

Problems of Quantitative Methods Algebra, Trigonometry, Analytical Geometry and Mathematical Analysis (Part I)

Probleme de metode cantitative Algebra, trigonometrie, geometrie analitica si analiza matematica (Partea I)

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This book is mainly addressed to students and graduates from Engineering Sciences (Aerospace, Mechanics, Transports, Applied Sciences, Material Science, Power), Economics, Mathematics, Physics, and it also can be a useful handbook for the researchers, since it provides thorough details regarding issues of practical interest found in mathematics.

Both theory and applications are presented and explained. The book contains topics that complete the current curriculum of mathematics covered for the 1st and 2nd year of study.

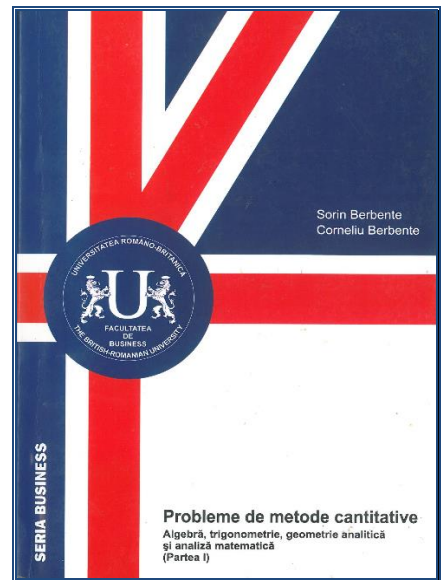
The approach is progressive, that is the topics are gradually introduced to the reader and potential user. The information structured within a 219 pages volume, refers to the theory and applications from algebra, trigonometry, analytical geometry and mathematical analysis.

There are 8 chapters, each one being structured in three parts; thus, the first part contains the definitions and the basic equations relevant to the topic, the second part presents solved problems and conclusions that enable the enhancement of the theory, and the third part contains proposed problems.

The applications represent the answers to the most significant problems from technical sciences and economy.

Chapter 1 introduces *Numbers, Sets and Operations*.

Chapter 2 deals with *Functions and Equations*.



Chapter 3 explains thoroughly the *Elements of Analytical Geometry*, with both 2D and 3D applications. *Sequences and Series of Numbers* are studied in Chapter 4, while Chapter 5 is dedicated to *Sequences and Series of Functions, Derivatives and Taylor Series*.

Chapter 6 presents the *Integration of Functions*, focusing on the analytical solutions of integrals, followed by an interesting approach for the computation of certain expenses.

Chapter 7 presents a detailed study regarding the *Differential Equations* (first order differential equations), with an original request-offer dynamic model.

Chapter 8, the last (but not the least, as importance from the view of the student) contains applications, for technical and economical purpose; such problems can provide a useful orientation and guide for examinations.

The **References list** contains significant books from the domain, as entries, shows the documentation and knowledge.

The authors had successfully proven their intent to show the practical feature of the basic mathematical knowledge by the means of the hereby presented applications, in purpose to modeling and solving technical and economical problems of great interest.

The aim of this approach refers to the contribution to the long-term stable benefits for the society.

The applications presented in this book allow the reduction of the human efforts, optimal expense of the resources, generator of profit, by the means of a professional activity.

Review and presentation:

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