

1. Award: 10.00 points

Exercise 9-23

A survey is being planned to determine the mean amount of time corporation executives watch television. A pilot survey indicated that the mean time per week is 13 hours, with a standard deviation of 3.0 hours. It is desired to estimate the mean viewing time within one-quarter hour. The 95 percent level of confidence is to be used.

How many executives should be surveyed? (Round up your answer to the next whole number.)

Number of executives
rev: 10_28_2013_QC_36910

References

Worksheet

Difficulty: Medium

Exercise 9-23

Learning Objective: 09-06 Calculate the required sample size to estimate a population proportion or population mean.

2. Award: 10.00 points

Exercise 9-42

An important factor in selling a residential property is the number of people who look through the home. A sample of 15 homes recently sold in the Buffalo, New York, area revealed the mean number looking through each home was 24 and the standard deviation of the sample was 5 people.

Develop a 98 percent confidence interval for the population mean. (Use [Table](#).) (Round your answers to 2 decimal places.)

Confidence interval for the population mean is between _____ and _____.

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References

Worksheet

Difficulty: Medium

Exercise 9-42

Learning Objective: 09-04 Compute a confidence interval for the population mean when the population standard deviation is unknown.

3. Award: 10.00 points

Exercise 9-47

As a condition of employment, Fashion Industries applicants must pass a drug test. Fashion Industries randomly tests its employees throughout the year. Last year in the 440 random tests conducted, 22 employees failed the test.

(1) Develop a 95 percent confidence interval for the proportion of employees that fail the test. (Round your answers to 3 decimal places.)

For the random tests conducted, the confidence interval is _____ and _____.

(2) Would it be reasonable to conclude that less than 4 percent of the employees are not able to pass the random drug test?

(Click to select) ▼

rev: 03_30_2012

Confidence interval for the population mean is _____ and _____.

References

Worksheet

Difficulty: Medium

Exercise 9-1

Learning Objective: 09-03 Compute a confidence interval for the population mean when the population standard deviation is known.

5.

Award: 10.00 points

Exercise 9-28

Forty-nine items are randomly selected from a population of 500 items. The sample mean is 40 and the sample standard deviation 9.

Develop a 99 percent confidence interval for the population mean? (Round your answers to 3 decimal places.)

The confidence interval is between _____ and _____.

Hints

Hint #1

References

Worksheet

Difficulty: Hard

Exercise 9-28

Learning Objective: 09-07 Adjust a confidence interval for finite populations.

6.

Award: 10.00 points

MC Qu. 24 For a given confidence interval, what is the...

For a given confidence interval, what is the interpretation of a 96% confidence level?

- 96% chance that the given interval includes the true value of the population parameter
- Approximately 96 out of 100 such intervals would include the true value of the population parameter
- 4% chance that the given interval does not include the true value of the population parameter
- Both a and c are true

References

Multiple Choice

Difficulty: Medium

MC Qu. 24 For a given confidence interval, what is the...

Learning Objective: 09-02 Define level of confidence.

Exercise 10-2

[The following information applies to the questions displayed below.]

The following information is available.

$$H_0: \mu \leq 26$$

$$H_a: \mu > 26$$

The sample mean is 28 for a sample of 48. The population standard deviation is 4.

References

Multiple Choice

Difficulty: Medium

Learning Objective: 10-06 Conduct a test of hypothesis about a population mean.

Exercise 10-2 Part a

Learning Objective: 10-05 Distinguish between a one-tailed and a two-tailed test of hypothesis.

Learning Objective: 10-07 Compute and interpret a p-value.

8.

Award: 10.00 points

Exercise 10-2 Part b

What is the decision rule?

- Reject H_0 when $z > 1.65$
- Reject H_0 when $z \leq 1.65$

References

Multiple Choice

Difficulty: Medium

Learning Objective: 10-06 Conduct a test of hypothesis about a population mean.

Exercise 10-2 Part b

Learning Objective: 10-05 Distinguish between a one-tailed and a two-tailed test of hypothesis.

Learning Objective: 10-07 Compute and interpret a p-value.

9.

Award: 10.00 points

Exercise 10-2 Part c

What is the value of the test statistic? (Round your answer to 2 decimal places.)

Value of the test statistic

References

Worksheet

Difficulty: Medium

Learning Objective: 10-06 Conduct a test of hypothesis about a population mean.

Exercise 10-2 Part c

Learning Objective: 10-05 Distinguish between a one-tailed and a two-tailed test of hypothesis.

Learning Objective: 10-07 Compute and interpret a p-value.

10.

Award: 10.00 points

Exercise 10-2 Part d

What is your decision regarding H_0 ?

- Reject H_0
- Fail to reject H_0

References

Multiple Choice

Difficulty: Medium

Learning Objective: 10-06 Conduct a test of hypothesis about a population mean.

Exercise 10-2 Part d

Learning Objective: 10-05 Distinguish between a one-tailed and a two-tailed test of hypothesis.

Learning Objective: 10-07 Compute and interpret a p-value.

11.

Award: 10.00 points

Exercise 10-2 Part E

What is the α -value? (Round your answer to 4 decimal places.)

random sample of 325 households showed 210 own pets. Does this data disagree with the Pet Food Dealers Association data? Use a 0.20 level of significance.

(a) State the null hypothesis and the alternate hypothesis. (Round your answers to 2 decimal places.)

$$H_0: \pi =$$

$$H_1: \pi \neq$$

(b) State the decision rule for 0.20 significance level. (Round your answers to 2 decimal places.)

H_0 is rejected if z is not between _____ and _____

(c) Compute the value of the test statistic. (Round your answer to 2 decimal places.)

Value of the test statistic _____

(d) Does this data disagree with the Pet Food Dealers Association data? Use a 0.20 level of significance.

H_0 is . There is evidence to show the proportion has changed.

Hints

[Hint #1](#)

References

Worksheet

Difficulty: Medium

Exercise 10-50

Learning Objective: 10-08 Conduct a test of hypothesis about a population proportion.

13.

Award: 10.00 points

Exercise 10-63

The following null and alternate hypotheses are given.

$$H_0: \mu \leq 50$$

$$H_1: \mu > 50$$

Suppose the population standard deviation is 10. The probability of a Type I error is set at .01 and the probability of a Type II error at .30.

Assume that the population mean shifts from 50 to 55. How large a sample is necessary to meet these requirements? (Round your answer to the nearest whole number.)

Sample _____

References

Worksheet

Difficulty: Hard

Exercise 10-63

Learning Objective: 10-09 Compute the probability of a Type II error.

14.

Award: 10.00 points

MC Qu. 34 What is the probability of making a Type II ...

What is the probability of making a Type II error if the null hypothesis is actually true?

- α
- 1
- 0
- 0.05

z

References

Multiple Choice

Difficulty: Medium

MC Qu. 35 Which symbol represents a test statistic use...

Learning Objective: 10-04 Define the term test statistic and explain how it is used.