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Extension of the GCD Star of David Theorem to More Than Two GCDs,

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Abstract

The GCD Star of David Theorem and the numerous papers related to it have largely been devoted to showing the equality of the greatest common divisors of two sets of elements formed by partitioning various arrays of binomial coefficients for any location of these arrays in Pascal's triangle. In this paper, we extend the study to arrays divided into n subsets with n equal greatest common divisors for n=2,3,4,5, and ultimately, for arbitrary $n\geq 2$.