

Northern Caribbean University

Math 205: Probability & Statistics

Self-Paced Review & Diagnostic Test

Select the correct answer

- 1) Identify whether the statement describes inferential statistics or descriptive statistics: The average age of the students in a statistics class is 19 years.
A) inferential statistics
B) descriptive statistics
- 2) Determine whether the given value is from a discrete or continuous data set: The temperature of a cup of coffee is 67.3°F.
A) Discrete
B) Continuous
- 3) Determine whether the data are qualitative or quantitative: the colors of automobiles on a used car lot
A) qualitative
B) quantitative
- 4) Determine whether the data are qualitative or quantitative: the number of complaint letters received by INDECOM in a given day
A) qualitative
B) quantitative
- 5) A die is rolled. The set of equally likely outcomes is {1, 2, 3, 4, 5, 6}. Find the probability of getting a 7.
A) 7
B) $\frac{7}{6}$
C) 0
D) 1
- 6) Find the mean score.
71 67 67 72 76 72 73 68 72 72
A) 71
B) 72
C) 68
D) 67
- 7) Find the median score.
67 67 68 71 72 72 72 72 73 76
A) 73
B) 71
C) 67
D) 72
- 8) A single six-sided die is rolled. Find the probability of rolling a number less than 3.
A) 0.25
B) 0.5
C) 0.1
D) 0.333
- 9) A question has five multiple-choice answers. Find the probability of guessing an incorrect answer.
A) $\frac{1}{5}$
B) $\frac{5}{2}$
C) $\frac{4}{5}$
D) $\frac{3}{5}$
- 10) A study where a drug was given to 23 patients and a placebo to another group of 23 patients to determine if the drug has an effect on a patient's illness. Which method below would you use?
A) experiment
B) simulation
C) observational study
D) survey

Nothing is really over until the moment you stop trying.

- 11) Decide which method of data collection you would use to collect data for the study. A study of the salaries of college professors in a particular state
- A) observational study
B) experiment
C) survey
D) simulation
- 12) Decide which method of data collection you would use to collect data for the study. A study where you would like to determine the chance getting three girls in a family of three children
- A) experiment
B) simulation
C) observational study
D) survey
- 13) Decide which method of data collection you would use to collect data for the study. A study to evaluate the success of a new experimental procedure performed on 35 patients at one hospital
- A) experiment
B) observational study
C) simulation
D) census
- 14) Use the given frequency distribution to find the (i) class width.
(ii) class midpoints of the first class.
(iii) class boundaries of the first class.

Height (in inches)

Class	Frequency, f
50 - 52	5
53 - 55	8
56 - 58	12
59 - 61	13
62 - 64	11

A) (i) 3

(ii) 51

(iii) 49.5-52.5

B) (i) 2

(ii) 51.5

(iii) 50-52

C) (i) 2

(ii) 51.5

(iii) 49.5-52.5

D) (i) 3

(ii) 51

(iii) 50-52

Provide an appropriate response.

- 15) For the stem-and-leaf plot below, what is the maximum and what is the minimum entry?

Key : 11| 7 = 11.7

11	6 7
12	4 6 6 7 8 9
13	0 1 1 2 3 6 6 7 8 8
14	3 4 6 6 8 9 9 9
15	0 1 1 2 3 7 7 8 9
16	2 2 5 7 8 8 9 9
17	0 3

A) max: 17.3; min: 11.7

C) max: 17.3; min: 11.6

B) max: 17.0; min: 11.6

D) max: 173; min: 116

SHORT ANSWER.

- 16) What is the difference between an observation and an experiment? Conduct a short research on an interesting experiment that occurred within the last 10 years and discuss any ethical implications etc.