

## SHORTER NOTICES.

*Junior High School Mathematics.* By GEORGE WENTWORTH, DAVID EUGENE SMITH, AND JOSEPH CLIFTON BROWN. Book 3; 282 pages, price 96 cents. Boston, Ginn, 1918.

FOR many years past, the unification of elementary mathematics has been a constant subject of discussion. Until recently, however, very little progress has been made in the direction of a practical solution of this problem. Only in vocational education has there been any definite attempt to modernize and coordinate instruction in mathematics, and in this field results are necessarily of somewhat limited application. Everyone interested in educational affairs must recognize the necessity of keeping pace with the growing needs and opportunities of our time. The members of the American Mathematical Society as well as teachers of high school mathematics should therefore feel indebted to the authors of the work under review for having so effectively modernized high school mathematics, especially geometry, and for the attractive and teachable form in which the results are here presented.

The two books of the series which precede the one under review were intended for the seventh and eighth grades, and include arithmetic, the elements of algebra, and intuitive geometry. Book 3 is based on this preliminary work, and includes algebra, the elements of plane trigonometry, and demonstrative geometry.

In particular, the first section, on algebra, includes the four fundamental processes applied to monomials, polynomials and fractions, the solution of simple and quadratic equations, and of simultaneous linear equations. Algebra is here presented as a universal shorthand, and approached from the practical standpoint of the formula. A pedagogical feature of special importance is the clear and concise treatment, and the use of the unit page, no topic overrunning the page, making each page complete in itself.

The section on plane trigonometry defines the trigonometric functions, and illustrates their practical application to the solution of right triangles. The importance of this section, of course, does not consist in its mathematical content, but