

國立高雄大學統計學研究所
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題目：Symmetric Sum and Symmetric Product of Two Independent
Random Variables

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摘要：

For sum of independent random variables X and Y , there exist symmetric X and nonsymmetric Y such that $X + Y$ is symmetric. Yet if both $X + Y$ and X are symmetric, under the condition that the characteristic function of X , $\psi_X(t) \neq 0$, almost everywhere in R , then Y must be symmetric. On the other hand, it is known for product of independent random variables X and Y , if one of them is symmetric, then XY is symmetric. Again there exists nonsymmetric X and nonsymmetric Y such that XY is symmetric. Yet if XY is symmetric, Y is nonsymmetric, and Y belongs to a complete family of distribution, then X must be symmetric.

指導教授簽名：