Statistics competency exam sample exam

1. Mr. Bean has determined that there is an 85% chance that the number of people visiting Prince Edward Island in the month of August will be between 3,700 and 2,200. This is an example of:
   a. a point estimate
   b. an interval estimate
   c. a high percentile rank
   d. a strong correlation

2. Mildred has developed an initial coding scheme for her qualitative data. Ideally, her next step in this analysis should be to:
   a. develop a more detailed set of sub-codes that will capture the nuances of the data
   b. apply it to a subset of the data and then re-evaluate the code.
   c. collect his data
   d. compute interrater reliability

3. Let A and B be two events. Suppose the probability that neither A or B occurs is 2/3. What is the probability that one or both occur?
   a. 1/3
   b. 2/3
   c. 1/4
   d. 1/5

4. You have taken the ACT exam, an exam taken by students who wish to apply for admission to a college. You are told that you have scored at the 80th percentile. From this information you can conclude:
   a. You have answered 80% of the questions correctly.
   b. You have an 80% chance of succeeding in college.
   c. You have scored as high or higher than 80% of the persons who have taken the test.
   d. None of the above.

5. If a clinical psychologist read in a scientific journal that sixty percent of all clinical psychologists suffer from hypertension and she believed this was too high, she would write the alternative hypothesis as:
   a. H_a: p < .60
   b. H_a: p > .60
   c. H_a: p = .60
   d. H_a: p ≤ .60

6. As a researcher you might discover that certain events almost always precede other events, or that certain thoughts and feelings almost always precede certain actions. Keeping in mind this-happens-and-then-that happens regularities, as a researcher you must keep in the forefront that:
   a. Weak correlation indicates causation
   b. Correlation does not necessarily indicate causation
   c. Strong correlation always indicates causation
   d. Correlation has nothing to do with causation

7. _____ scales are typically measures of non-numeric concepts like satisfaction, happiness, or discomfort.

   a. Nominal
   b. Ordinal
   c. Interval
   d. Ratio.

8. Here is a set of scores: 5, 8, 7, 8, 6, 2, 5, 8. The mode of this set of scores is:
   a. 8
   b. 4
   c. 6.125
   d. None of the above

9. Tom believes that left handed persons get higher grades than right handed persons, and plans to collect some data to demonstrate that. The appropriate null hypothesis would be:
   a.   Left handed persons get the same or lower grades than right handed persons.
   b.   Left handed persons get higher grades than right handed persons.
   c.   There is a difference between the grades of left and right handed persons.
   d.   The standard deviation of the grades of left handed persons is higher than that of right handed persons.

10. It is known that a salesperson makes a sale on 35% of customer contacts. A normal work w eek will enable the salesperson to contact 40 customers. The expected number of sales for th e week is _____.
   a.   14
   b.   26
   c.   35
   d.   40

Answer Key

1	2	3	4	5	6	7	8	9	10
B	B	A	C	A	B	B	A	A	A