

We have tacitly assumed that  $-\frac{\pi}{2} < \beta < \frac{\pi}{2}$ . However, the investigation of the different cases which may present themselves, although interesting, would carry us out of the limits of this paper. Let only one remark be made with respect to the variation of the angle  $\beta$ , namely, that *the motion of the sphere or spherical shell depends on the orientation of the inclined plane and the deviation from the line of slope is maximum when  $\beta = \pi$ , minimum when  $\beta = 0$ .*

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NOTES.

A REGULAR meeting of the American Mathematical Society was held in New York on Saturday afternoon, April 25, at three o'clock, Professor MANSFIELD MERRIMAN in the chair. There were twenty-one members present. On the recommendation of the Council, the following persons, previously nominated, were elected to membership: Mr. F. M. MCGAW, Bordentown Military Institute, Bordentown, N. J.; Mr. A. B. CHACE, Valley Falls, R. I.; Professor E. D. ROE, Oberlin College, Oberlin, Ohio. Four nominations for membership were received. The following papers were read:

- (1) Dr. EMORY McCLINTOCK: "On the most perfect forms of magic squares, with methods for their production."
- (2) Professor CHARLOTTE ANGAS SCOTT: "On the theory of the birational transformation of a plane curve."

THE committee appointed by the Council to arrange for holding a colloquium in connection with the summer meeting at Buffalo, announces two courses of six lectures each, one by Professor Maxime Bôcher on the subject of Linear Differential Equations and their Applications, the other by Professor James Pierpont on the Galois Theory of Equations. The meetings of the Colloquium will begin immediately after the adjournment of the Society and will continue through the week. A special circular giving detailed information in regard to the arrangements for the Colloquium will be issued by the Committee early in July.

A NEW list of officers and members of the Society has been compiled by the Secretary and has been published by the Society. In the same pamphlet are included the Constitution and By-Laws of the Society, an account of the last Annual Meeting, and the reports of the Secretary and the Treasurer for 1895. Extra copies can be obtained from the Secretary.

PROFESSOR J. GRIESS, of Algiers, has translated into French Professor KLEIN's very interesting pamphlet, *Lectures on certain questions of elementary geometry*, reviewed by Miss SCOTT in the March number of the BULLETIN, pp. 157-164. The translator has expanded the text in a few places, and has substituted synthetic proofs for certain analytical proofs of the original. Nony & Company of Paris are the publishers of this translation.

COLUMBIA UNIVERSITY. The Department of Mathematics will give during the next academic year the following graduate courses, each course consisting of three lectures a week: by Professor T. S. Fiske, Special topics in the differential and integral calculus, first term; Differential equations and applications, second term; Theory of functions (second course), both terms. By Professor F. N. Cole, Theory of the complex variable, first term; Elliptic functions, second term. By Dr. J. B. Chittendon, Theory of invariants, second term. By Dr. J. E. Hill, Higher plane curves, first term; analytical theory of curves of double curvature and curved surfaces, second term. By Dr. G. H. Ling, Theory of numbers, both terms.

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## NEW PUBLICATIONS.

### I. HIGHER MATHEMATICS.

AMERICAN MATHEMATICAL SOCIETY. See MATHEMATICAL PAPERS.

BOLZA (O.). See MATHEMATICAL PAPERS.

CATALOGO della insigne biblioteca appartenuta alla chiara memoria del principe Don Baldassare Boncompagni. 2a edizione. Parte I: Matematica, scienze naturali, ecc. Roma, 1895. 8vo. 511 pp.

CAUCHY (A.). Oeuvres complètes, publiées sous la direction scientifique de l'Académie des sciences et sous les auspices du Ministre de l'Instruction publique, avec le concours de MM. Valsou et Collet. 1re série, Vol. IX: Extraits des *Comptes rendus* de l'Académie des sciences. 1896. 4to. Fr. 25.00.

COLLET. See CAUCHY (A.).

DEL RE (A.). Geometria proiettiva ed analitica. Fascicoli 1 e 2. Modena, 1896. 8vo. pp. 1-256. Complete Fr. 8.50.

DUHAMEL (J. M. C.). Des méthodes dans les sciences de raisonnements. 3e édition. (En 5 parties). Partie II: Application des méthodes à la science des nombres et à la science de l'étendue. Paris, Gauthier-Villars, 1896. 8vo. Fr. 7.50.

EBNER (F.). Zur Theorie der Spiralfächen. [Diss.] Rostock, 1895. 8vo. 35 pp.