Elementary Mathematics

By Prof. Hyman Levy. (Nelson's Aeroscience Manuals.) Pp. 216.

Modern Trigonometry

By M. J. G. Hearley. (Nelson's Aeroscience Manuals.) Pp. 168.

(London and Edinburgh: Thomas Nelson and Sons, Ltd., 1942.) 5*s*. net each.

THE utilitarian aspect of mathematics has been well emphasized in the declaration that "Mathematics is ever ready to serve, and it rules because it serves". The present conflict has undoubtedly called forth no inconsiderable development of the practical nature of the subject. As a consequence, quite a number of books have been issued, mainly for use in Service training.

There is no short cut to the realm of mathematical knowledge and skill, but the long road may be traversed more quickly and easily if the traveller's interest is vitally stimulated. In the two books under notice, this aim has been commendably attained. The volumes belong to a series designed to cover the field of science underlying the principles of aeronautics.

As would be expected, Prof. Levy's "Elementary Mathematics" is an inspiring tonic. In its seventeen chapters, the reader is led from first principles right into the heart of the subject by simple logical steps which are so attractively presented that the student is not only making useful progress, but also is amazed to find eventually what a practically interesting subject this alleged abstruse and meaningless mathematics really is! He becomes familiar with the varieties of number, including vectors; with the fundamental facts of geometry and algebra; with the conception of a function and the basic ideas underlying the calculus. He is also taught to calculate properly, with or without logarithms, tables of which are provided. It is indeed quite probable that the sincere reader will, like the famous character of Dickens, ask for more!

Mr. Hearley's "Modern Trigonometry" is designed to provide a fresh and interesting introduction to the subject. The practical nature of trigonometry is well developed by the inclusion of so many applications, and not only these, but also the attractive presentation of the text, reveal how well the aim has been carried out. The student will appreciate here the fundamental part of trigonometry in navigation and modern engineering. Besides answers to the exercises, the necessary tables are provided.

F. G. W. BROWN.

Chemical Industries

Chemical and Physical Data, Chemical Engineering, Glossaries of Industrial Chemicals, Pharmaceuticals, Constructional Materials, Perfumery Raw Materials, Directory of Plants and Materials. Edited by L. Ivanovszky. Sixteenth edition, largely rewritten and revised. Pp. 338. (London: Leonard Hill, Ltd., 1942.) 15*s*.

THIS is one of those books that everyone dealing with chemicals likes to have on his desk. It begins properly with the index so that we can find the information required, and is divided into sections dealing with constructional materials, power plant and water treatment, chemical plant, handling, conveying and transport, instruments and apparatus. Finally, there is much information about industrial and fine chemicals, including a glossary of trade names.

The advertisements of the firms prepared to supply all our requirements come boldly after each section, as they do on the front pages of the daily papers, instead of being hidden away at the back.

It is one of those books which, when we have become used to it, makes us wonder how we have done without it previously: it is hoped to make it an annual publication.

It is noted in the preface that Prof. D. M. Newitt, who has been associated with the preparation of the volume since the first edition, has now ceased to take any active part.

Science Looks Ahead

By Prof. A. M. Low; with Contributions by Dr. Julian Huxley, C. G. Grey, G. E. T. Eyston, F. Kingdon Ward, Dr. H. Spencer Jones, Sir Alliott Verdon-Roe. Pp. 640+47 plates. (London, New York and Toronto: Oxford University Press, 1942.) 12*s*. 6*d*. net.

PROF. A. M. Low is well known for his presentation of scientific and technical advances in popular terms. In the present volume, he has attempted a survey in descriptive terms of recent developments in many fields. In successive chapters he discusses sources of power, rays, science and war, materials of industry, transport, measurement, medicine, the sea, exploration of the universe, weather, communications, exploration, the cinema, and science and the criminal. Dr. Julian Huxley provides a chapter on evolution, Dr. H. Spencer Jones one on the planets, and Capt. F. Kingdon Ward two on food plants and 'living' fossils respectively; while C. G. Grey deals with aeroplanes in war, Capt. G. E. T. Eyston with speed records and Sir Alliott Verdon-Roe with flying. The forty-seven plates illustrate outstanding features of the articles they accompany, and there is a useful index.

A History of Tropical Medicine

Based on the Fitzpatrick Lectures delivered before the Royal College of Physicians of London, 1937–38. By Sir H. Harold Scott. Second impression. Vol. 1. Pp. xix+648+3 plates. Vol. 2. Pp. iv+649–1219+ plates 4–13. (London: Edward Arnold and Co., Ltd., 1942.) 63*s*. net.

THIS is the second edition of a book which was first published so recently as 1939 and reviewed in NATURE of November 11, 1939, p. 801. Volume 1 deals first of all with the history of tropical medicine in the navy and mercantile marine, the army, the Colonies, Protectorates and Dominions, India and Australia. It then proceeds to a consideration of the history of malaria, blackwater fever, yellow fever, trypanosomiasis, leishmaniasis and leprosy. Volume 2 continues with diseases, namely, cholera, plague, undulant fever, relapsing fever, meloidosis, dengue, amœbic dysentery, hepatitis, ankylostomiasis and tropical diseases connected with food. Some special areas, namely, the Suez and Panama Canals, are then reviewed, and the diseases connected with the slave trade are considered. Fifteen biographies are appended, and the book ends with a bibliography, appendix and author and subject indexes.