

137. Key: E

Because X and Y are independent and identically distributed, the moment generating function of $X + Y$ equals $K^2(t)$, where $K(t)$ is the moment generating function common to X and Y . Thus, $K(t) = 0.30e^{-t} + 0.40 + 0.30e^t$. This is the moment generating function of a discrete random variable that assumes the values -1 , 0 , and 1 with respective probabilities 0.30 , 0.40 , and 0.30 . The value we seek is thus 0.70 .