

$$t = \left[ \frac{\log n - \log 2}{\log 3} \right].$$

Therefore

$$R(n) \geq \left[ \frac{\log n - \log 2}{\log 3} \right] + 1.$$

Hence

$$\left[ \frac{\log n}{\log 2} \right] \geq R(n) - 1 \geq \left[ \frac{\log \frac{n}{2}}{\log 3} \right].$$

ANNAMALAI UNIVERSITY,  
CHIDAMBARAM, SOUTH INDIA

## MULTIPLE POINTS OF ALGEBRAIC CURVES\*

BY T. R. HOLLCROFT

1. *Introduction.* Limits to the number of multiple points of algebraic curves were first found by Cramer.† He found and tabulated the maximum numbers of multiple points of all possible orders for curves of orders up to and including eight. Plücker‡ obtained the general expression  $(n-1)(n-2)/2$  for the maximum number of double points of an algebraic curve of order  $n$ .

Except for individual curves, the maximum number of multiple points of higher order than two for a curve of given order has not been found. A general expression for the maximum number of compound singularities or singularities of different orders is not practicable. When, however, the curve possesses only multiple points or sets of multiple points of the same order, serviceable limits for the maximum number of such singularities can be found.

The purpose of this paper is to determine the maximum number of distinct multiple points of given order and con-

\* Presented to the Society, June 20, 1929.

† G. Cramer, *Introduction à l'analyse des lignes courbes algébriques*, Geneva, 1750, pp. 455-459.

‡ J. Plücker, *Theorie der Algebraischen Curven*, Bonn, 1839, p. 215.