

ON A NEW SYSTEM OF DISCRETE DISTRIBUTIONS AND CHARACTERIZATIONS OF SEVERAL DISCRETE DISTRIBUTIONS BY EQUALITY OF DISTRIBUTIONS

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Abstract. This paper deals with a new system of discrete distributions. It also gives several characterizations of the Waring (and hence the Yule) distribution (and its truncated versions), the super-Poisson, the discrete uniform and other discrete distributions by using this system and other such systems existing in the literature, and linear regression. Continuous analogues of the above results are also briefly discussed.

Key words and phrases: Characterizing, linear regression, new system of distributions, Waring distribution.