

The second part of the book takes up the subject of projective analytic geometry, by discussing the usual topics, such as the triangle of reference, homogeneous coordinates, duality, the line at infinity, etc. Some of the topics already considered in the first part are developed further. All this is written with the same preoccupation for clarity and simplicity as the first part. The student will find many judicious remarks, many striking "asides" which cannot but interest him. Constant appeal is made to the student's geometric intuition. Synthetic methods are often made use of, and even synthetic proofs are given, when this procedure seems to simplify and expedite matters. Exercises are numerous throughout the book and often used to supply details of proofs and to clarify the text generally.

It is possible to raise the question whether the author, by making the presentation too easy, has not deprived the student of his birthright to come to grip with difficulties. This reviewer, for one, shares the author's view that such fears are futile. The difficulties inherent in the subject matter discussed, and in Mathematics, in general, are a sufficient guaranty that the learner will have to put forward his best efforts, if he is to get anywhere, and it is not necessary to pile up difficulties of presentation, just for the pleasure of having them there. It is more reasonable to smoothen the learner's path when possible and thus enable him to reach more quickly a higher level in his studies.

However, the reviewer does not share the author's view that it is always advisable to assume as meager a preparation on the part of the student as possible. The author followed a custom which has attained the dignity and the rigidity of a dogma. This "starting from scratch" is a burdensome procedure that impedes progress, and is often unnecessary.

The book as a whole is well thought out, well planned, and well written.

N. A. COURT

*Introductory Quantum Mechanics.* By V. Rojansky. New York, Prentice-Hall, 1938. 529 pp.

The prerequisites for a study of this book are "the elements of calculus and of ordinary differential equations, and a recognition of the failure of classical mechanics in the domain of atomic physics." The book is for those who are willing to devote the necessary time for getting a sound working knowledge of the subject. The emphasis is on ideas and fundamentals. Thus the problems are selected for mathematical simplicity and for their appropriateness in illustrating the theory. The free particle and the harmonic oscillator are most often used.

Mathematical and physical difficulties receive separate treatment. The mathematics of operators, eigenfunctions and eigenvalues, and matrices is treated fully enough for the comfortable reading of the physical part. The book closes with chapters on the states of the normal hydrogen atom, electron spin, and Dirac's theory of the electron.

It seems to the reviewer that the author has succeeded in his aim to introduce the reader to Quantum Mechanics, and that most readers would save time and get better results by working through this book before going to a more "comprehensive and critical survey of the theory, or a study of its applications" for which it is an introduction. The coherence of the book is to be praised. The author has made the subject his own and has not written a compilation.

K. W. LAMSON