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Kapitel: Algèbre linéaire et multilinéaire, théorie des matrices

Lou VAN DEN DRIES. — **Tame topology and o-minimal structures.** — London Mathematical Society lecture note series, vol. 248. — Un vol. broché, 15,5×23, de x, 180 p. — ISBN 0-521-59838-9. — Prix: £24.95. — Cambridge University Press, Cambridge, 1998.

These notes give a self-contained treatment of the theory of o-minimal structures from a geometric and topological viewpoint, assuming only rudimentary algebra and analysis. The book starts with an introduction and overview of the subject. Later chapters cover the monotonicity theorem, cell decomposition, and the Euler characteristics in the o-minimal setting and show how these notions are easier to handle than in ordinary topology. The remarkable combinatorial property of o-minimal structures, the Vapnik-Chervonenkis property, is also covered.

Algèbre linéaire et multilinéaire, théorie des matrices

Jin Ho KWAK, Sungpyo HONG. — **Linear algebra.** — Un vol. relié, 17,5×25, de IX, 369 p. — ISBN 0-8176-3999-3. — Prix: SFr. 48.00. — Birkhäuser, Boston, 1997.

Linear algebra continues to be one of the most useful courses in undergraduate mathematics, science and engineering, and one of the essential tools for industrial scientists. The primary aim of this book is to give a clear and rigorous presentation of the basic concepts of linear algebra as a coherent part of mathematics. At the same time, by emphasizing computational skills along with mathematical abstractions, the authors illustrate linear algebra's power and usefulness in its applications to such other disciplines as physics, computer science, and economics. The book contains many important examples, explanations and problems right in the middle of the text.

Anneaux et algèbres

Paul E. BLAND. — **Topics in torsion theory.** — Mathematical research, vol. 103. — Un vol. broché, 17×24, de 160 p. — ISBN 3-527-40131-8. — Prix: DM 128.00. — Wiley-VCH, Berlin, 1998.

The purpose of this book is to provide the reader with a quick introduction to torsion theory and to study selected properties of rings and modules in this setting. The material presented ranges from a torsion theoretical treatment of standard topics in ring and module theory to how previously untreated properties of rings and modules might be dealt with in this setting. The approach has been to develop the material so that classical results can be recovered by selecting an appropriate torsion theory. Torsion free covers are also studied and results are given which generalize well-known results on torsion free covers for modules (with usual torsion) over an integral domain.

Winfried BRUNS and Jürgen HERZOG. — **Cohen-Macaulay rings.** — Revised edition. — Cambridge studies in advanced mathematics, 39. — Un vol. broché, 15×23, de XIV, 453 p. — ISBN 0-521-56674-6. — Prix: £24.95. — Cambridge University Press, Cambridge, 1998.

This book meets the need for a thorough, self-contained introduction to the homological and combinatorial aspects of the theory of Cohen-Macaulay rings, Gorenstein rings, local cohomology, and canonical modules. A separate chapter is devoted to Hilbert functions (including Macaulay's theorem) and numerical invariants derived from them. Throughout each chapter the authors have supplied many examples and exercises, which combined with the expository style, will make the book very useful for graduate courses in algebra. As the only modern, broad account of the subject, it will be essential reading for specialists as well.