Question 1

1 point possible (graded)

Let us consider an exponential random variable with parameter $\lambda = 10$. What is its average value?

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Question 2

1 point possible (graded)

The squared coefficient of variation of an exponential distribution is equal to

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Question 3

1 point possible (graded)

Let U be a random variable. Let u and u0 be two positive real numbers. Which of the following statements are true?

- [ ] $$P(U > u + u_0 \mid U > u_0) = \frac{P(U > u + u_0, U > u_0)}{P(U > u_0)}$$

- [ ] $$P(U > u + u_0 \mid U > u_0) = \frac{P(U > u + u_0)}{P(U > u_0)}$$

- [ ] $$P(U > u + u_0 \mid U > u_0) = \frac{P(U > u + u_0) + P(U > u_0)}{P(U > u_0)}$$

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Question 4

1 point possible (graded)

Let U be an exponential random variable with parameter λ and let S be an exponential random variable with parameter μ. We assume moreover that U and S are independent. Which of the following statements are correct?

- [ ] $$P(\min(U, S) > z) = P(U > z)P(S > z)$$

- [ ] $P(\min(U, S) < z) = P(U < z)P(S < z)$

- [ ] $P(\min(U, S) > z) = \exp(-(\lambda + \mu)z)$

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