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REVIEWS.

PLANE TRIGONOMETRY AS FAR AS THE SOLUTION OF TRIANGLES; by J. B. Cherriman, M.A., late Fellow of St John's College, Cambridge, &c., &c. FOURTH EDITION, with numerous examples and Logarithmic Tables Edited by Alfred Baker, M.A., Mathematical Tutor, University College, Toronto. Toronto: Copp, Clark & Co.

A want long felt by the student has at length been supplied by the publication of the above text-book. The original text by Prof. Cherriman, though quite practical, in that it approached by the shortest method the solution of triangles, was not quite as comprehensive as might have been desired. This point has been thoroughly attended to in Mr. Baker's edition, in which the additional matter has been worked into the various parts, in which it was required, in the shape of explanations, including the papers set at the University Matriculation and First Year Examinations. The whole forms a very neat and compact volume, and the publishers are to be congratulated on its appearance.

We must not fail, however, to notice the tables of Logarithms, which conclude the work, and which are compiled in so brief a space that they must be of great advantage for ordinary calculation.

The Trigonometry will form an excellent text-book for those preparing for the Matriculation and First Year Examinations, for the Examinations in Engineering, and those required for the Provincial Land Surveyors of Ontario.

OUR HOMES. By Henry Hartshorne, A. M., M. D. Pp. 150, 12mo.—Philadelphia: Persley Blakiston, 1880 This excellent little work is the ninth of the series of American Health Primers. It treats in a popular and readable style of the plain, constructing, lighting, warming, ventilating, water-supply, draining, and disinfecting of dwellings, with special reference to the climatic and other conditions of this continent. There are, besides, chapters on population and workmen's homes. Much valuable information is given, and the practical suggestions seem judicious. The great prevalence of typhoid fever, a preventible disease, in the rural districts as well as the towns of this country, shows how much our people are in need of instruction in these matters. The authors and publishers of books such as this, which aim at giving, in a cheap form, the conclusions reached by the students of sanitary science, deserve the thanks and the pecuniary support of the public.

REMNANTS OF EARLY LATIN. Selected and explained for the use of students by Frederick D. Allen, Ph. D., Professor in Yale College. Pp. viii. and 106, 8vo. Boston: Ginn and Heath, 1880. This is a small but scholarly treatise, calculated to be very useful to students of Latin and philology, and likely to be read with delight by all taking an interest in those subjects, who happen to become acquainted with it. It contains a short introduction, dealing with the peculiarities of early Latin, spelling, inflexion, and versification, and a selection from inscriptions and literary sources, of those "remains of the earliest Latin as are most important as monuments of the language." We have found many of these "remains" interesting, on account of their matter as well as their linguistic form, and can speak in high terms of the fulness and goodness of the notes. The work is well printed, and may be said to be creditable alike to American scholarship and typography.

ELEMENTARY LESSONS IN ENGLISH. Boston: Ginn and Heath. This work is written by Professor W. D. Whitney, of Yale College, and Mrs. N. L. Knox. It is in two parts. Part I. contains *no technical Grammar*. It is designed to give children such a knowledge of the English language as will enable them to *speak, write, and use it with accuracy and force*. It is made up of exercises to increase and improve the vocabulary, lessons in enunciation, pronunciation, spelling, sentence-making, punctuation, the use of capitals, abbreviations, drill in writing gender and number forms, and the possessive form, letter-writing, and such other matters

pertaining to the art of language as may be taught simply, clearly, and profitably. Many and varied oral and written exercises supplement every lesson. Part II. is an introduction to the "Essentials of English Grammar." It is a most excellent work. The same publishers have issued a *Teachers' edition*, containing the text and valuable suggestions for developing the lessons.

BRAIN WORK AND OVERWORK. Philadelphia: Presley Blakiston. This is No. 10 of the American Health Primers. It discusses in a plain, straightforward manner the causes of nervous exhaustion, and the natural processes for the restoration of nerve force. The author is not an extremist or a mere theorist. He takes a common sense as well as a medical view of the questions he takes up. Teachers will find it of great use in enabling them to teach practical hygiene to their pupils.

ORATORY AND ORATORS. By Wm. Mathews, LL. D., Author of "Getting on in the World," "The Great Conversers, and other Essays," "Words; their Use and Abuse," "Hours with Men and Books." Chicago: S. C. Griggs & Co. \$2.00. This is a complete cyclopedia of all that pertains to elocution, gesture, &c., and is arranged in an admirable manner. It contains numerous standard selections for declamation, in addition to the very valuable chapters on the theory.

FIRST YEARS IN SONG LAND. Root and Son, Chicago. This contains over three hundred songs for imitation practice, songs for the study of notation, songs for recreation, and songs and hymns for special occasions. It is specially adapted for day schools and juvenile classes. The book contains well graded lessons, with very clear instructions for teaching the subject.

HALF A HUNDRED SONGS. Davis, Bardeen, & Co., Syracuse, N.Y. These were written by a teacher for use in her own school. She selected popular airs and adapted the words to them. They are very well written, and are appropriate to the various events of school life.

RODERICK HUME. Davis, Bardeen & Co., Syracuse, N. Y. This is a story of a New York teacher, written by Mr. C. W. Bardeen, Editor of the *School Bulletin*. Mr. Bardeen has evidently been a most observant man, not merely of what goes on inside the school room, but of all the outside influences connected with the teacher's work. Most teachers will recognize the characters as old friends or foes. They will meet the different kinds of trustees, the ignorant, the officious, the intermeddling, the men who have relations in the teaching profession, the men who are trustees merely for the advantages their positions may throw in their way, and the good, practical, common-sense man who believes the well-trained teacher to be the best judge in matters relating to his own business. Teachers of many varieties meet the reader, some deserving of esteem for the qualities of their heads and hearts, some exhibiting traits of character not to be admired. The lamentable fact that teachers are not true to each other receives a clear illustration. Election contests, school-book agents, the intense rivalry of too many neighboring towns, and other weak points of the school system are faithfully portrayed. Teachers cannot fail to be greatly benefitted by reading the book. Roderick's address to his pupils is a compendium of the best points in the highest kind of school management. Miss Duzenberrie's victory and Vic Blarsten's closing remarks ought to teach lessons of warning to many teachers who are even the most in earnest about their work. Mary Lowe is a beautiful model of a teacher, and no one will be surprised that Roderick should make her his helpmeet instead of his assistant. It is a capital story, and we recommend it strongly to every Canadian teacher. Each one should get a copy for himself, as he will wish to read it more than once.

THE ANALYST, A JOURNAL OF PURE AND APPLIED MATHEMATICS. Edited and published by J. E. Hendricks, Des Moines, Iowa. The Analyst, as usual, contains a number of valuable and interesting articles—On the Variation of the Length of the Day, Quaternions, Spheres Cutting, Given Spheres at Same Angle, The Cissoid, Problems with their Solutions. It is well worthy the patronage of Canadian mathematicians.

THE MATHEMATICAL VISITOR. Edited and Published by Artemus Martin, M.A., Member of the London Mathematical Society, Erie, Pa. Mr. Martin judiciously divides his journal into Junior and Senior Departments; the former deals with Arithmetic, Algebra, Geometry, Trigo-