NOTES.

A NEW edition of the Annual Register of the Society has been published, containing beside the usual information a complete catalogue of the periodicals contained in the Society's library. Copies of the Register have been mailed to the members and extra copies can be obtained from the Secretary.

The opening (January) number of volume 24 of the *American Journal of Mathematics* contains the following memoirs: "Cyclic subgroups of the simple ternary linear fractional group in a Galois field," L. E. DICKSON; "Curves of triple curvature," by J. G. HARDY; "Primary prime functions in several variables and a generalization of an important theorem of Dedekind," by HARRIS HANCOCK; "The plane cubic curve in relation to the circular points at infinity," by R. A. ROBERTS; "Peirce's linear associative algebra," by H. E. HAWKES; "Groups defined by the orders of two generators and the order of their product," by G. A. MILLER.

The number contains a portrait of BENJAMIN PEIRCE.

THE January number (second series, volume 3, number 2) of the *Annals of Mathematics* contains the following papers: "Some applications of the method of abridged notation," by M. BÔCHER; "On the roots of functions connected by a linear recurrent relation of the second order," by M. B. PORTER; "Space of constant curvature," by F. S. WOODS.

AT THE regular meeting of the London mathematical society on December 12, 1901, Professor A. E. H. LOVE communicated a paper by Mr. J. H. MICHELL on the flexure of plates, and Lieut. Col. A. J. C. CUNNINGHAM gave a sketch of Euler's method of finding amicable numbers and announced two new primes. The preliminary programme for the January meeting of this year consisted of the following papers: "Non-uniform convergence and the integration of series," by the president, Dr. E. W. HOBSON; "Network," by Mr. S. ROBERTS; "On quartic curves with a triple point," by Mr. A. B. BASSET; "On the integrals of the differential equation $du/\sqrt{f(u)} + dv/\sqrt{f(v)} = 0$, where $f(x) \equiv ax^4 + 4bx^3 + 6cx^2 + 4dx + e$, considered geometrically," by Professor W. SNOW BURNSIDE; "On the fundamental theorem of differential equations," by Mr. W. H. YOUNG.

AT a meeting of the Liverpool mathematical society held in University College on Wednesday, December 18, 1901, Professor SEBASTIAN SIRCOM (President) took the chair, and delivered the third part of his paper "On some hydrodynamical problems examined," dealing principally with the stream lines of a fluid flowing past the cassinian oval. Mrs. A. BOOLE STOTT showed and explained some models and diagrams illustrating rotation in four-dimensional space about a plane; and Mr. H. W. CURJEL gave some notes with regard to axes of regular solids and planes of symmetry of regular hypersolids.

AMONG the prizes awarded by the Paris academy of sciences at its annual meeting, December 16, 1901, are the following:—In geometry: The Francoeur prize to L. LAUGEL; the Poncelet prize to E. BOREL.—In mechanics: The extraordinary prize of six thousand francs divided equally between MM. TISSOT and MARBEC; the Montyon prize to A. WITZ; the Plumey prize to Professor BOULVIN of the University of Gand; the Fourneyron prize was not awarded.—In astronomy: The Lalande prize to M. THOME; the Valz prize to M. CH. ANDRÉ.—The Prix Petit D'Ormoy in the mathematical sciences was awarded to Professor G. KOENIGS.

The subjects proposed for the current year include the following:—In geometry: The subject proposed for the grand prize of the mathematical sciences is to perfect, in an important point, the application of the theory of continuous groups to partial differential equations; for the Bordin prize (3,000 francs), to develop and perfect the theory of surfaces applicable to the paraboloid of revolution; the Francoeur prize (1,000 francs) and the Poncelet prize (2,000 francs) will be awarded for works useful to the progress of pure or applied mathematics.—In mechanics: The Plumey prize (2,500 francs) for an improvement in the steam engine or any other invention contributing to the progress of steam navigation; a Montyon prize (700 francs) for invention or improvement of instruments; the extraordinary prize of 6,000 francs for any invention tending to improve the efficacy of the French naval forces.—In astronomy: The Damoiseau prize (1,500 francs) for the completion of the theory of Saturn as given by Leverrier, publishing the rectifying formulæ and establishing the agreement between theory and observation; the Janssen gold medal for an important discovery in physical astronomy; the Lalande prize (540 francs) and the Valz prize (460 francs) for general work in astronomy.

THE PRINCE JABLONOWSKI SOCIETY of Leipsic, announces for 1902 a prize of 1,000 marks for an adequate treatment of the following subject:

"To complete in any essential respect the investigations contained in the paper of Poincaré: 'La méthode de Neumann et le problème de Dirichlet,' *Acta Mathematica*, volume 20 (1896), page 59."

The prize subject proposed by the Society for 1903 is the following:

"By thorough and incontestable experimental investigation, to make an essential contribution to the determination of the laws of light-electric currents."

THE DANISH ACADEMY OF SCIENCES offers its gold medal for a satisfactory discussion of the following question:

"Whether every family of tortuous curves contains limiting forms composed of straight lines." In the case of a negative answer to the general question, the requisite limitation and conditions are to be discussed.

DR. FELIX HAUSDORFF, docent in astronomy and mathematics at the University of Leipsic, has been promoted to an assistant professorship.

DR. FAGUART has been made assistant professor of mathematics at the University of Geneva.

PROFESSOR MIE, of Karlsruhe, has been called to an assistant professorship of mathematical physics at the University of Greifswald.

PROFESSOR N. I. HATZIDAKIS, of the Military Academy at Athens, has been appointed professor of mathematical analysis at the University of Athens.

Mr. E. LASKER, the celebrated chess-player, has been made lecturer in mathematics in Owens College, Manchester, England.

PROFESSOR L. MATTHIESSEN, of the University of Rostock, is concluding the one-hundredth semester of his ordinary professorship.

DR. B. O. PEIRCE, Hollis professor of mathematics and natural philosophy at Harvard University, has returned from Europe. He expects to resume the duties of his professorship at the beginning of the next academic year.

DR. C. A. LAISANT, examiner at the Ecole polytechnique and editor of the *Nouvelles Annales de mathématiques*, and other mathematical journals, has recently spent several weeks travelling in the United States.