Ikosaeder" (1884), page 18, to prove that the icosahedron-group of rotations is simple does not apply. The alternating substitution group of degree 68 is such an instance. The number of substitutions of the form abc is

$$\frac{68 \cdot 67 \cdot 66}{3} = 100232,$$

and

$$1 + 100232 = 9 \cdot 7 \cdot 37 \cdot 43.$$

The diophantine equation

$$1 + 100232\alpha + \ldots = d$$

has in this case at least the following three solutions:

$$(\alpha, \beta, \delta, \ldots; d) = (1, 0, 0, \ldots; 1), \ (1, 1, 1, \ldots; \frac{68!}{2}),$$
$$(1, 1, 0, \ldots; 100233).$$

Since every alternating group whose degree exceeds four is simply isomorphic to a number of other simple groups, this instance proves that the given test is insufficient with respect to simple groups which are not alternating. The subgroup Γ_n of Professor Moore's article and its constituent groups are clearly such simple groups, if we take for G_n the given alternating group.   GEORGE A. MILLER.
  December 28, 1894.

BRIEFER NOTICES.

LOBACHEVSKY MEMORIAL VOLUME: 1793–1893. *Celebration of the one hundredth anniversary of the birth of N. I. Lobachevsky.* [In Russian.] Kazàn, University Press, 1894. Folio, 212 pp. With a portrait of Lobachevsky.

IN addition to a detailed account of the three days' celebration in honor of Lobachevsky, held at the University of Kazàn in November, 1893,* this volume contains the letters and telegrams of congratulation received by the university, and some of the addresses and papers read on this occasion. Professor Suvòrov gives a somewhat popular exposition of the meaning of non-Euclidean geometry, while Professor Smirnòv discusses the same subject rather elaborately from the philosophical point of view. The other papers are historical: Mr. Iznòskov speaks of Lobachevsky's activity as a member of the Kazàn Agricultural Society; the president of the university,

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* See *Bulletin of the New York Mathematical Society*, vol. 3, p. 201.

Professor Voroshilov, devotes his inaugural address to a sketch of the remarkable pedagogic and administrative activity of Lobachevsky, who for nineteen years (1827 to 1846) held the office of president of the university; Professor Vasiliev's paper, the most interesting of all, is a succinct account of Lobachevsky's life. An English translation of this biography was recently published by Professor G. B. Halsted, of the University of Texas.   A. Z.

NOTES.

A REGULAR meeting of the AMERICAN MATHEMATICAL SOCIETY was held Saturday afternoon, January 26, at three o'clock, the president, Dr. Hill, in the chair. There were ten members present. On the recommendation of the council, Professor Irving Fisher, of Yale University, New Haven, and Mr. William A. Freedman, of Columbia College, New York, nominated at the preceding meeting, were elected to membership. Six nominations for membership were received. The following papers were presented :

(1) "The principles of differentiation in space-analysis," by Professor A. MACFARLANE.

(2) "Apolar triangles on a conic," by Professor F. MORLEY.

(3) "The group of automorphic transformations of a bilinear form," by Professor H. TABER.

PROFESSOR CAYLEY died at Cambridge, England, on January 26, at the age of seventy-four years.

ON the 17th of December the annual award of prizes took place at the French Academy. Dr. JULIUS WEINGARTEN, professor of mechanics in the Charlottenburg Polytechnic School, received the grand prix de mathématiques, honorable mention being accorded to C. GUICHARD, professor of mechanics in the Faculty of Sciences at Clermont-Ferrand. The subject set by the Academy for this prize was: to advance in some important respect the theory of the deformation of surfaces.

The Bordin prize (to study the problems of theoretical mechanics admitting integrals algebraic in the velocities, especially quadratic integrals) was awarded to PAUL PAINLEVÉ of the Sorbonne, LIOUVILLE and ELLIOT receiving honorable mention.

The Francœur prize was given to J. COLLET; the Poncelet prize to H. LAURENT, for the whole of his mathematical works; the Dalmont prize to AUTONNE and MAURICE D'OCAGNE, with honorable mention to POCHET and WILLOTTE.