From No. 15 we get the theorem:—If from any point M on a conic, a tangent be drawn meeting a confocal in N, the product of the perpendicular from the centre on the tangent at N by the intercept on the normal at N between the tangents at M and N is constant.

Mr J. S. MACKAY gave a synopsis of Frans Schooten's "Geometry of the Rule," as it is contained in the second book of the *Exercitationes Mathematicae*, Leyden, 1657.

Mr P. ALEXANDER contributed a note on the two definite integrals

$$\int_0^\infty \sin nx dx \quad \text{and} \quad \int_0^\infty \cos nx dx.$$

Sixth Meeting, April 10th, 1885.

A. J. G. BARCLAY, Esq., M.A., President, in the Chair.

Note on the evaluation of functions of the Form 0^0.

By T. B. SPRAGUE, M.A., F.R.S.E.

Let $f(t)$, $\phi(t)$, be two functions of t, such that they both vanish with t, that is, $f(0)=0$, $\phi(0)=0$; and put

$$z=\{f(t)\}^{\Phi t}.$$

Then, in order to find the limiting value of z when $t=0$, we proceed as follows:—

$$\text{Log}z=\phi(t)\,.\log f(t)=\frac{\log f(t)}{\dfrac{1}{\phi(t)}}$$

This fraction takes the form $-\frac{\infty}{\infty}$ when $t=0$, and we therefore have

https://doi.org/10.1017/S0013091500037329 Published online by Cambridge University Press