1. By means of a certain trigonometric sum of order n at most, with an error not exceeding

$$\frac{1}{n}\left(c_1\lambda + c_2\frac{\nu}{\delta}\right),$$

where c_1 and c_2 (like $c_3, \cdots, c_6$ below) are absolute constants, and ν is the difference between the upper and lower limits of $f(x)$.

2. By means of Fejér's arithmetic mean of the first $n+1$ terms $(n > 1)$ of the Fourier series of $f(x)$, with an error not exceeding

$$\frac{\log n}{n}\left(c_3\lambda + c_4\frac{\nu}{\delta}\right).$$

3. By means of the first $n+1$ terms $(n > 1)$ of the Fourier series itself, with an error not exceeding

$$\frac{\log n}{n}\left(c_5\lambda + c_6\mu\frac{\nu}{\delta}\right),$$

where μ is the number of discontinuities in any interval of length 2π.

18. The systems of curves studied by Professor Kasner play (roughly) the same role in the geometry of the dual variable $u + jv$ $(j^2 = 0)$ as the isothermal systems in the geometry of the ordinary complex variable $x + iy$ $(i^2 = -1)$. The analogy is not complete, since the Laplace equation $\psi_{xx} + \psi_{yy} = 0$ is replaced by the simpler equation $\psi_{vv} = 0$, but a list of analogous properties (including new results for the isothermal type) is obtained.

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THREE OR MORE RATIONAL CURVES COLLINEARLY RELATED.

BY DR. JOSEPH E. ROWE.

(Read before the American Mathematical Society, December 31, 1912.)

Introduction.

The R^n, or rational plane curve of order n, possesses certain sets* of covariant rational point and line curves which

* J. E. Rowe, "Bicombinants of the rational plane quartic and combinant curves of the rational plane quintic," *Transactions*, vol. 13 (July, 1912), pp. 388–389.