

6) If you were told that four students from a class of twenty were questioned for a poll about study habits, this would be an example of _____. 6) _____
A) systematic sampling B) stratified sampling
C) random sampling D) cluster sampling

Answer: D
Diff: 3 Type: BI

7) Determine which of the following describes nominal data. 7) _____
i. My favorite days of the week are Friday, Saturday, and Tuesday.
ii. My favorite day of the week is Friday, my second-favorite is Saturday, and third-favorite is Tuesday.
A) both i and ii B) ii only C) i only D) neither i nor ii

Answer: C
Diff: 1 Type: MC

8) Determine which of the following describes ordinal data. 8) _____
i. In the horse race, Betty's Girl won, Mr. Ed placed, and Wabash showed.
ii. In the horse race, I bet on Betty's Girl to win, Mr. Ed to place, and Wabash to show.
A) both i and ii B) ii only C) i only D) neither i nor ii

Answer: A
Diff: 1 Type: MC

9) In an advertisement for a car, a driver is shown driving expertly through a difficult road course. At the bottom of the ad, the following is included in small print "Professional driver on a closed course". Which of the following choices best describes this misuse of data? 9) _____
A) faulty survey questions B) implied connections
C) changing the subject D) detached statistics

Answer: B
Diff: 3 Type: BI

10) Which one of the following data are continuous? 10) _____
A) the rankings of the trees, from most numerous to least numerous
B) the average height of a sample of trees
C) the number of species of trees in a park
D) the number of representatives of each species in the park

Answer: B
Diff: 1 Type: MC

11) The four basic methods used to obtain samples are: random, irregular, cluster, and stratified sampling. 11) _____
A) False B) True

Answer: A
Diff: 1 Type: MC

- 29) Statistics is the science of conducting studies to _____
A) monitor, study, and report on a subject.
B) hypothesize, experiment, and form conclusions.
C) solve a system of equations.
D) collect, organize, summarize, analyze, and draw conclusions from data.

Answer: D

Diff: 1 Type: BI

- 30) Based on her electric bills from last year, Mrs. Smith expects she will be paying \$75/month this year. This is an example of descriptive statistics. _____
A) False
B) True

Answer: A

Diff: 3 Type: MC

- 31) Determining the number of people from the state of Alaska who voted for a Republican in the last election is an example of _____ measurement. _____
A) ratio-level
B) percentage-level
C) interval-level
D) nominal-level

Answer: A

Diff: 3 Type: BI

- 32) Determine which of the following describes nominal data. _____
i. Michaelangelo's sells small, medium, large, and jumbo pizzas.
ii. Michaelangelo's most-requested toppings are pepperoni, black olives, and mushrooms.
A) both i and ii
B) ii only
C) neither i nor ii
D) i only

Answer: A

Diff: 1 Type: MC

- 33) Determine which of the following describes qualitative data. _____
i). the volume of a shipping container, in gallons
ii). the name of the material from which the container is made
iii). the shape of the container
A) i and iii only
B) i and ii only
C) ii and iii only
D) i, ii, and iii

Answer: C

Diff: 1 Type: MC

- 34) _____ is a decision-making process for evaluating claims about a population, based on information obtained from samples. _____
A) Forecasting
B) Hypothesis testing
C) Inferential statistics
D) Descriptive statistics

Answer: B

Diff: 3 Type: BI

- 35) Determine which of the following describes quantitative data. 35) _____
- i). the name of a chemical sample
 - ii). the mass of a chemical sample
 - iii). the color of a chemical sample
- A) i only B) i and ii only C) i, ii, and iii D) ii only

Answer: D
 Diff: 1 Type: MC

- 36) A magazine tests a new car and reports that it could be twice as much fun to drive. This is NOT an example of 36) _____
- A) changing the subject
 - B) suspect samples
 - C) implied connections
 - D) detached statistics

Answer: A
 Diff: 4 Type: BI

- 37) Questioning every 14th customer leaving a theatre about the movie they had seen, would be an example of systematic sampling. 37) _____
- A) True
 - B) False

Answer: A
 Diff: 3 Type: MC

- 38) In the following chart, *Height* is the independent variable and *Age of Tree* is the dependent variable. 38) _____



- A) False
- B) True

Answer: A
 Diff: 3 Type: MC

- 39) Which of the following sample types should you always regard as unreliable? 39) _____
- A) voluntary response samples
 - B) stratified samples
 - C) cluster samples
 - D) simple random samples

Answer: A
 Diff: 1 Type: MC

40) In an experimental study, manipulation of the _____ variable is studied to see if it leads to changes in the _____ variable. 40) _____
A) controlled; random B) independent; dependent
C) outcome; explanatory D) input; output

Answer: B
Diff: 3 Type: BI

41) A television station interviews five movie viewers after the first showing of a movie. After finding out that all five enjoyed the movie very much, the reporter states that this movie will definitely be a big hit. This is an example of _____. 41) _____
A) suspect samples B) detached statistics
C) changing the subject D) ambiguous averages

Answer: A
Diff: 1 Type: BI

42) A dependent variable can also be referred to as an outcome variable. 42) _____
A) False B) True

Answer: B
Diff: 1 Type: MC

43) Which of the following best defines the relationship between confounding, dependent, and independent variables? 43) _____
A) The influence of the confounding variable cannot be separated from the influence of the dependent variable.
B) The confounding variable influences the independent variable, but has no effect on the dependent variable.
C) The confounding variable may cause the dependent variable to act independently.
D) The confounding variable influences the dependent variable, but is not separated from the independent variable.

Answer: D
Diff: 3 Type: BI

44) Determine which of the following describes quantitative data. 44) _____
i). the length of an object in feet
ii). the speed of an object in meters per second
iii). the number of objects that are blue
A) i and ii only B) i only C) i, ii, and iii D) iii only

Answer: C
Diff: 1 Type: MC

45) Which one of the following data are discrete? 45) _____
A) the latitude and longitude of a boat at sea
B) the number of crew members on the boat
C) the speed of the boat's propeller, in revolutions per minute
D) the latitude and longitude of the boat's port of departure

Answer: B
Diff: 1 Type: MC

46) Give the boundaries of the given value. 46) _____
27 feet
A) 26.9-27.1 feet B) 26-28 feet C) 26.5-27.5 feet D) 27-28 feet

Answer: C
Diff: 1 Type: BI

47) Inferential statistics is based on probability. 47) _____
A) True B) False

Answer: A
Diff: 1 Type: MC

48) A _____ variable assumes values that can be counted. 48) _____
A) quantitative B) continuous C) discrete D) enumerable

Answer: C
Diff: 3 Type: BI

49) Determine which branch of statistics was used to make the following statement. Because 49) _____
of the current economy, 49% of 18 to 34 year olds have taken a job to pay the bills.
A) time series statistics B) inferential statistics
C) differential statistics D) descriptive statistics

Answer: B
Diff: 3 Type: BI

50) Give the boundaries of the given value. 50) _____
15.58
A) 15.579-15.581 B) 14.58-16.58
C) 15.575-15.585 D) 15.57-15.59

Answer: C
Diff: 1 Type: BI

51) "Vitamin E is a proven antioxidant and may help in fighting cancer and heart disease." 51) _____

Is there anything ambiguous about this claim?

- A) There is nothing ambiguous about it.
- B) Since the word *may* is used, there is no guarantee that the product will help fight cancer and heart disease.
- C) It is unclear what is meant by "cancer and heart disease".
- D) There is no proof that vitamin E is an antioxidant.

Answer: B

Diff: 3 Type: BI

52) An advertisement for a truck states that it is 20% more powerful. This is an example of 52) _____

- A) changing the subject
- B) detached statistics
- C) ambiguous averages
- D) suspect samples

Answer: B

Diff: 3 Type: BI

53) The _____ level of measurement classifies data into categories that can be ranked; however, precise differences between the ranks do not exist. 53) _____

- A) ordinal
- B) nominal
- C) cardinal
- D) interval

Answer: A

Diff: 3 Type: BI

54) What level of measurement classifies data into mutually exclusive categories in which no order or ranking can be imposed on the data? 54) _____

- A) interval
- B) nominal
- C) ordinal
- D) ratio

Answer: B

Diff: 3 Type: BI

55) In which branch of statistics would a researcher acquire twenty-five 2000 Toyota Celicas, drive them until they had a major mechanical failure, record the final mileage, and then write a report for *Car and Driver*? 55) _____

- A) descriptive statistics
- B) inferential statistics
- C) differential statistics
- D) predictive statistics

Answer: A

Diff: 3 Type: BI

56) A _____ consists of all subjects that are being studied. 56) _____

- A) population
- B) sample
- C) group
- D) variable

Answer: A

Diff: 3 Type: BI

57) Which branch of statistics would employ probability to predict how many miles one should be able to drive a 2000 Toyota Celica during its lifetime? 57) _____
A) time series statistics B) inferential statistics
C) differential statistics D) descriptive statistics

Answer: B
Diff: 3 Type: BI

58) According to a pilot study of 20 people conducted at a major university, daily doses of a compound called arabinogalactan over a period of 8 months resulted in a significant increase in the beneficial lactobacillus species of bacteria. Why can't it be concluded that the compound is beneficial for the majority of people? 58) _____
A) It is not known if lactobacillus is beneficial to everybody.
B) The people studied were not selected randomly.
C) The study did not last long enough.
D) Only 20 people were used in the study.

Answer: D
Diff: 3 Type: BI

59) A person's hair color would be an example of a quantitative variable. 59) _____
A) False B) True

Answer: A
Diff: 3 Type: MC

60) _____ sampling is used when the population is large and it includes subjects residing over a large geographic area. 60) _____
A) Cluster B) Convenient C) Random D) Stratified

Answer: A
Diff: 3 Type: BI

61) An electronics manufacturer test every 200th cell phone to verify that it is functioning properly. Identify the kind of sample that is being used. 61) _____
A) stratified sample B) systematic sample
C) simple random sample D) cluster sample

Answer: B
Diff: 1 Type: MC

62) In a research study, it is always preferable for the researcher to carefully choose his participants rather than randomly select them from a suitable group. 62) _____
A) False B) True

Answer: A
Diff: 3 Type: MC

- 63) Give the boundaries of the given value. 63) _____
56.8 yards
A) 56.8-57.8 pounds B) 55.8-57.8 pounds
C) 56.75-56.85 pounds D) 56.79-56.81 pounds

Answer: C
Diff: 1 Type: BI

- 64) If a researcher manipulates one of the variables and tries to determine how the manipulation influences other variables, the researcher is conducting a(n) 64) _____
A) observational study. B) independent study.
C) confounding study. D) experimental study.

Answer: D
Diff: 3 Type: BI

- 65) Give the boundaries of the given value. 65) _____
40 quarts
A) 39.5-40.5 quarts B) 39.9-40.1 quarts
C) 39-41 quarts D) 40-41 quarts

Answer: A
Diff: 1 Type: BI

- 66) Determine which branch of statistics was used to make the following statement. In 2011, there were 34 deaths from the avian flu. 66) _____
A) predictive statistics B) descriptive statistics
C) differential statistics D) inferential statistics

Answer: B
Diff: 3 Type: BI

- 67) Which of the following is the best description of a double-blind experiment? 67) _____
A) an experiment in which neither the investigators nor the subjects know how the treatments have been assigned
B) an experiment in which both the investigators and the subjects are hidden from the others' views
C) an experiment in which the subjects are blindfolded so they cannot see which treatment is applied to them
D) an experiment in which neither the investigators nor the subjects know the others' names

Answer: A
Diff: 1 Type: MC

- 68) Each value in a data set may be referred to as either a data value or a(n) _____. 68) _____
A) datum B) point C) atom D) subdata

Answer: A
Diff: 3 Type: BI

- 69) Give the boundaries of the given value. 69) _____
43.75 pounds
A) 42.75-44.75 pounds B) 43.745-43.755 pounds
C) 43.749-43.751 pounds D) 43.75-44.75 pounds

Answer: B
Diff: 1 Type: BI

- 70) Determine which of the following describes qualitative data. 70) _____
i). the make of the car with license plate number VNS-862
ii). the license plate number VNS-862
iii). the number of vehicles whose license plate number begins with "VNS"
A) iii only B) i and ii only
C) i only D) neither i, nor ii, nor iii

Answer: B
Diff: 1 Type: MC

- 71) What level of measurement allows for the ranking of data, a precise difference between units of measure, and also includes a true zero? 71) _____
A) ordinal B) nominal C) ratio D) interval

Answer: C
Diff: 3 Type: BI

- 72) A _____ is a characteristic or attribute of a subject that can assume different values? 72) _____
A) sample B) exponent C) datum D) variable

Answer: D
Diff: 1 Type: BI

- 73) Quantitative data can be further classified as continuous or nonsequential. 73) _____
A) True B) False

Answer: B
Diff: 1 Type: MC

- 74) Which one of the following data are discrete? 74) _____
A) the height of the tallest player on Duke University's men's basketball team
B) the average height of players on the University of Connecticut's women's basketball team
C) the average preseason ranking of the University of Connecticut's women's basketball team over the past 10 years
D) the pre-season ranking of Duke University's men's basketball team

Answer: D
Diff: 1 Type: MC

- 75) Give the boundaries of the given value. 75) _____
8.6 millimeters
A) 7.6-9.6 millimeters B) 8.55-8.65 millimeters
C) 8.59-8.61 millimeters D) 8.6-9.6 millimeters

Answer: B
Diff: 1 Type: BI

- 76) When running an experimental study, the group that is manipulated can be called the treatment group. 76) _____
A) False B) True

Answer: B
Diff: 3 Type: MC

- 77) Determine which of the following describes ordinal data. 77) _____
i. My best friends are Georgia, Amithaba, and Raphael.
ii. My favorite numbers are 2, 7 and 13.
A) neither i nor ii B) i only C) ii only D) both i and ii

Answer: A
Diff: 1 Type: MC

- 78) What type of sampling is being employed if the country is divided into economic classes and a sample is chosen from each class to be surveyed? 78) _____
A) stratified sampling B) cluster sampling
C) systematic sampling D) random sampling

Answer: A
Diff: 3 Type: BI

- 79) "In a recent clinical study, our brand was proven to be 1,750% better than creatine!" 79) _____

What is wrong with the statement?
A) It does not state when the study was made.
B) It does not state what the starting point for the improvement is.
C) Percentages greater than 100% do not exist.
D) The only time claims can be proven is when the entire population is used.

Answer: D
Diff: 3 Type: BI

- 80) A middle school student passes out leaflets to the adults at a school function. The leaflets ask the recipient to indicate whether they believe in anthropogenic global warming. The bottom of the leaflet indicates that the completed leaflet should be returned to the student. Identify the kind of sample that is being used. 80) _____
A) cluster sample B) systematic sample
C) sample of convenience D) stratified sample

Answer: C
Diff: 1 Type: MC

81) One advantage of a(n) _____ study is that it occurs in a natural setting without intervention by the researcher. 81) _____
A) retrospective B) natural C) observational D) experimental

Answer: C
Diff: 3 Type: BI

82) Determine which branch of statistics was used to make the following statement. In 2025, the world population is predicted to be 8 billion people. 82) _____
A) time series statistics B) inferential statistics
C) descriptive statistics D) differential statistics

Answer: B
Diff: 3 Type: BI

83) Rating a restaurant by a number of stars is an example of an ordinal level of measurement. 83) _____
A) True B) False

Answer: A
Diff: 3 Type: MC

84) By visiting homes door-to-door, a municipality surveys all the households in 134 randomly-selected neighborhoods to see how residents feel about a proposed property tax increase. Identify the type of sample that is being used. 84) _____
A) cluster sample B) stratified sample
C) voluntary response sample D) systematic sample

Answer: A
Diff: 1 Type: MC

85) Which one of the following data are continuous? 85) _____
A) the time remaining for an MP3 music download
B) the number of musicians performing in the MP3 file
C) the number of times the file has been downloaded
D) all of these represent continuous data

Answer: A
Diff: 1 Type: MC

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

86) Statistics are used to analyze the results of surveys. It is important to understand the terms and concepts so that one can understand exactly what is being represented (or misrepresented) by a given statement. 86) _____

Answer: True False
Diff: 3 Type: TF

Answer Key

Testname: CH1

- 1) B
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- 2) D
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- 3) B
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- 4) A
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- 5) B
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Topic:
- 6) D
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- 7) C
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- 8) A
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- 9) B
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- 10) B
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- 11) A
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- 12) C
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- 13) B
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- 15) A
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- 16) A
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Answer Key

Testname: CH1

- 17) D
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- 18) C
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- 19) D
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- 20) B
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- 21) C
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- 22) C
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- 23) C
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- 24) A
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- 25) A
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- 26) A
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- 27) B
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- 28) A
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- 30) A
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- 31) A
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- 32) A
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Answer Key

Testname: CH1

- 33) C
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- 34) B
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- 35) D
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- 36) A
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- 37) A
Diff: 3 Page Ref:
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- 38) A
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- 39) A
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- 40) B
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- 41) A
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- 42) B
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- 43) D
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- 44) C
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- 45) B
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- 46) C
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- 47) A
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- 48) C
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Answer Key
Testname: CH1

- 49) B
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- 50) C
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- 51) B
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- 52) B
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- 53) A
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- 54) B
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- 56) A
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- 57) B
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- 60) A
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- 62) A
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- 63) C
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- 64) D
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Answer Key

Testname: CH1

- 65) A
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- 66) B
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Topic:
- 67) A
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Topic:
- 68) A
Diff: 3 Page Ref:
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- 69) B
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Topic:
- 70) B
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Topic:
- 71) C
Diff: 3 Page Ref:
Topic:
- 72) D
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Topic:
- 73) B
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Topic:
- 74) D
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- 75) B
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- 76) B
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- 77) A
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- 78) A
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- 79) D
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Answer Key

Testname: CH1

81) C

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82) B

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Topic:

83) A

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84) A

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85) A

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86) TRUE

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