioned Quantities.- 1.2.8 Images.- 1.3 Conclusions.- Exercises.- 2. Dimensioned Linear Algebra.- 2.1 Vector Spaces and Linear Transformations.-...



READ ONLINE
[7.74 MB]

Reviews

This ebook is great. I am quite late in start reading this one, but better then never. I am just easily will get a satisfaction of reading through a composed pdf.

-- **Brendan Doyle**

Good e book and useful one. It really is simplistic but shocks in the 50 % of your book. Your way of life period will probably be convert the instant you total reading this ebook.

-- **Myah Williamson**

Other Books



Bully, the Bullied, and the Not-So Innocent Bystander: From Preschool to High School and Beyond: Breaking the Cycle of Violence and Creating More Deeply Caring Communities (Paperback)

HarperCollins Publishers Inc, United States, 2016. Paperback. Book Condition: New. Reprint. 203 x 135 mm. Language: English . Brand New Book. An international bestseller, Barbara Coloroso's groundbreaking and trusted guide on bullying-including cyberbullying-arms parents and teachers with real solutions for a...



History of the Town of Sutton Massachusetts from 1704 to 1876 (Paperback)

Createspace, United States, 2015. Paperback. Book Condition: New. annotated edition. 229 x 152 mm. Language: English . Brand New Book ***** Print on Demand *****.This version of the History of the Town of Sutton Massachusetts from 1704 to 1876 is a labor...



From Kristallnacht to Israel: A Holocaust Survivor's Journey (Paperback)

Dog Ear Publishing, United States, 2009. Paperback. Book Condition: New. 226 x 152 mm. Language: English . Brand New Book ***** Print on Demand *****.In the 1930s, as evil begins to envelope Europe, Karl Rothstein is born in Austria. As his life...



From Dare to Due Date (Paperback)

Harlequin, United States, 2016. Paperback. Book Condition: New. Not for Online.. 168 x 104 mm. Language: English . Brand New Book. THE NIGHT THEY MADE A BABY Mia Palinski had never even considered herself the kind of girl to have a one-night...



Good Tempered Food: Recipes to love, leave and linger over

Clearview. Paperback. Book Condition: new. BRAND NEW, Good Tempered Food: Recipes to love, leave and linger over, Tamasin Day-Lewis, Slow-cooked food and what the author likes to call 'good tempered food', is what proper cooking is all about. In fact, it's the...



Would It Kill You to Stop Doing That?

Book Condition: New. Publisher/Verlag: Little, Brown Book Group | A Modern Guide to Manners | A laugh-out-loud guide to modern manners by acclaimed humorist, author, and Vanity Fair columnist Henry Alford. | A few years ago, humorist and journalist Henry Alford found...