Complex Numbers in n Dimensions (North-Holland Mathematics Studies)

S. Olariu

Complex Numbers in n Dimensions (North-Holland Mathematics Studies)

S. Olariu

Complex Numbers in n Dimensions (North-Holland Mathematics Studies) S. Olariu
Two distinct systems of hypercomplex numbers in n dimensions are introduced in this book, for which the multiplication is associative and commutative, and which are rich enough in properties such that exponential and trigonometric forms exist and the concepts of analytic n-complex function, contour integration and residue can be defined.

The first type of hypercomplex numbers, called polar hypercomplex numbers, is characterized by the presence in an even number of dimensions greater or equal to 4 of two polar axes, and by the presence in an odd number of dimensions of one polar axis. The other type of hypercomplex numbers exists as a distinct entity only when the number of dimensions n of the space is even, and since the position of a point is specified with the aid of n/2-1 planar angles, these numbers have been called planar hypercomplex numbers.

The development of the concept of analytic functions of hypercomplex variables was rendered possible by the existence of an exponential form of the n-complex numbers. Azimuthal angles, which are cyclic variables, appear in these forms at the exponent, and lead to the concept of n-dimensional hypercomplex residue. Expressions are given for the elementary functions of n-complex variable. In particular, the exponential function of an n-complex number is expanded in terms of functions called in this book n-dimensional cosexponential functions
of the polar and respectively planar type, which are generalizations to n dimensions of the sine, cosine and exponential functions.

In the case of polar complex numbers, a polynomial can be written as a product of linear or quadratic factors, although it is interesting that several factorizations are in general possible. In the case of planar hypercomplex numbers, a polynomial can always be written as a product of linear factors, although, again, several factorizations are in general possible.

The book presents a detailed analysis of the hypercomplex numbers in 2, 3 and 4 dimensions, then presents the properties of hypercomplex numbers in 5 and 6 dimensions, and it continues with a detailed analysis of polar and planar hypercomplex numbers in n dimensions. The essence of this book is the interplay between the algebraic, the geometric and the analytic facets of the relations.

⬇ **Download** Complex Numbers in n Dimensions (North-Holland Mat ...pdf

Download and Read Free Online Complex Numbers in n Dimensions (North-Holland Mathematics Studies) S. Olariu

---

From reader reviews:

Brian Price:

Here thing why that Complex Numbers in n Dimensions (North-Holland Mathematics Studies) are different and trusted to be yours. First of all studying a book is good but it really depends in the content of the usb ports which is the content is as scrumptious as food or not. Complex Numbers in n Dimensions (North-Holland Mathematics Studies) giving you information deeper as different ways, you can find any book out there but there is no reserve that similar with Complex Numbers in n Dimensions (North-Holland Mathematics Studies). It gives you thrill looking at journey, its open up your current eyes about the thing in which happened in the world which is perhaps can be happened around you. It is easy to bring everywhere like in recreation area, café, or even in your means home by train. When you are having difficulties in bringing the printed book maybe the form of Complex Numbers in n Dimensions (North-Holland Mathematics Studies) in e-book can be your option.

David Carson:

The publication with title Complex Numbers in n Dimensions (North-Holland Mathematics Studies) has lot of information that you can find out it. You can get a lot of benefit after read this book. This book exist new expertise the information that exist in this book represented the condition of the world at this point. That is important to yo7u to find out how the improvement of the world. This specific book will bring you with new era of the globalization. You can read the e-book on the smart phone, so you can read it anywhere you want.

Kathleen King:

Many people spending their time by playing outside together with friends, fun activity using family or just watching TV all day long. You can have new activity to pay your whole day by looking at a book. Ugh, do you consider reading a book can really hard because you have to bring the book everywhere? It fine you can have the e-book, getting everywhere you want in your Smart phone. Like Complex Numbers in n Dimensions (North-Holland Mathematics Studies) which is having the e-book version. So , why not try out this book? Let's notice.

Keith Lugo:

Within this era which is the greater person or who has ability to do something more are more valuable than other. Do you want to become among it? It is just simple method to have that. What you are related is just spending your time very little but quite enough to experience a look at some books. One of several books in the top record in your reading list is Complex Numbers in n Dimensions (North-Holland Mathematics Studies). This book which is qualified as The Hungry Hillsides can get you closer in becoming precious person. By looking way up and review this reserve you can get many advantages.

Download and Read Online Complex Numbers in n Dimensions (North-Holland Mathematics Studies) S. Olariu #9UOG3Q0J4I6

Read Complex Numbers in n Dimensions (North-Holland Mathematics Studies) by S. Olariu for online ebook

Complex Numbers in n Dimensions (North-Holland Mathematics Studies) by S. Olariu 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 Complex Numbers in n Dimensions (North-Holland Mathematics Studies) by S. Olariu books to read online.

Online Complex Numbers in n Dimensions (North-Holland Mathematics Studies) by S. Olariu ebook PDF download

Complex Numbers in n Dimensions (North-Holland Mathematics Studies) by S. Olariu Doc

Complex Numbers in n Dimensions (North-Holland Mathematics Studies) by S. Olariu Mobipocket

Complex Numbers in n Dimensions (North-Holland Mathematics Studies) by S. Olariu EPub