By mathematical induction it is proved that the leading term in

$$\sum_{k=0}^{n} \binom{2n}{n+k} k^{2p+1}$$

is

$$\frac{1}{2} p!\, n^{p+1} \binom{2n}{n}.$$

Corresponding to the application made at the end of § 1, we have here

$$\int_0^\infty e^{-x^2/2\sigma^2} x^{2p+1} dx = \lim_{n=\infty} \frac{1}{\binom{2n}{n}} \sum_{k=0}^{\infty} \binom{2n}{n+k} (k\Delta x)^{2p+1} \Delta x$$

$$= \lim_{n=\infty} \frac{1}{2} p!\, n^{p+1} \left(\frac{2\sigma^2}{n}\right)^{p+1}$$

$$= \frac{1}{2} p!\, (2\sigma^2)^{p+1}.$$

For example, since the area under the whole curve $y = e^{-x^2/2\sigma^2}$ is $\sigma \sqrt{2\pi}$, the "mean deviation" of this area is $\sigma \sqrt{2/\pi}$.

The products of the binomial coefficients by powers of terms of other arithmetical progressions do not seem to give simple results analogous to those obtained by Kenyon; this question is reserved for further study.

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THE WORK OF POINCARÉ ON AUTOMORPHIC FUNCTIONS.

Oeuvres de Henri Poincaré, publiées sous les auspices du Ministère de l'Instruction publique par G. DARBOUX. Tome II, publié avec la collaboration de N. E. NÖRLUND et de ERNEST LEBON. Paris, Gauthier-Villars, 1916. lxxi + 632 pp.

THE collected works of Poincaré will fill some 10 volumes, of which the one before us is the first to be published. It contains the principal papers written by him in the field of