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SCIENCE & TECHNOLOGY

Mathematics

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The following review appeared in the September 2005 issue of CHOICE:

43-0369 QA184 2004-53353 CIP
Farin, Gerald. **Practical linear algebra: a geometry toolbox**, by Gerald Farin and Dianne Hansford. A K Peters, 2005.
384p bibl index ISBN 1568812345, \$67.00

Is linear algebra a tool that is capable of solving a myriad of problems or an example of mathematical structures and reasoning? The answer, of course, is both. In this book, Farin and Hansford certainly take the first viewpoint. Common theorem-proof presentation has been replaced by motivation, examples, or graphics. Their goal is to give the student an intuitive and geometric grasp of the fundamental concepts. The book is aimed at the freshman/sophomore level and is quite appropriate for students in engineering and computer graphics as well as in mathematics. It is well written and the examples are carefully chosen to motivate or exemplify the topic at hand. As a consequence, it is significantly different from a traditional work in the area. For example, "eigen things" (their term) are introduced in the plane and used to diagonalize symmetric matrices, but the general problem of diagonalizing a matrix is omitted. There is no mention of similar matrices. It appears to be a very good book, if the goal is introduction to applications, but perhaps not for introduction to mathematical proofs. **Summing Up:** Recommended. Lower-division undergraduates; two-year technical program students. -- *J. R. Burke, Gonzaga University*