Pattern Making. By W. R. Needham. Pp. v + 114. 2s. 6d. net. 1921. (Blackie.)

This book, with a companion volume on Foundry Practice, should prove a great boon to young apprentices. The treatment, necessarily of an elementary nature, is simple but sound, the author never allowing the close coordination of pattern making and moulding to be forgotten.

It is well illustrated and covers a wide range of work, including the hand and machine tools, the manufacture of metal patterns and multiple production on the plate principle.

The author could with advantage, in his chapter on Struck Work and Sweeps, have elaborated somewhat on skeleton pattern work for the construction of pump volutes, turbine exhaust casings, and patterns of similar construction, which may be easily made up by the principles of generative geometry or methods of radial section. F. C. Mustard.

Elementary Algebra. Part II. By C. V. Durell and R. M. Wright. Pp. xxiii + 253-556 + xlvii-lxxxv. 5s. 6d. ; without Introduction and with select Answers, 4s. 6d. 1921. (Bell & Sons.)

Of the general merits of Part II. we can but repeat what has already been said of Part I. in the *Gazette*. It remains to indicate the ground covered. The book opens with chapters on indices, logarithms, ratio, proportion, and variation. A chapter on functions of one variable provides the general characteristics of simple functions. Next come sections on the ideas of limits and gradients, and then follow chapters on differentiation, and on integration as the reverse process of differentiation. Simple accounts are given of Dufton's and Simpson's approximate rules. Elementary series are now treated in the simplest possible way, the point of view being the " definite value in the appreciation of any kind of algebraic form, and in the cultivation of the power to generalise ideas and to utilise formulae. If the reader can be led to construct formulae for himself and to understand the idea of order, he will gain definite advantage from this chapter." From Permutations and Combinations, with a few remarks and examples on easy Probabilities, the student is led to the Binomial Theorem and its application to approximate calculations. A very useful chapter on empirical formulae precedes a chapter on Nomography, with a series of carefully worked out examples. So far the greater part of the book is for the non-specialist. The final pages deal with the theory of quadratics, Algebraic form, Σ notation and the like. About eighty pages are given to Revision Exercises, and the book closes with a Glossary, Index and log. tables.

Obituary Notices.

MR. H. G. MAYO.

WE regret to notice the death of Mr. H. G. Mayo, M.A. Cambridge, B.Sc. London, and L.C.P., who died on 27th December, 1921. He was educated at the Marling School, Stroud, and was a Scholar of Queen's College, Cambridge. He was successively Assistant and Second Master of Norwich Middle and Norwich City Schools, respectively, 1905-1913, and was Head Master of Ossett Grammar School from 1913-1917. Leaving Ossett, he was Assistant Master at Bristol Grammar School, 1917-1920. He was then appointed as the first Head Master of the new Oldershaw Secondary School. At the time of his death he was working with Prof. Tyndall, of Bristol University, on a new form of Hygrometer, for use in cold storage. His loss will be lamented by a large circle of pupils and friends.

MR. C. H. HODGES.

THE death is reported in New South Wales of Mr. C. H. Hodges, formerly assistant master in Rugby School, where he is remembered as a sportsman and a teacher of rare distinction. Mr. Hodges was educated at Carlisle School and Queen's College, Oxford, where he took a first in the mathematical final school.

After some experience as an assistant master at Radley, he was appointed on the staff at Rugby, but a breakdown in health caused him to seek a more congenial climate. He settled in Queensland as head master of Townsville School, and later became head master of Sydney School, which he developed into the best equipped and most important school in the Commonwealth. Mr. Hodges was regarded as one of the great constructive head masters and the pioneer of the public-school system in Australia.

MR. REGINALD SAUMAREZ DE HAVILLAND.

ETONIANS all over the world will receive the news of the death of Mr. Reginald Saumarez de Havilland with grief. Mr. Havilland was one of the best, if not the best, of rowing coaches the school ever had, and Eton's many successes in the Ladies' Plate at Henley during the past decade were largely due to his skill. After a distinguished career at Eton he went up to Oxford and obtained a third in the Mathematical Final School in 1884. He rowed in the Oxford Eight and became President of the O.U.B.C. He returned to Eton as an assistant master in 1889, and retired in 1920, when Mr. C. J. M. Adie took over his house. He was appointed Major Commandant of the Eton College Rifle Volunteer Corps in 1905. A successful house master and a most faithful friend, his cheery disposition early gained him the title of " Happy," afterwards altered to " Havi." Beloved by all with whom he came into contact, his memory will be cherished with affection by many generations of Etonians.— [*Journal of Education.*]

ENQUIRY.

Prof. W. H. Young, F.R.S., University College of Wales, Aberystwith, will be glad to hear of isolated volumes or sets of the *Math. Annalen* for sale.

THE LIBRARY.

THE Library has now been removed to 29 Gordon Square, London, W.C. 1 and Mr. W. E. Paterson has taken over the duties of Honorary Librarian.

The Librarian will gladly receive and acknowledge in the *Gazette* any donation of ancient or modern works on mathematical subjects.

REGULATIONS FOR THE USE OF THE LIBRARY BY MEMBERS.

1. Any member of the Association is entitled to borrow books from the Library (except those marked in the catalogue with an asterisk).

2. Not more than three volumes at a time may be borrowed, and any book borrowed must be returned within one calendar month.

3. The borrower must pay carriage both ways, and will be held responsible for any loss or damage.

4. Requests for the loan of books, or for permission to consult the books in the shelves, must be made to Mr. G. D. Dunkerley, at 29 Gordon Square, London, W.C. 1.

SCARCE BACK NUMBERS.

Reserves are kept of A.I.G.T. Reports and Gazettes, and, from time to time, orders come for sets of these. We are now unable to fulfil such orders for want of certain back numbers, which the Librarian will be glad to buy from any member who can spare them, or to exchange other back numbers for them :

Gazette No. 8 (very important).
A.I.G.T. Report No. 11 (very important).
A.I.G.T. Reports, Nos. 10, 12.