

A point is incident with a line if the point lies on (is a member of) the line; a line is incident with a point if the line falls on (passes through, contains) the point.

This book is very readable. Illustrations are effectively used. The basic concepts are nicely stated. There is an excellent bibliography. There are many interesting and appropriate quotations throughout the book. The author is careful not only to introduce the concepts thoroughly but also to warn the reader of possible misinterpretations. For example, on pages 70 and 71 he emphasizes that no matter how many figures are drawn, the figures will not provide a proof that the three points under discussion are collinear; rather the figures provide supporting evidence for a conjecture that still remains to be proved.

The author states (p. xvi) that "this book is not a textbook in the usual sense. . . ." I agree since no exercises are provided. However, readers should approach this book with "their pencils in hand" and work along with the author by drawing their own figures and providing their own illustrations for the concepts under discussion.

The book's mathematical structure is excellent. It is based on the recognition of various geometries and systems of coordinates; figures on a real projective plane; the Theorems of Pappus, Desargues, Pascal, and Brianchon; and a brief treatment of finite projective planes. The treatment throughout is mathematically sound and much more complete than an ordinary expository article or book.

Anyone who has at least vague recollections of solving two linear equations in two variables and of graphing lines and conic sections (circles, ellipses, parabolas, and hyperbolas) has sufficient background in mathematical skills to read this book. Even a casual reader may expect to broaden his understanding of geometry. A careful reader will find many opportunities for meditation on what has been said. The author has been very careful not to leave major gaps. The exposition is complete. However, this book is concerned with mathematical principles that deserve meditation. Those who read the book with care will find that this very worthwhile experience adds rich dividends to their understanding of geometric principles.

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## Conference and Symposium Reports

**Behavior of Materials at Cryogenic Temperatures.** A symposium (Lafayette, Ind.), June 1965. American Soc. for Testing and Materials, Philadelphia, 1966. 154 pp. Illus. Paper, \$8.50; members, \$5.95. Five papers: "Plastic behavior of metals at cryogenic temperatures" by E. B. Kula and T. S. Desisto; "Some basic and engineering considerations regarding the fracture of metals at cryogenic temperatures" by E. T. Wessel; "Low-temperature phase transformations" by R. P. Reed and J. F. Breedis; "Effect of metallurgical variables on the superconducting properties of metals and alloys (abstract only)" by H. W. Schadler and J. D. Livingston; and "Thermophysical properties of metals at cryogenic temperatures" by R. L. Powell.

**Chemical Physics of Ionic Solutions.** An international symposium of the Electrochemical Society (Toronto, Canada), May 1964. B. E. Conway and R. G. Barradas, Eds. Wiley, New York, 1966. 640 pp. Illus. \$25. Twenty-five papers.

**Hydrocarbon Fuel Cell Technology.** A symposium organized by the Division of Fuel Chemistry, American Chemical Society (Atlantic City, N.J.), Bernard S. Baker, Ed. Academic Press, New York, 1965. 576 pp. Illus. \$21.50. Thirty-six papers on the following topics: Indirect Systems (6 papers); Methanol Fuel Cells (8 papers); Molten Carbonate Fuel Cells (7 papers); Experimental Techniques (8 papers); and Direct Hydrocarbon Fuel Cells (7 papers).

**International Symposium on Genes and Chromosomes—Structure and Function** (Buenos Aires, Argentina), November–December 1964. Juan I. Valencia and Rhoda F. Grell, Eds. U.S. Department of Health, Education, and Welfare, Washington, D.C., 1965 (order from Superintendent of Documents, Washington, D.C.). 372 pp. Illus. \$3.50. Nineteen papers on the following topics: Genes: Structure and Function (6 papers); Chromosome Structure and Replication (4 papers); Chromosome Breakage and Reunion (2 papers); Chromosome Behavior (3 papers); and Chromosome Metabolism (4 papers).

**Materials Technology in Steam Reforming Processes.** Proceedings of a symposium (Billingham, England), October 1964. C. Edeleanu, Ed. Pergamon, New York, 1966. 395 pp. Illus. \$14. Thirty-one papers given at a symposium organized by the Agricultural Division, Imperial Chemical Industries.

**Prace i Materiały Naukowe.** First Protein Symposium (Warsaw), June 1964. vol. 6, Biochemistry and Clinic of Proteins in Ontogenesis. Organized by National Research Institute of Mother and Child, Warsaw. Państwowy Zakład Wydawnictw Lekarskich, Warsaw, 1965. 347 pp. Illus. Paper. Thirty-seven papers on the following topics: Biochemistry of Proteins in Ontogenesis (19 papers); Physiopathology of Immunoglobulins (5 papers); and Metabolism of Proteins and Amino Acids in Children (13 papers). Papers are in English, summaries in Polish.

**Proceedings of the SAC Conference** (Nottingham, England), July 1965. P. W. Shallis, Ed. Published for the Society for

Analytical Chemistry. Heffer, Cambridge, England, 1966. 623 pp. Illus. £6 6s. Fifty-three papers.

**Rarefied Gas Dynamics.** Proceedings, fourth international symposium (Toronto, Canada), July 1964. vols. 1 and 2. J. H. de Leeuw, Ed. Academic Press, New York, 1965. vol. 1, 716 pp., \$19.50; vol. 2, 624 pp., \$18.50. Illus. Seventy-two papers on the following topics: Kinetic Theory (7 papers); Shock Structure (9 papers); Transition Flow—Theory (9 papers); Transition Flow—Experimental (11 papers); Free Molecule and Internal Flow (4 papers); Rarefied Plasma Flows (4 papers); Experimental Methods in Rarefied Gas Dynamics (9 papers); Molecular Beams (6 papers); and Surface Interactions (13 papers).

**Reproduction: Molecular, Subcellular, and Cellular.** A symposium of the Society for Developmental Biology (Carleton, Minn.), June 1965. Michael Locke, Ed. Academic Press, New York, 1965. 358 pp. Illus. \$11.50. Twelve papers: "Reproduction: Molecular, subcellular, and cellular" by Herbert Stern; "Transcription and translation of genes" by K. C. Atwood; "Structural basis of the specificity of antibodies" by Alfred Nisonoff and F. P. Inman; "Interactions between plant viruses and host cells" by K. W. Mundry; "Interaction of viruses with the genetic material of the host cells" by Renato Dulbecco; "Chromosome reproduction in mitosis and meiosis" by C. P. Swanson and William J. Young; "The continuity of the chloroplast in *Euglena*" by Jerome A. Schiff and H. T. Epstein; "Extrachromosomal heredity in fungi" by Adrian M. Srb; "Final remarks: 'Why so much DNA?'" by S. Granick; "Haploidy versus diploidy in the reproduction of cell type" by Walter Tulecke; "Cell and tissue interactions in the reproduction of cell type" by Irwin R. Konigsberg and Stephen D. Hauschka; and "Aging as a consequence of growth cessation" by Robert R. Kohn.

**The Thalamus.** Proceedings of a symposium sponsored by the Parkinson's Disease Information and Research Center, Columbia University. Dominick P. Purpura and Melvin D. Yahr, Eds. Columbia Univ. Press, New York, 1966. 448 pp. Illus. \$15. Twenty-two papers.

**Tokyo Summer Lectures in Theoretical Physics, 1965**, pt. 1, Many-Body Theory. Ryogo Kubo, Ed. Syokabo, Tokyo; Benjamin, New York, 1966. 166 pp. Illus. \$6.75. Ten papers: "The fluctuation-dissipation theorem and Brownian motion" by Ryogo Kubo; "Relaxation phenomena near the critical points" by Hazime Mori; "Elementary excitations in a homogeneous Bose liquid, with application to He II" by David Pines; "Properties of liquid helium-three" by Keith A. Brueckner; "A new formulation of the inhomogeneous electron gas problem" by W. Kohn; "A new mechanism for superconductivity" by J. M. Luttinger; "Breakdown of the quasiparticle approximation in metals" by J. Robert Schrieffer; "The Landau-Ginsburg equations and the properties of type II superconductors" by P. G. de Gennes; "The theory of correlated crystals" by Keith A. Brueckner; and "The present status of the theory of nuclear structure" by Keith A. Brueckner.