example, those arising in trigonometry, the principal relations between the elliptic integrals (Jacobian notation), and series for frequently occurring functions. In the last the author has been careful to state the limits within which the expansions are valid. At the end of the book are several numerical tables which include, beside the usual logarithmic and trigonometric ones, some four place tables of the elliptic integrals and of the gamma functions. In future editions a table of contents might be added.

Ernest W. Brown.

## NOTES.

Attention is called to the change-in the hours of meeting of the American Mathematical Society. Hereafter the morning session will open at 11 o'clock and the afternoon session at 2 o'clock. The Council will meet at $10: 15 \mathrm{a} . \mathrm{m}$.

A new list of members of the Society will be issued in January. Forms for furnishing necessary information have been sent to each member, and a prompt response will be of great assistance to the Secretary.

A meeting of the National academy of sciences was held at Columbia University, November 14-16, pure and applied mathematics being represented by Professors Cleveland Abbe, C. S. Hastings, E. S. Holden, A. E. Michelson, Simon Newcomb, Mr. C. S. Peirce, and Professor R. S. Woodward. The following mathematical papers were presented at the meeting: Professor R. S. Woodward: "The statical properties of the atmosphere," "A direct proof of the effect on the eulerian cycle of an inequality in the equatorial moments of inertia of the earth ;' Mr. C. S. Peirce : "The definition of continuity," "Topical geometry in general," "The map-coloring problem."

The preliminary programme for the November meeting of the London mathematical society announced the following mathematical papers:: "Note on Clebsch's second method for the integration of a Pfaffian equation," by Mr. J. Brill; "On the forms of lines of force near a point of equilibrium"; "The reduction of conics and quadrics to their principal axes by the Weierstrassian method of reducing quadratic forms;" and "On the reduction of a linear substitution to a canonical form, with applications to linear differ-

