Question 1

Not yet answered

Marked out of 1.00

Printed circuit cards are placed in a functional test after being populated with semiconductor chips. A lot contains 140 cards, and 20 are selected without replacement for functional testing.

If there are 20 defective cards among 140 cards, what is the probability that at least 1 defective card is in the sample?

- a. 0.9935
- b. None of the answers are correct
- c. 0.964
- d. 0.0065
- e. 0.0356

Clear my choice

Question 2

Not yet answered

Marked out of 1.00

The number of questions that you answer correctly on this practice quiz is an example of a discrete random variable.

Select one:

- True
- False

Question 3

Not yet answered

Marked out of 1.00

Let X be a discrete random variable with E(X) = 1 and Var(X) = 5.

What is Var(10 + 3X)? Choose the correct answer.

- a. 6
- b. 10
- c. 5
- d. 45

Question 4

Not yet answered

Marked out of 1.00

The thickness of photoresist applied to wafers in semiconductor manufacturing at a particular location on the wafer is uniformly distributed between 0.2050 and 0.2152 micrometers. Determine the proportion of wafers that exceeds 0.2125 micrometers in photoresist thickness (Round your answer to 3 decimal places).

- a. None of the others
- b. 0.265
- c. 0.250
- d. 0.178

Question 5

Not yet answered

Marked out of 1.00

Toby's Trucking Company determined that the distance traveled per truck per year is normally distributed, with a mean of 50 thousand miles and a standard deviation of 13 thousand miles.
How many miles will be traveled by at least 80% of the trucks?

- a. 60.92
- b. None of the other choices is correct
- c. 39.08
- d. 61.05

Question 6

Not yet answered

Marked out of 1.00

Assume that Z has a standard normal distribution. Use Appendix Table III to determine the values for z_1, z_2 such that:
$P(-z_1 < Z < z_1) = 0.68$ and $P(-z_2 < Z < z_2) = 0.9973$

- a. $z_1 = 1, z_2 = 3$
- b. None of the above
- c. $z_1 = 1, z_2 = -2$
- d. $z_1 = -2, z_2 = 3$

Question 7

Not yet answered

Marked out of 1.00

The number of defective items produced is an example of a discrete random variable.

Select one:

- True
- False

Question 8

Not yet answered

Marked out of 1.00

The time between the arrivals of electronic messages at your computer is exponentially distributed with a mean of 1.5 hours.

If you did not receive a message in the last five hours what is the probability that you do not receive a message in the next two hours?

- a. 0.5134
- b. 0.2636
- c. 0.7364
- d. None of the other choices is correct

Question 9

Not yet answered

Marked out of 1.00

From many years of observation, a biologist knows that the probability is only 0.68 that any given Arctic tern will survive the migration from its summer nesting area to its winter feeding grounds. A random sample of 500 Arctic terns were banded at their summer nesting area. What is the approximate probability that between 310 and 340 of the banded Arctic terns will survive the migration?

- a. 0.8530
- b. None of the other choices is correct
- c. 0.4818
- d. 0.5199
- e. 0.5182

Question 10

Not yet answered

Marked out of 1.00

An automated egg carton loader has a 1.5% probability of cracking an egg, and a customer will complain if more than one egg per dozen is cracked. Assume that each egg load is an independent event. What is the probability that a dozen eggs result in a complaint?

- a. 0.023
- b. None of the answer are correct
- c. 0.0134
- d. 0.1659

« PREVIOUS ACTIVITY
Assignment 1.2

NEXT ACTIVITY
Assignment 2.2 »