

J. Southwest-China Teachers Univ. 1987, no.1, 10–15.

SOME RESULTS ON COVERING SYSTEMS OF CONGRUENCES

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ABSTRACT

$\{a_i \pmod{n_i}\}_{1 \leq i \leq k}$ is said to be a k th order covering system if it is a covering system but none of its (proper) subsystems is. In this paper, we give some useful properties of k th order covering systems. Using these properties, we prove and improve a proposition observed by J. L. Selfridge, and obtain that the number of k th order covering systems is finite for any positive integer k .