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Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	<p>""Linear Algebra Problem Book""; ""copyright page ""; ""Preface ""; ""Contents""; ""1 SCALARS""; ""1. Double addition""; ""2. Half double addition""; ""3. Exponentiation""; ""4. Complex numbers""; ""5. Affine transformations""; ""6. Matrix multiplication""; ""7. Modular multiplication""; ""8. Small operations""; ""9. Identity elements""; ""10. Complex inverses""; ""11. Affine inverses""; ""12. Matrix inverses""; ""13. Abelian groups""; ""14. Groups""; ""15. Independent group axioms""; ""16. Fields""; ""17. Addition and multiplication in fields""; ""18. Distributive failure""</p> <p>""19. Finite fields""""2 VECTORS""; ""20. Vector spaces""; ""21. Examples""; ""22. Linear combinations""; ""23. Subspaces""; ""24. Unions of subspaces""; ""25. Spans""; ""26. Equalities of spans""; ""27. Some special spans""; ""28. Sums of subspaces""; ""29. Distributive subspaces""; ""30. Total sets""; ""31. Dependence""; ""32. Independence""; ""3 BASES""; ""33. Exchanging bases""; ""34. Simultaneous complements""; ""35. Examples of independence""; ""36. Independence over R and Q""; ""37. Independence in C^2""; ""38. Vectors common to different bases""; ""39. Bases in C^3""</p> <p>""40. Maximal independent sets""""41. Complex as real""; ""42. Subspaces of full dimension""; ""43. Extended bases""; ""44. Finite-dimensional subspaces""; ""45. Minimal total sets""; ""46. Existence of minimal total sets""; ""47. Infinitely total sets""; ""48. Relatively independent sets""; ""49. Number of bases in a finite vector space""; ""50. Direct sums""; ""51. Quotient spaces""; ""52. Dimension of a</p>

quotient space"; "53. Additivity of dimension"; "4
TRANSFORMATIONS"; "54. Linear transformations"; "55. Domain and
range"; "56. Kernel"; "57. Composition"
"78. Reflexivity""79. Annihilators"; "80. Double annihilators"; "81.
Adjoint"; "82. Adjoint of projections"; "83. Matrices of adjoints";
"6 SIMILARITY"; "84. Change of basis: vectors"; "85. Change of
basis: coordinates"; "86. Similarity: transformations"; "87. Similarity:
matrices"; "88. Inherited similarity"; "89. Similarity: real and
complex"; "90. Rank and nullity"; "91. Similarity and rank"; "92.
Similarity of transposes"; "93. Ranks of sums"; "94. Ranks of
products"; "95. Nullities of sums and products"; "96. Some
similarities"
"97. Equivalence"

Sommario/riassunto

Linear Algebra Problem Book can be either the main course or the dessert for someone who needs linear algebra and nowadays that means every user of mathematics. It can be used as the basis of either an official course or a program of private study. If used as a course, the book can stand by itself, or if so desired, it can be stirred in with a standard linear algebra course as the seasoning that provides the interest, the challenge, and the motivation that is needed by experienced scholars as much as by beginning students. The best way to learn is to do, and the purpose of this book is to get the reader to DO linear algebra. The approach is Socratic: first ask a question, then give a hint (if necessary), then, finally, for security and completeness, provide the detailed answer.
