

in algebra, follow chapters on ratio and proportion, logarithms, arithmetical and geometrical progressions, the binomial theorem, inequalities, and exercises in physics.

The style is simple and the problems are numerous; the function notion is introduced and used in eight different places; the sine, cosine, tangent and cotangent functions are used in the solution of right triangles; correlation with geometry is made through problems involving geometric principles; graphic methods are used frequently; proper emphasis is placed upon translation from English to algebra and from algebra to English; historical notes and pictures of famous mathematicians appear in many places.

While the book as a whole seems to be a satisfactory text, yet we find a few points to criticise. Since  $\infty$  is not a number symbol in elementary algebra, we dislike "The symbol  $\infty$  denotes an exceedingly large number," etc., page 4. "The exponent 0 shows that  $x$  is used no times as a factor of the product, or has dropped out and so does not affect the product of the other factors," page 146, seems an unfortunate expression and not helpful in emphasizing the important fact that any number with a zero exponent is equal to unity. In the treatment of imaginaries it is feared that the student will miss the importance of expressing in the  $i$ -form before attempting operations with imaginaries. In variation the almost obsolete notation is used which many wish to see eliminated; the better equality form is mentioned but not sufficiently emphasized to avoid the difficulties students usually have with the language of variation. In the theory of the quadratic the general form  $ax^2 + bx + c = 0$  seems much better and is more usual than the form  $x^2 + px + q = 0$  which the author uses;  $p^2 - 4q$  is certainly not the usual or common form of the discriminant of the quadratic.

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*Complete Business Arithmetic.* By GEORGE H. VAN TUYL.  
New York, American Book Company, 1911. 4 + 416 pp.

ONE of the most serious problems which we have to face in the teaching of elementary mathematics at the present time relates to the work in our commercial courses. The world is far from coming to a decision as to what mathematics is best suited to the training of the boy and girl who propose to enter the field of commercial activity. The school of educators