

any place in Italy can be found when the hour of central Europe (used for civil purposes in that country) is known. Much astronomical information is also given. The map of Italy, which is divided into four parts for convenience, deserves especial commendation. The geographical details are very full and red lines drawn at intervals of a quarter of a degree of longitude, or one minute of time, show at a glance the local time difference between any two places.

ERNEST W. BROWN.

*Formulario scolastico di matematica elementare.* Per MARCO AURELIO ROSSOTTI. Milan, M. Hoepli, 1899. 18mo, pp. xvi + 191.

THIS compendium is prepared for use in the secondary schools of Italy; in the author's opinion it is representative of their methods, needs, and requirements; it thus possesses interest to the American reader in addition to the intrinsic value of its material. Its contents fall into four parts occupied with arithmetic, algebra, geometry, and trigonometry, respectively. As is indicated by the title, formulæ and results alone are given; the book is in no sense didactic and all demonstrations are excluded.

The first part contains numerous tables, among which are those of all primes less than ten thousand; of the minimum divisors of integers less than ten thousand and not divisible by two, three, five, or eleven; of the eight perfect numbers less than the twenty-fourth power of ten; of the first twenty-six pairs of amicable numbers; of the squares and cubes of all integers from one to one thousand; of the first fifty powers of two, three, and five; of the square and cube roots, to five places of decimals, of all the integers up to one thousand. The great convenience to be gained by the universal adoption of the metric system in Italy is evidenced by the fact that twelve pages of the seventy devoted to this part are sacrificed to the different tables of weights and measures of twelve Italian states. This section concludes with various theorems in ratio and proportion, and the rules of interest, alligation, and false position.

The second part presents initially the laws of the operations of ordinary algebra. There is a curious inversion in notation when  $b + ai$  appears as the symbol of the complex number. The elaborate tabular discussions of the solutions of linear and quadratic equations are so exhaustive as to be almost painful in their details. The usual properties of progressions, permutations, probabilities, indeterminate, exponential, and binomial equations are accompanied by col-