NOTES.

THE third (July) number of Volume II. of the *Transactions* of the AMERICAN MATHEMATICAL SOCIETY contains the following papers : "On the convergence of continued fractions with complex elements," by E. B. VAN VLECK ; "Geometry within a linear spherical complex," by P. F. SMITH ; "A new determination of the primitive continuous groups in two variables," by H. F. BLICHFELDT ; "Determination of all the groups of order p^m which contain the abelian group of type $(m-2, 1)$, p being any prime," by G. A. MILLER ; "Zur linearen Transformation der ϑ-Reihen," by F. MERTENS ; "On a fundamental property of a minimum in the calculus of variations, and the proof a theorem of Weierstrass," by W. F. OSGOOD ; "Concerning Harnack's theory of improper definite integrals," by E. H. MOORE.

THE July number (volume 23, number 3), of the *American Journal of Mathematics* contains the following articles : "Geometry on the cubic scroll of the second kind," by F. C. FERRY ; "Congruent reductions of bilinear forms," by T. J. I'A. BROMWICH ; "On the imprimitive substitution groups of degree fifteen, and the primitive substitution groups of degree eighteen," by E. N. MARTIN ; "Removal of two terms from a binary quantic by linear transformations," by B. G. MORRISON.

THE July number (second series, volume 2, number 4) of the *Annals of Mathematics* contains the following papers : "Concerning du Bois-Reymond's two relative integrability theorems," by E. H. MOORE ; "On a theorem of kinematics," by P. SAUREL ; "The collineations of space which transform a non-degenerate quadric surface into itself," by R. G. WOOD ; "Note on multiply perfect numbers," by J. WESTLUND ; "The isoperimetrical problem on any surface," by J. K. WHITTEMORE ; "On a surface of the sixth order which is touched by the axes of all screws reciprocal to three given screws," by E. W. HYDE ; "Note sur l'évaluation d'une intégrale définie," by D. SINTSOF.

CORNELL UNIVERSITY.—During the academic year 1901–1902, the following advanced courses will be offered by the department of mathematics, each course extending through the year unless the contrary is explicitly stated : By Professor L. A. WAIT : Advanced analytic geometry, three

hours ; Advanced differential calculus three hours.—By
Professor J. McMahon : Theoretical mechanics, two hours ;
Potential functions and spherical harmonics, two hours ;
Theory of sound, two hours.—By Professor J. H. Tanner :
Algebraic invariants, two hours ; Reading course in Ger-
man, two hours.—By Professor Trevor : Mathematical
theory of thermodynamics, two hours.—By Dr. J. I. Hutch-
inson : Advanced integral calculus, two hours ; Elliptic,
automorphic, and abelian functions, three hours.—By Dr.
V. Snyder : Projective geometry, three hours ; Algebraic
curves, three hours ; General function theory, three hours.
By Dr. W. B. Fite : Introduction to the theory of groups,
three hours ; Theory of numbers, two hours.—By Mr.
——— : Differential equations, three hours.

JOHNS HOPKINS UNIVERSITY.—The following advanced
courses are offered by the department of mathematics dur-
ing the academic year 1901–1902:—By Professor F. Morley:
Geometry (advanced course), three hours : The differential
equations of physics, two hours, first half year ; Kinematics,
two hours, second half-year ; Mathematical seminary,
weekly.—By Dr. A. Cohen : Advanced differential equa-
tions, two hours ; Theory of algebraic numbers, two hours ;
Elementary theory of functions, two hours ; Elementary
differential equations, two hours.

Dr. F. Franklin will give a short course on Probability
in the second half-year.

Professors David Hilbert, of Göttingen, Georg Can-
tor, of Halle, and Ulisse Dini, of Pisa, have been elected
honorary foreign members of the London mathematical
society.

Dr. G. Zeuner, of Dresden, has been elected a corre-
sponding member of the Paris academy of sciences, in the
section of mechanics.

Dr. A. S. Chessin, formerly of Johns Hopkins Univer-
sity, has been appointed professor of mathematics at Wash-
ington University, St. Louis, Mo., to succeed Professor E.
A. Engler, who was recently elected president of the
Worcester Polytechnic Institute.

At Harvard University Mr. J. L. Love has been pro-
moted to an assistant professorship of mathematics.

Dr. W. B. Fite has been promoted to an instructorship
in mathematics at Cornell University.

THE death is announced of Dr. P. HELMLING, formerly professor of mathematics at the University of Dorpat, at the age of eighty-four.

PROFESSOR C. S. JAMES, formerly professor of mathematics and physics in Bucknell College, died June 8, 1901.

PROFESSOR T. H. SAFFORD, of Williams College, died June 13, 1901, aged sixty-seven years.

NEW PUBLICATIONS.

I. HIGHER MATHEMATICS.

ADAM (C.). See DESCARTES (R.).

AMALDI (U.). See PINCHERLE (S.).

ANDREIEF (K. A.). Elements of analytic geometry, with exercises and solutions. Moscow, 1900. 8vo. 216 pp. (Russian.)　　M. 10.00

ARBICONE (A.). See FORSYTH (A. R.).

AUTENHEIMER (F.). Elementarbuch der Differential- und Integralrech- nung, mit zahlreichen Anwendungen aus der Analysis, Geometrie, Mechanik und Physik. Für höhere Lehranstalten und den Selbstun- terricht. 5te Auflage, bearbeitet von A. Donadt. Leipzig, Voigt, 1901. 8vo. 10 + 602 pp.　　　　　　　　　　　　M. 9.00

BOREL (E.). Leçons sur les séries divergentes. Paris, Gauthier-Villars, 1901. 8vo 6 + 186 pp. (Nouvelles leçons sur la théorie des fonctions, III.)　　　　　　　　　　　　　　　　　　　Fr. 4.50

CANTOR (M.). Vorlesungen über Geschichte der Mathematik. (In 3 Bänden.) Vol. III, Abteilung 2 : von 1700–1726. 2te Auflage. Leipzig, Teubner, 1901. 8vo. 2 + 218 pp.　　　　　　　M. 3.20

DESCARTES (R.). Oeuvres, publiées par C. Adam et P. Tannery, sous les auspices du ministère de l'instruction publique. Correspondance. Vol. IV : juillet 1643–april 1647. Paris, Cerf, 1901. 4to. 713 pp.

DONADT (A.). See AUTENHEIMER (F.).

EDSER (E.). Differential and integral calculus ; for beginners, adapted to the use of students of physics and mechanics. London, Nelson, 1901. 8vo. 254 pp.　　　　　　　　　　　　　　　　2s. 6d.

ELLENSSON (L.). Die reciproken Polarkurven der Epi- und Hypocy- kloiden. (Diss.) Bern, 1899. 8vo. 103 pp., 1 plate.

FORSYTH (A. R.). Trattato sulle equazioni differenziali. Prima ver- sione dall' inglese da A. Arbicone. Livorno, 1901. 8vo. 352 pp.
　　　　　　　　　　　　　　　　　　　　　　　　　　Fr. 8.50

GECK (E.). Ueber die singulären Punkte algebraischer Flächen. (Diss). Tübingen, 1900. 8vo. 40 pp.

HAMILTON (W. R.). Elements of quaternions. 2d edition by C. J. Joly. Vol. II. London, Longmans, 1901. 8vo.　　　　　21s.