says, "On the sarcophagus is placed the figure of Sir Isaac Newton in a cumbent posture, with his elbow resting on several of his works. Two youths stand before him with a scroll, on which is drawn a remarkable diagram relative to the solar system, and above that is a converging series." Brewster would surely have said "binomial theorem" instead of "converging series," had the theorem been there.

In the article "Newton" in the *Penny Cyclopædia* (1840) we read, "It is not true that the binomial theorem is also engraven upon it [the monument], though it is so stated under 'Binomial Theorem,' on the authority of several writers." Now all mathematical articles in this cyclopædia are De Morgan's. From the numerous cross-references to mathematical articles made under "Newton" and the absence of references to other articles (such as "Light" and "Gravitation," not written by De Morgan), as well as from other considerations, we infer that the article "Newton" is De Morgan's also. Remembering his accuracy in details, much weight must be attached to this denial. The above passage is reprinted in the *English Cyclopædia* (with the omission of three words), while under "Binomial Theorem" we read, "It is often said, but wrongly, to have been engraven on his tomb in Westminster Abbey."

Thus it appears pretty conclusively that there is no more foundation for the statement that the Binomial Theorem was inscribed on Newton's tomb or monument than there was authority for the story of the "apple" or for the use of the word *fluxion* and the notation $\dot{x}$ by all English writers previous to 1704 (excepting Newton and Cheyne) and by Stone in 1743, in the sense of an infinitely small increment.

NOTES.

A REGULAR meeting of the AMERICAN MATHEMATICAL SOCIETY was held Saturday afternoon, October 27, at three o'clock, the President, Dr. McClintock, in the chair. The following persons, having been duly nominated and being recommended by the Council, were elected to membership: Miss Charlotte Cynthia Barnum, New Haven, Conn.; Professor Robert Lee Flowers, Trinity College, Durham, N. C.; Mr. George H. Hallett, University of Pennsylvania, Philadelphia, Pa.; Mr. Edgar Odell Lovett, University of Virginia, Charlottesville, Va.; Mr. Elmer A. Lyman, University of Michigan, Ann Arbor, Mich.; Mr. Max Osterberg, Columbia College, New York, N. Y.; Dr. James P. Pierpont, Yale University, New Haven, Conn.; Mr. Ralph Augustus Roberts, New York, N. Y.

The following papers were read :

(1) "A method for calculating simultaneously all the roots of an equation—Second paper," by Dr. Emory McClintock.

(2) "Determination in a literal form of the motion of the Moon's perigee," by Dr. G. W. Hill.

Dr. McClintock's paper was a continuation of a previous paper (see BULLETIN for October, 1894, pp. 2–4). It will be printed in the *American Journal of Mathematics.*

Dr. Hill's paper will appear in the *Astronomical Journal.* He has furnished the following abstract: "The earlier investigators of the lunar theory contented themselves with giving a numerical result for the motion of the Moon's perigee; and Plana was the first to derive a literal expansion. Considering only the principal part, he carried it to the term in m^7 inclusively, m denoting the ratio of the month to the year. This expression was afterwards confirmed by Pontécoulant and others. Delaunay in elaborating his lunar theory added the terms in m^8 and m^9. Comparing these terms with the numerical result of my paper on the motion of the Moon's perigee of 1877, it seemed to me that they were probably somewhat in error. However, as this was not certainly proved, I abstained from making any assertion to this effect. But Mr. Andoyer has, within a few years, given values for the coefficients of these two terms differing somewhat from those of Delaunay, and which he claims ought to be substituted for the latter. It seemed important that these new values of Mr. Andoyer should be subjected to verification. This, accordingly, I have done in the present paper, with the result that Mr. Andoyer is right. To give more interest to the paper I have determined the two next following terms of the series, viz., those in m^{10} and m^{11}."

AMONG the courses announced for the winter semester at the University of Göttingen are the following: Klein, Theory of numbers—Weber, Introduction to the higher mathematics, Calculus of variations—Schönflies, Algebra, Descriptive geometry—Burkhardt, Axioms of geometry—Ritter, Introduction to the theory of functions—Pockels, Hydrodynamics—Schering, Partial differential equations—Riecke, Thermodynamics—Voigt, Applications of potential theory—Ambronn, Higher geodesy—Schur, Determination of orbits of planets and comets.

THE fall announcements of Macmillan & Co. include a long series of works. We may mention: "A Treatise on Bessel's Functions," by G. B. Mathews and A. Gray; "Elliptic Functions," by A. C. Dixon; "Practical Plane Geometry," by J. H. Spanton; "An Introductory Account of Certain Modern Ideas

and Methods in Plane Analytical Geometry," by Charlotte A. Scott; "An Elementary Treatise on the Theory of Functions," by J. Harkness and F. Morley; "Integral Calculus and Differential Equations for Beginners," by Joseph Edwards; "Geometrical Conic Sections," by Charles Smith; "Elementary Mensuration," by F. H. Stevens; "The Theory of Light," by Thomas Preston, second edition, thoroughly revised; "Magnetism and Electricity," by Andrew Gray.

WORKS of interest announced by the Cambridge University Press are: "The Scientific Papers of John Couch Adams"; "A Treatise on Spherical Astronomy," by Prof. Sir Robert S. Ball; "Hydrodynamics: a Treatise on the Mathematical Theory of the Motion of Fluids," by Prof. H. Lamb, new edition; "Catalogue of Scientific Papers Compiled by the Royal Society of London," new series for the years 1874–83, vol. XI, in the press; "A Treatise on Geometrical Optics," by R. A. Herman; "An Introduction to Abel's Theorem and the Allied Theory," by H. F. Baker; "A Treatise on Geometrical Conics," by F. S. Macaulay; "Euclid's Elements of Geometry, Books XI and XII," by H. M. Taylor; "Mechanics and Hydrostatics" and "Electricity and Magnetism," both by R. T. Glazebrook.

Sampson Low & Co.'s announcements include "A Textbook of Mechanics and Hydrostatics," by Herbert Hancock, and "Thermodynamics: treated with elementary mathematics, and containing applications to animal and vegetable life, tidal friction, and electricity," by J. Parker. In Mr. Murray's list is a "History of Astronomy," by Arthur Berry; and in Chapman & Hall's a "Practical Plane and Solid Geometry," by Henry Angel. T. S. F.

NEW PUBLICATIONS.

I. HIGHER MATHEMATICS.

BÖKLE (C.). Die Ordnungskurven des Nullsystems. Ihre Verteilung im Raum und ihre Konstruction. [Progr.] Frankenthal, 1894. 8vo. 26 pp. Illustrated.

BOREL (E.) et DRACH (J.). Introduction à l'étude de la théorie des nombres et de l'algèbre supérieure. D'après des conférences faites à l'École normale supérieure par J. Tannery. Paris, Nony, 1895. 8vo. 9 and 355 pp.

CAYLEY (A.). Collected mathematical papers, Vol. VII. Cambridge, University Press, 1894. 4to. 25s