

ON MULTIPARAMETER DISTRIBUTIONS OF ORDER k

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Abstract. A multiparameter negative binomial distribution of order k is obtained by compounding the extended (or multiparameter) Poisson distribution of order k by the gamma distribution. A multiparameter logarithmic series distribution of order k is derived next, as the zero truncated limit of the first distribution. Finally a few genesis schemes and interrelationships are established for these three multiparameter distributions of order k . The present work extends several properties of distributions of order k .

Key words and phrases: Multiparameter distributions of order k , type I and type II distributions of order k , genesis schemes and interrelationships, extended distributions of order k .