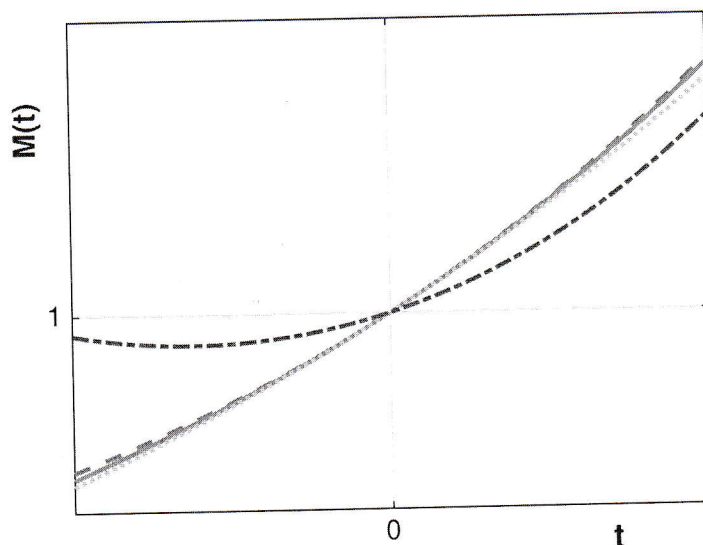


8. The following graph displays the moment-generating functions of four distributions:



Which of these distributions is not included?

- A. $\mathcal{N}(1, 4)$ B. $\text{Exp}(2)$ ~~C. $U(-2, 6)$~~ D. $\chi^2(4)$ E. $\text{Gamma}(2, 1)$

- ~~B~~ 9. If six observations are taken independently from a Chi-square distribution with 15 degrees of freedom, find the probability that at most one of these observations exceeds 25.

- A. 0.89 B. 0.91 C. 0.93 D. 0.95 E. 0.97

$$\chi^2 = 15$$

$$2 = 15/2$$

- ~~B~~ 10. The marginal distribution of X is exponential with mean 3. The conditional distribution of Y , given that $X = x$, is $U(0, x)$. If $f(x, y)$ denotes the joint p.d.f. of X and Y , find $f(1, 2)$.

- A. 0 B. 0.15 C. 0.24 D. 0.72 E. 1

g