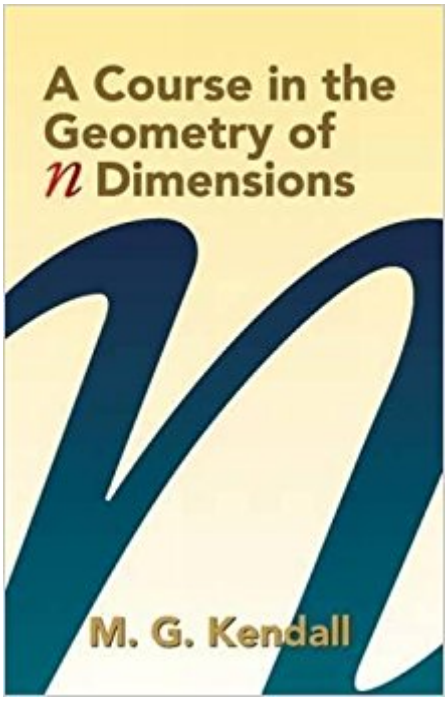
A Course In The Geometry Of N Dimensions (Dover Books On Mathematics)



Synopsis

This text for undergraduate students provides a foundation for resolving proofs dependent on n-dimensional systems. The author takes a concise approach, setting out that part of the subject with statistical applications and briefly sketching them. The two-part treatment begins with simple figures in n dimensions and advances to examinations of the contents of hyperspheres, hyperellipsoids, hyperprisms, parallelotopes, hyperpyramids, and simplexes. The second part explores the mean in rectangular variation, the correlation coefficient in bivariate normal variation, Wishartâ ™s distribution, correlations as angles, regression and multiple correlation, canonical correlations, and component analysis. 1961 edition.

Book Information

Series: Dover Books on Mathematics
Paperback: 80 pages
Publisher: Dover Publications; Dover Ed edition (July 15, 2004)
Language: English
ISBN-10: 0486439275
ISBN-13: 978-0486439273
Product Dimensions: 8.5 x 5.4 x 0.3 inches
Shipping Weight: 4 ounces
Average Customer Review: 4.2 out of 5 stars 2 customer reviews
Best Sellers Rank: #998,922 in Books (See Top 100 in Books) #125 inÂ Books > Science & Math > Mathematics > Geometry & Topology > Analytic Geometry #4183 inÂ Books > Science & Math > Mathematics > Applied > Probability & Statistics

Customer Reviews

Wonderful minibook.

This text was written to give a rapid introduction to the topic to statistics students who are having conceptual difficulties with the idea of more than 3 spacelike dimensions. The idea of using geometric intuition to explain the interaction of multiple variables has been very fruitful in dimensions up to 3 and can be as extended as fruitfully to collections of more than 3 variables, if the reader can first get over the intellectual hurdle that says that geometry has to have some physical referrent. This book does a very good job on that account. It doesn’t go very deeply into any aspect of the topic. Prerequisites are Calculus of several variables (partial derivatives), a first course in linear

algebra and high school geometry.A prospective reader who wants a deep understanding of the subject should really read Sommerville'sÂ An introduction to the geometry of n dimensionsÂ instead. Please note that Sommerville expects a higher level of knowlege of geometry and analysis than does Kendall.

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