**QUESTIONS FOR STUDENTS**

**STATISTICS**

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**1029-1030**

1)State whether each of the following variables is categorical or quantitative and indicate its measurement scale.

2) These data show the time in days required to complete year-end audits for a sample of 20 clients of Sanderson and Clifford, a small public accounting firm.

Construct a relative frequency and percent frequency distribution table for these data.

3) Binomial probability distribution.

4) Normal probability distribution**.**

5) Definition of probability

6) Confidence interval.

7) Show the frequency distribution. Show the relative frequency distribution.Show the cumulative frequency distribution.

 8) Empirical rule

9) Uniform distribution.

10) Normal probability distribution.

11) Definition of conditional probability.

12) Construct a 95% confidence interval estimate for the population mean.

***13)*** Using the given data as a sample, compute coefficient of variation.

1. Suppose that the rate of return for a particular stock during the past two years
2. The following table provides a probability distribution for the random variable x.

a. Compute E(x), the expected value of x.

b. Compute the variance of x.

c. Compute σ, the standard deviation of x.

16) Hypergeometric distribution.

17) What is the probability?

18) What is the point estimate of the proportion of the population that would provide Yes responses? Compute the 95% confidence interval for the population proportion.

19)Compute mean, variance and standard deviation.

1. Compute the geometric rate of return per year.

21) Compute the mean number. Poisson distribution.

22) Compute the expected return for stock X and for stock Y and standard deviation for stock X and for stock Y.

23) At 95% confidence, what is the margin of error? What is the 95% confidence interval for the population mean?

24) Normal probability distribution.

1. What is the z-score for a given number?
2. Compute and interpret the sample correlation coefficient.

27) Exponential distribution.

26) Provide 90% and 95% confidence intervals for the population mean number of weekly customer contacts for the sales personnel.

27)Consider the following hypothesis test. Use α = .05 and make the conclusion.

28)Explain the non probability sampling methods. Give examples.

29) According to the empirical rule, what percentage of these funds are expected to be within standard deviation of the mean?

1. Bayes’ formula.
2. What is the probability that the sample mean will be within\_5 of the population mean?
3. Binomial probability distribution.
4. Consider the following hypothesis test.At α =0.05, what is your conclusion?

34) State the hypotheses. What is the 95% confidence interval estimate of the population mean examination score.

35)Empirical rule

1. Binomial probability distribution.
2. Normal probability distribution.
3. Determine the first four elements that will be selected for the simple random sample.
4. Conditional probability.
5. Consider the following hypothesis test. State your conclusion for α= .01.
6. Compute the lower and upper limits for the corresponding box plot.
7. Compute and interpret the sample correlation coefficient.
8. Normal probability distribution.
9. Population proportion. Interval estimation.

45) State the hypothesis test for this quality control application.What is the rejection rule for the preceding hypothesis testing procedure? What is the conclusion?

46) Explain stratified and cluster sampling methods.

1. For the given data construct a scatter plot and compute the correlation coefficient. Interpret the relationship.
2. Definition of probability.
3. Normal probability distribution.
4. Normal probability.
5. Provide 95% confidence intervals for the population mean number of weekly customer contacts for the sales personnel.
6. Consider the following hypothesis test. State your conclusion for α= .01

53) Develop a scatter diagram for these data. What does the scatter diagram indicate about a relationship between *x* and *y*?

1. Compute the geometric rate of return per year.

55) Assume that the president is correct and *p* = .30. What is the sampling distribution of for this study? What is the probability that the sample proportion will be between .20 and .40?

1. Two sample tests.

56) Mathched samples test.

 57) Explain simple random and systematic probability sampling methods with examples.

58) Use Chebyshev’s theorem to calculate the percentage of individuals who sleep between 4.5 and 9.3 hours.

59) Compute and interpret the sample covariance.Compute and interpret the sample correlation coefficient.

60) Probability function.

61) Poisson distribution.

62) Provide a 90% confidence interval for the population mean.

63) Construct a 99% confidence interval estimate for the population mean paper length.

64) Show the frequency distribution. Show the relative frequency distribution.Show the cumulative frequency distribution.

65) What is the median endowment? What is the mode endowment?

1. The following table provides a probability distribution for the random variable x.

a. Compute E(x), the expected value of x.

b. Compute the variance of x.

c. Compute σ, the standard deviation of x.

67)Binomial probability distribution.

68) Find the t value(s) for each of the following case.

69) Consider the following hypothesis test. State your conclusion for α= .01.

1. The sample standard deviation was 5.2. Provide 95% confidence intervals for the population mean number of weekly customer contacts for the sales personnel.
2. What is the 95% confidence interval estimate of the population mean flying time for the pilots?

72) What is the point estimate of the proportion of the population that would provide Yes responses? Compute the 95% confidence interval for the population proportion.

73) State the null and alternative hypotheses.

74)Consider the following hypothesis test. State your conclusion for α= .05.

75) Consider the following hypothesis test. State your conclusion for α= .05.