Worked examples in applied mathematics, by B.A.L. Hart. Iliffe Books Ltd., London, 1968. 275 pages. 21 s.

This book deals largely with material not taught in most Canadian mathematics departments, as can be seen from the list of chapter titles:

1) Elementary vector theory; 2) Vector field theory; 3) General hydrodynamics; 4) Hydrodynamics (two-dimensional motion); 5) Elementary gravitational, electrostatic, and magnetostatic field theory; 6) Particle motion; 7) Plane motion of a rigid body and of systems of particles; 8) Impulsive motion and vibration problems; 9) Statics.

The style of presentation is much like a Schaum's outline: a brief statement of the relevant definitions and results, followed by worked examples. There are additional problems for the student to solve at the end of each chapter. Many of the examples are taken from English university examinations. Indeed, the book was intended to help prepare students for such examinations.

The author (or perhaps one should blame the examiners), seems to regard such things as expressions for curl $(p \times q)$, and for the Laplacian in orthogonal curvilinear coordinates as basic facts which the student ought to know. Many of the problems are solved essentially by computation and manipulation. I suppose this book might be useful as a supplement for a student studying these topics in classical mathematical physics or as a source of examples for an instructor teaching mathematics to physicists or engineers.

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College algebra and trigonometry, by Daniel E. Dupree and Frank L. Harmon. Prentice-Hall, Inc., Englewood Cliffs, New Jersey. ix + 288 pages. U.S. $7.95.

The chapter headings of this textbook are as follows:

1) Logic, sets, and the real number system; 2) Functions, inverse functions and graphs of functions; 3) Equations, inequalities, and identities; 4) Applications of the algebraic and trigonometric functions; 5) Determinants and matrices; 6) The exponential and hyperbolic trigonometric functions.

A review of Chapter 5 should suffice to indicate the general character and level of the book. Here sums, scalar multiples, and dot products of vectors (n-tuples of real numbers) are defined and computed, as are sums, scalar multiples, and products of matrices. Vectors and sums of vectors in 2- and 3-space are also interpreted geometrically. Sigma notation is introduced. Determinants are defined, their properties are stated, and a few determinants are computed. Cramer's rule is proved for the 3×3 case. Inverses of matrices are computed by calculating adjoints, and applied to the solution of certain systems of linear equations.

The book did not fire the reviewer's enthusiasm.

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