# THIRTY-FIRST SESSION, 1912-1913. 

First Meeting, Friday, 8th November 1912.

1. Integral equations and the determination of Green's

Functions in the Theory of Potential - - Prof. H. S. Carslaw.
2. On the Expansion of $\left(1+\frac{z}{\mid \underline{2}}+\frac{z^{2}}{\mid \underline{3}}+\frac{z^{3}}{\mid \underline{4}}+\ldots\right)^{-n}$
in positive integral powers of $z$, when $n$ is a
positive integer - - - - . - F. E. Edwardes.
3. A determinantal proof of Ptolemy's Theorem - Prof. J. C. Swaminarayan.

Second Meeting, Friday, 13th December 1912.

1. A method of finding (i) the double points of a
unicursal curve, (ii) unicursal quartics with three
given double points - . - . - - Dr R. J. T. Bell.
2. Integration of the $x-u$ differential equation in the
problem of two bodies - - . . . Dr G. D. C. Stokes.
3. The point " $O$ " and two associated cubics - - - F. G. Taylor.

Third Meeting, Friday, 1oth January 1913.

1. On a certain Algebraical Elimination - - - R. F. Davis.
2. Osculating conic at any point of a given plane curve Prof. J. C. Swaminarayan.
3. Diametral curves, and mean point loci of systems
of curves and surfaces - . . . . H. Levy.
Fourth Meting, Friday, 14th February 1913.
4. A problem of Robert Simson - - . - . Dr G. Philip.
5. On the Summation of $1^{r}+2^{r}+3^{r}+\ldots+n^{r} \quad-\quad$ J. A. Donaldson.
6. Generalized form of Clairaut's equation - - Prof. J. C. Swaminarayan.

Fifth Meeting, Friday, 14 th March 1913.

1. Some optical constructions - . - - - Prof. D. Robertson.
2. Generalisation of the "Orthopole"' and allied theorems Dr J. A. Third.
3. Mathematical Induction - - - - - . Dr R. F. Muirhead.

Sixth Meeting, Friday, 9th May 1913.

1. Nonagons nonuply in perspective - - . - Dr W. P. Milne.
2. On a certain class of linear substitutions with common
invariants, and an associated substitution of order four
D. G. Taylor.

1

Secondary Educational Congress, Saturday, 17th May 1913.

1. Changes in University Mathematics during the last twenty years - . - . . . Prof. E. T. Whittaker.

Seventh Meeting, Friday, 13th June 1913.

1. The " $O$ " circle of the co-axial triad through the vertices of a triangle, and the " $O$ " locus for a cyclic quadrangle - . - . . . Wm. Finlayson.
2. A simple equal-area linkage
E. M. Horsburgh.
3. Model of a well-known deformable triangular linkage
E. M. Horsburgh.
4. Graphical Harmonic Analysis
E. M. Horsburgh.
