

## NOTE ON A MERSENNE NUMBER.

BY MR. H. J. WOODALL, A.R.C.S.

I DESIRE to announce the discovery that  $2^{181} - 1$  is divisible by 43441 (a prime). This is important because the exponent 181 is one of the few remaining prime numbers, less than 257, about which it was to be inferred, as not being included in Mersenne's list, that, used as exponents, they would give  $2^p - 1$  composite numbers. The writer has verified the result by direct division, and desires to express his thanks to Lieutenant Colonel Allan Cunningham, R.E., for his verification.

MARKET PLACE,  
STOCKPORT, ENGLAND,  
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## SHORTER NOTICES.

*A Text-Book on Advanced Algebra and Trigonometry*, with Tables. By W. C. BRENKE, Ph.D. New York, The Century Company, 1910. 8vo. x + 345 pp.

PROFESSOR Brenke has succeeded in bringing together within the 284 pages of his book that are taken up by the text most of the topics of algebra and trigonometry that are suitable for presentation in the freshman year of our colleges. Selection of subjects can be made so as to suit the needs of the classes in liberal arts colleges, where only three hours a week are devoted to mathematics, as well as those of classes in the colleges of engineering, where five weekly hours is the allotted time.

As the title indicates, this book is an attempt to correlate the subjects of algebra and trigonometry. The author says in the preface: "Usually algebra is taken up first and then trigonometry, or else the two subjects are studied on alternate days. Neither plan is quite satisfactory. It has therefore seemed to the writer that a single book, treating both subjects in a correlated manner, might be of service both to student and teacher."

In the professional colleges correlation is induced by the fact that the work in mathematics is to be applied later on; the desire to direct the work as much as possible toward the appli-