

FULL NAME: _____

DATE: January 8th, 2024

GROUP NUMBER: _____

TIME: 90 minutes

20

ACTIVITY ONE (10 POINTS) – 1 point for each correct answer.

Tick (✓) the correct answer:

1. If σ^2 is 1.35, the population standard deviation is:
 0.67
 1.16
 1.82
 2.70
2. A bimodal distribution often suggests that the data were collected with:
 Two distinct data collection instruments
 Two distinct data analysis methods
 Two distinct statistical tests
 Two distinct populations
3. A sampling approach that divides the population into strata and selects participants non-randomly:
 Stratified sampling
 Quota sampling
 Systematic sampling
 Cluster sampling
4. In the Kolmogorov–Smirnov test, $P = .500$, means:
 The data are normally distributed
 The data are not normally distributed
 The data are significant
 The data are not significant
5. In a word recognition task, the time taken to respond is:
 Nominal data
 Ordinal data
 Interval data
 Ratio data
6. If $p = .0501$ in the Levene's test, then:
 The variances are homogeneous
 The data are normally distributed
 The variances are heterogeneous
 The data are not normally distributed
7. In the dataset (21, 15, 4, 24, 7, 23, 24, 7), the median is:
 7
 24
 18
 7 and 24
8. Positive correlation between students' talking time and oral fluency suggests that:
 Increased talking time increases oral fluency
 Increased talking time is related to increased fluency
 Increased talking decreases oral fluency
 Increased talking time is related to decreased fluency
9. The hypothesis "Increased exposure to authentic materials improves phonetic accuracy" is:
 Null hypothesis
 Non-directional hypothesis
 Directional hypothesis
 None of the above
10. The role of descriptive statistics is:
 Summarizing the data of a sample
 Making predictions about a sample
 All of the above
 None of the above

TURN THE PAGE ...

ACTIVITY TWO (5 POINTS)

Summarize the following dataset in the descriptive statistics table including measures of frequency, measures of central tendency, and measures of spread.

Dataset

Participants	Pretest	Posttest
Student 1	5.30	5.64
Student 2	6.75	6.78
Student 3	7.19	7.14
Student 4	5.84	5.79
Student 5	6.43	6.40
Student 6	7.26	7.82

Descriptive statistics table

TEST	Σ	\bar{x}	S^2	S
Pretest	38.77 (0.5pts)	6.46 (0.5pts)	0.60 (0.75pts)	0.77 (0.75pts)
Posttest	39.57 (0.5pts)	6.60 (0.5pts)	0.69 (0.75pts)	0.83 (0.75pts)

ACTIVITY THREE (5 POINTS)

A researcher employed a structured questionnaire to ask eight people about their use of physical libraries versus use of online libraries with the frequency scale bellow. Summarize the dataset in the descriptive statistics table below:

Frequency scale	Never	Rarely	Sometimes	Often	Always
	0	1	2	3	4

Dataset

Participant	Gender	Physical library use	Online library use
Subject 1	Male	3	2
Subject 2	Female	1	3
Subject 3	Male	4	4
Subject 4	Male	2	3
Subject 5	Female	3	4
Subject 6	Male	2	3
Subject 7	Female	2	2
Subject 8	Male	1	3

Descriptive statistics table

Gender	Physical library use			Online library use		
	\bar{x}	S^2	S	\bar{x}	S^2	S
Female	2 (0.25pts)	1 (0.25pts)	1 (0.25pts)	3 (0.25pts)	1 (0.25pts)	1 (0.25pts)
Male	2.40 (0.25pts)	1.30 (0.25pts)	1.14 (0.25pts)	3 (0.25pts)	0.50 (0.25pts)	0.71 (0.25pts)
Total	2.25 (0.25pts)	1.07 (0.5pts)	1.04 (0.25pts)	3 (0.25pts)	0.57 (0.5pts)	0.76 (0.25pts)