

- # 51 Define x_n by $x_n = x_{n-1} + \frac{1}{2}x_{n-2}$, $x_0 = 0$, $x_1 = 1$. Prove that for $n > 8$, x_n is not an integer.
- # 68 Find, asymptotically, the number of lattice points in the disc $x^2 + y^2 \leq R^2$ as $R \rightarrow \infty$.
- # 73 Given n points in the unit square, there is a shortest curve connecting them. Estimate the longest this curve can be.
- # 82 Show that if $f(x)$ and $f''(x)$ are bounded, then $f'(x)$ is. (Here $f(x) \in C^2$, and the domain is the whole line.)
- # 90 Can the positive integers be partitioned into at least two arithmetic progressions such that they all have different common differences?
- # 96 Show that $1 + n/1! + n^2/2! + \cdots + n^n/n! \sim \frac{1}{2}e^n$.
- # 109 At each plane lattice point there is placed a positive number in such a way that each is the average of its four nearest neighbors. Show that all the numbers are the same!

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Clifford analysis, By. F. Brackx, R. Delanghe, and F. Sommen, Research Notes in Mathematics, Vol. 76, Pitman Advanced Publishing Program, Boston, 1982, 308 pp., \$19.95. ISBN 0-2730-8535-2

1. Clifford analysis. What is Clifford analysis? The general answer is that it is the development of a function theory for functions which map \mathbf{R}^n into a universal Clifford algebra with a goal being to generalize to this setting properties of holomorphic functions of one complex variable. Other goals are to relate the monogenic functions, the functions which correspond to holomorphic functions in Clifford analysis, to distributions with values in a Clifford algebra and to study the duals of monogenic functions.

In this first section we define universal Clifford algebra and introduce topological and algebraic structures and spaces of test functions and distributions with values in a certain Clifford algebra; although of a rather technical nature, we need these basic definitions and concepts at our disposal in order to be able to compare the Clifford analysis with previous work and to obtain an understanding of Clifford analysis in its generality as presented in the book under review. In subsequent sections we will discuss motivation for the study of Clifford analysis and topics in the analysis, and we will make some conclusions concerning this book.