are not enumerated in any x-group ; thus two points of a x-group fall at P, in whatever direction P is taken. This may perhaps be most simply expressed by saying that the complement to A contains an evanescent circuit about A. This is what de Paolis refers to as a "punto fondamentale doppio"; it is one variety of the fundamental point of the third species.

The fundamental points and lines, the double points, and the Jacobian, in the first plane, with their correspondents in the second plane, form a kind of framework for the transformation, indicating everything exceptional; and a complete knowledge of them is essential to a full comprehension of the possible effects of the general rational transformation. If $x > 2$, the co-jacobian has to be taken into account also, and as I have here shown, the different species of fundamental points and lines can no longer be discriminated ; hence the purely geometrical treatment becomes very involved, and it appears necessary to resort to analysis. Thus it is hardly to be expected that the treatment of transformation can be carried any further on the lines of Cremona and de Paolis ; but the intrinsic interest of de Paolis' work is surely excuse enough for devoting some little space to it in a periodical of a critical and historical nature.

BRYN MAWR COLLEGE,
        May, 1900.

NOTES.

THE Chicago Section of the AMERICAN MATHEMATICAL SOCIETY will meet in the Ryerson physical laboratory of the University of Chicago, on Thursday and Friday, December 27th and 28th next. Titles and abstracts of papers to be read at this meeting should be in the hands of the Secretary of the Section not later than December 5th.

THE third (July) number of the *Transactions* of the AMERICAN MATHEMATICAL SOCIETY contains the following papers : "Wave propagation over non-uniform conductors," by M. I. PUPIN ; "Ueber Systeme von Differentialgleichungen denen vierfach periodische Functionen Genüge leisten," by M. KRAUSE ; "On linear criteria for the determination of the radius of convergence of a power series," by E. B. VAN VLECK ; "On the existence of the Green's function for the