NOTES.

A REGULAR meeting of the AMERICAN MATHEMATICAL SOCIETY was held in New York, Saturday afternoon, November 30, at three o'clock, the President, Dr. HILL, in the chair. There were fifteen members present. On the recommendation of the Council, the following persons, nominated at the preceding meeting, were elected to membership: Professor ALEXANDRE S. CHESSIN, Johns Hopkins University, Baltimore, Md.; Dr. JONATHAN BRACE CHITTENDEN, Columbia College, New York; Mr. ARTHUR BOWES FRIZELL, University of City of New York, New York; Mr. JOHN ETHAN HILL, Columbia College, New York; Professor ELLEN HAYES, Wellesley College, Wellesley, Mass.; Professor THOMAS EMERY MCKINNEY, Marietta College, Marietta, O.; Professor EDGAR JEROME TOWNSEND, University of Illinois, Champaign, Ill. Three nominations for membership were received. The following papers were read:

(1) Mr. R. A. ROBERTS: "On the locus of the foci of conics having double contact with two fixed conics."

(2) Professor F. MORLEY: "On the common tangents to two similar epicycloids."

(3) Dr. G. W. HILL: "On the convergence of the series used in the subject of perturbations."

AT the Annual Meeting of the AMERICAN MATHEMATICAL SOCIETY, which will be held on Friday afternoon, December 27, at three o'clock, the President, Dr. G. W. HILL, will deliver an address entitled: "*Some Remarks on the Progress of Celestial Mechanics since the Middle of the Century.*"

THE mathematical courses of the *Faculté des Sciences* in Paris during the first semester of the current academic year include the following: — Professor Darboux: Principles of geometry and theory of algebraic curves; — Professor Picard: Analogies between the theory of algebraic equations and that of linear differential equations; — Professor Appell: General laws of equilibrium and motion; — Professor Tisserand: Principal methods employed for the determination of orbits of comets, planets, and double stars; — Professor Poincaré: Study of elasticity; — Professor Boussinesq: Fluids; study of their mechanical properties, and the most important motions in which interior friction plays a secondary part. The following supplementary courses are also given: — Mr. Painlevé: Differential and integral calculus; — Mr. Koenigs: Kinematics; — Mr. Andoyer: Rotations of the heavenly bodies on themselves. Mathematical conferences are conducted by Messrs.

Painlevé, Puiseux, Raffy, Andoyer, and Koenigs. Professor Hermite will not lecture until the second semester.

AMONG the courses for the current winter semester at Göttingen are the following: — Professor Schering: Potential function; Magnetic observations; Mathematico-physical seminarium; — Professor Klein: Theory of numbers; Mathematical seminarium; — Professor Schur: Spherical astronomy, I.; Practical work with instruments in the observatory; Method of least squares; Astronomical problems in seminarium; — Professor Hilbert: Integral calculus; Theory of partial differential equations; Mathematical seminarium; — Professor Schoenflies: Theory of functions; Descriptive geometry; Mathematical proseminarium; — Dr. Burkhardt: Vector analysis; — Dr. Ambronn: Astrophysics; Fundamental theory of astronomy; — Dr. Pockels: Electromagnetic theory of light; Fundamental principles of modern meteorology; — Dr. Bohlmann: Homogeneous linear differential equations; Life insurance; — Dr. Sommerfeld: Projective geometry; Exercises in descriptive geometry.

AMONG the recent and forthcoming publications of A. Hermann are the following: J. BOLYAI: "La science absolue de l'éspace, indépendante de la vérité ou de la fausseté de l'axiome xi. d'Euclide," translated from the German by J. Houel. G. DARBOUX: "Sur une classe remarquable de courbes et de surfaces algébriques et sur la théorie des imaginaires," second edition, with notes and additions. G. DEMARTRES: "Cours d'analyse de la Faculté des Sciences de Lille; 3me partie; Équations différentielles et aux dérivées partielles." P. DUHEM: "Le potentiel thermodynamique et ses applications à la mécanique chimique et à l'étude des phénomènes électriques," second edition. E. GOURSAT: "Leçons sur l'intégration des équations aux dérivées partielles du second ordre." This work is to consist of two volumes, the first of which is now ready. P. PAINLEVÉ: "Leçons sur le frottement, professées à la Faculté des Sciences de Paris." B. RIEMANN: "Sur les hypothèses qui servent de fondement à la géométrie," translated from the German by J. Houel.

NEW PUBLICATIONS.

I. HIGHER MATHEMATICS.

BÔCHER (M.). Simplification of Gauss's third proof that every algebraic equation has a root. (*American Journal of Mathematics*, vol. 17, pp. 266–268.) 4to.