

Unit 01: Introduction to Statistical Analysis

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1. Unit 01: Introduction to Statistical Analysis

4. Chapter: Unit 01: Introduction to Statistical Analysis

1. Unit 01: Introduction to Statistical Analysis Questions

4.1.1. A Fortune 500 company asked its customers to take a voluntary survey...

Author: David Bourgeois

A Fortune 500 company asked its customers to take a voluntary survey each time a customer made an online purchase. The company gathered over 5,000 responses, which included both quantitative and qualitative information. Which of the following best demonstrates the difference between a quantitative variable and qualitative variable?

Please choose only one answer:

- Part 1 of the survey asked the customer for information on his or her total years of schooling, and Part 2 asks for his or her current level of income in dollars.
- Part 1 of the survey asked the customer for information on whether he or she completed college, and Part 2 asked for whether he or she had lost a job in the last five years.
- Part 1 of the survey asked the customer for information on his or her total years of schooling, and Part 2 asked if he or she own a car.
- Part 1 of the survey asked the customer for information on his or her total years of schooling, and Part 2 asked how many members are in his or her household.

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4.1.2. A high school math teacher offers an after-school tutoring session ...

Author: David Bourgeois

A high school math teacher offers an after-school tutoring session open to all students. To measure student demand for the session, she keeps track of the total number of students attending each week. In the last five weeks, the total attendance was 6, 3, 0, 4, and 2, respectively. Calculate the variance of attendance in the last five weeks. Round your answer to the nearest tenth.

Please choose only one answer:

- 5.0
- 2.2
- 4.0
- 2.5

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4.1.3. A local restaurant keeps statistics on the average number of meals ...

Author: David Bourgeois

A local restaurant keeps statistics on the average number of meals ordered for each table in the restaurant during dinner hours. In the last hour, four tables ordered and were served 2, 4, 6, and 8 meals, respectively. Calculate the standard deviation of the number of meals ordered in the last hour. Round your answer to the nearest tenth.

Please choose only one answer:

- 2.6
- 6.7
- 2.2
- 5.0

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4.1.4. A major coffee company decides to offer its customers a cup of coff...

Author: David Bourgeois

A major coffee company decides to offer its customers a cup of coffee brewed from an extravagant process in half of its large-city retail locations. The special cup of coffee costs \$3.50 more than the basic cup of coffee the company offers. Which of the following is NOT an example of how the coffee company could use business statistics to understand the value of introducing the new, and very expensive, cup of coffee to its customers?

Please choose only one answer:

- So the company can compare the effect of revenues for a store from the new expensive brew versus stores where the brew is not offered
- So the company can measure if the amount of regular (cheaper) cups of coffee is purchased less in favor of the more expensive cup
- So the company can gauge whether the new coffee improves the ambience of the in-store seating area
- So the company can gauge whether on average customers who order the more expensive cup also tend to order more or less food along with their coffee

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4.1.5. A national shoe company noticed that sales of its new running shoe ...

Author: David Bourgeois

A national shoe company noticed that sales of its new running shoe are below what was expected for the month of December. To better understand the trends in the sales data collected for each day in December, which option below would NOT be a useful way to present the data to company executives?

Please choose only one answer:

- Compile the sales data in a spreadsheet, and construct a table with each day's sales from highest to lowest displaying which days were the strongest days for sales.
- Compile the sales data in a spreadsheet, and construct a histogram showing the frequency of sales over the weeks of the December shopping season.
- Compile the sales data in a spreadsheet, and construct a table with each day's sales from this December and the previous December to compare the difference.
- Compile the sales data in a spreadsheet, and construct a table listing the reasons you think sales were lower than expected.

Check the answer of this question online at QuizOver.com:

Question: [A national shoe company noticed that sales David Bourgeois @The Business](#)

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4.1.6. A small firm awards points to its employees for working overtime an...

Author: David Bourgeois

A small firm awards points to its employees for working overtime and subtracts points for unapproved absences from work (the points are then used in annual performance reports). A group of five employees has points of 1, -2, -3, 4, and 5, respectively. To get a sense of the average size of the total points awarded to the group of employees, calculate the root mean square of those five numbers. Round your answer to the nearest tenth.

Please choose only one answer:

- 1
- 3.2
- 11.2
- 45.0

Check the answer of this question online at QuizOver.com:

Question: [A small firm awards points to its employees David Bourgeois @The](#)

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4.1.7. Complete the following sentence. In a histogram, the area of the bi...

Author: David Bourgeois

Complete the following sentence. In a histogram, the area of the bin is:

Please choose only one answer:

- proportional to the interquartile range of the data.
- proportional to the height of the scaled y-axis.
- proportional to the total number of observations in the histogram.
- proportional to the relative frequency of the observations in the bin.

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4.1.8. In a random sample of cell phone users, a leading marketing company...

Author: David Bourgeois

In a random sample of cell phone users, a leading marketing company compiled a count of total minutes per month, per user, over a three month period. With the data organized in a spreadsheet, which of the following is the best way to identify the mode number of minutes among the sample of users?

Please choose only one answer:

- Sort the data in a single column from highest to lowest, and identify the value that appears most often.
- Sort the data in a single column from highest to lowest, and find the average value by using the spreadsheet's averaging function.
- Sort the data in two columns, subtract the difference between each row and column, and then add the total by using the spreadsheet's summary function.
- Sort the data in three columns, and add the three month totals for each user by using the spreadsheet's summary function.

Check the answer of this question online at [QuizOver.com](http://www.quizover.com):

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4.1.9. In a study conducted by the National Collegiate Athletic Associatio...

Author: David Bourgeois

In a study conducted by the National Collegiate Athletic Association, a number of variables were gathered on the characteristics of student athletes across the United States. In the report publicizing the major findings, certain variables for each student athlete are grouped together. Which grouping below provides the best example of quantitative information?

Please choose only one answer:

- The grade point average, the total credit hours in the most recent semester, and the number of classes missed as a result of athletics in the most recent semester for each student athlete
- The height, weight, and ethnicity of each student athlete
- The chosen major of the student athlete, whether the student had missed class as a result of athletics in the most recent semester, and whether the student had sought help from the instructor outside of regular class time in the most recent semester
- The sport of each student athlete, the number of practice hours per week for each athlete, and number of days the athlete spent traveling during the most recent semester

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4.1.10. In a study conducted by the National Collegiate Athletic Associatio...

Author: David Bourgeois

In a study conducted by the National Collegiate Athletic Association, a number of variables were gathered on the characteristics of student athletes across the United States. In the study, specific information on each student athlete is collected. Which information best describes an ordinal variable?

Please choose only one answer:

- If a student athlete is a humanities major, business major, or a science major
- If a student athlete is a freshman, sophomore, junior, or senior with respect to athletic eligibility
- If a student athlete is or has been ranked nationally in his or her respective sport
- If the student athlete is on full scholarship

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4.1.11. In order to stock the appropriate types of foods in its store, a lo...

Author: David Bourgeois

In order to stock the appropriate types of foods in its store, a local grocery chain conducts a voluntary survey of its customers as they leave the store. The survey asks for the total number of persons living in the customer's household. Calculate the mode number of household members based on the following numbers from the first ten surveys: 3, 6, 4, 9, 2, 3, 4, 9, 5, 4.

Please choose only one answer:

- 4
- 9
- 3
- 6

Check the answer of this question online at QuizOver.com:

Question: [In order to stock the appropriate types David Bourgeois Saylor Business](#)

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4.1.12. In order to stock the appropriate types of foods in its store, a lo...

Author: David Bourgeois

In order to stock the appropriate types of foods in its store, a local grocery chain conducts a voluntary survey of its customers as they leave the store. The survey asks for the total number of trips the customer makes per month to the store. Calculate the median number of trips based on the following numbers from the first few surveys: 3, 6, 9, 2, 4, 5, 1.

Please choose only one answer:

- 9
- 3
- 4
- 5

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Question: [In order to stock the appropriate types David Bourgeois Saylor Business](#)

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4.1.13. On a recent business-statistics exam, the instructor noticed that o...

Author: David Bourgeois

On a recent business-statistics exam, the instructor noticed that out of 100 students, the number of students that scored between a 60 and 70 (out of 100) was twice as many as the number that scored between 70 and 80. The instructor also noticed that more students scored below 60 than above 80. Which of the following options would best enable the instructor to visually represent the exam scores?

Please choose only one answer:

- Construct a table listing the exam scores from highest to lowest.
- Tabulate the mean and standard deviation of all the exam scores.
- Tabulate the frequency of the scores within ten point ranges, and construct a histogram of the data.
- Tabulate the mean and standard deviation of the exam scores, and construct a histogram of the data.

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4.1.14. On the most recent business-statistics exam, the instructor tallied...

Author: David Bourgeois

On the most recent business-statistics exam, the instructor tallied a wide range of scores for the students in the course. Based on the following sample of test scores, 10, 23, 37, 41, 55, 69, 73, 89, which of the following values would result in a test score one standard deviation below the mean? Round your answer to the nearest tenth.

Please choose only one answer:

- -3.9
- 22.9
- 26.7
- 49.6

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Question: [On the most recent business-statistics David Bourgeois Saylor Business](#)

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4.1.15. The National Oceanic and Atmospheric Administration just released i...

Author: David Bourgeois

The National Oceanic and Atmospheric Administration just released its annual hurricane prediction report to major insurance companies offering flood insurance in the southeastern United States. The report provides a number of variables describing the type and intensity of the hurricanes expected for the year. Which pair of variables contained in the report best represents the difference between a categorical variable and a quantitative variable?

Please choose only one answer:

- The number of hurricanes expected for the year and the average wind speed for each
- The number of hurricanes expected for the year and amount of rainfall expected for each
- The expected average wind speed when the hurricane hits land and the expected severity of damage rated between moderate to extreme
- The expected average wind speed when the hurricane hits land and the expected rise in feet of the water level along the shoreline

Check the answer of this question online at [QuizOver.com](http://www.quizover.com):

Question: [The National Oceanic and Atmospheric David Bourgeois Saylor Academy](http://www.quizover.com/question/the-national-oceanic-and-atmospheric-david-bourgeois-saylor-academy?pdf=3044)

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4.1.16. The University of Arizona varsity golf team keeps track of a number...

Author: David Bourgeois

The University of Arizona varsity golf team keeps track of a number of statistics related to its team members' performance, with an emphasis on measuring the team members' spread of scores over the golf season. Which of the following is NOT a common measure of spread?

Please choose only one answer:

- Inter-quartile range (IQR)
- Standard deviation
- Range
- Quartile

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4.1.17. True or False. All variables that take numerical values are quantit...

Author: David Bourgeois

True or False. All variables that take numerical values are quantitative.

Please choose only one answer:

- True
- False

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Question: [True or False. All variables that take David Bourgeois @The Saylor](#)

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4.1.18. True or false: Qualitative and categorical variables typically do n...

Author: David Bourgeois

True or false: Qualitative and categorical variables typically do not have units.

Please choose only one answer:

- True
- False

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Question: [True or false: Qualitative and categorical David Bourgeois @The Business](#)

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4.1.19. Which of the following is a reason to study statistics as part of a...

Author: David Bourgeois

Which of the following is a reason to study statistics as part of a business program?

Please choose only one answer:

- So you are able to determine whether observed differences in a marketing campaign are significant or just the result of chance
- So you are able to understand and interpret the results of a marketing survey
- So you are able to predict corporate sales for the next year
- All of these answers

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Question: [Which of the following is a reason to David Bourgeois Saylor Academy](#)

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4.1.20. Which of the following is NOT a characteristic of a discrete quanti...

Author: David Bourgeois

Which of the following is NOT a characteristic of a discrete quantitative variable compared to a continuous variable?

Please choose only one answer:

- The possible values must have a minimum spacing.
- Discrete variables can be used to count things.
- The values the variable can take on cannot be ordered.
- The set of possible values is countable.

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Question: [Which of the following is NOT a characteristic David Saylor Academy](#)

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4.1.21. Which of the following is not a measure of location?

Author: David Bourgeois

Which of the following is not a measure of location?

Please choose only one answer:

- Mean
- Median
- Mode
- Standard deviation

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Question: [Which of the following is not a measure David Bourgeois Saylor Business](#)

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4.1.22. You are in charge of monitoring your electronics company's online r...

Author: David Bourgeois

You are in charge of monitoring your electronics company's online reviews (on major online shopping websites) for its newest smart phone, which has been sold in limited quantities to determine the phone's quality. You gather the most recent user ratings out of 10 for the phone which are: 3, 6, 1, 9, 2, 3, 4, 10, 5, and 4. To determine whether to continue selling the smart phone, you want to make sure it has a mean above 5. Should your company go forward with the production of the product?

Please choose only one answer:

- The mean is 5.9, so the company should move forward with production.
- The mean is 4.7, so the company should not move forward with production.
- The mean is 5.2, so the company should move forward with production.
- The mean is 3.6, so the company should not move forward with production.

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