FULL NAME: _____   **DATE:** January 8th, 2024

GROUP NUMBER: _____   **TIME:** 90 minutes

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

Tick (✓) the correct answer:

1. If σ is 1.35, the population standard deviation is:
- ○ 0.67
- ◉ 1.16
- ○ 2.70
- ○ 1.82

2. If p = .0301 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

3. A large variance often suggests that:
- ○ The data are very close to the mean
- ◉ The data are very spread out from the mean
- ○ The variances are homogeneous
- ○ The variances are heterogeneous

4. In the dataset (42, 24 ,12, 53, 17, 47, 53, 17), the median is:
- ◉ 33
- ○ 53
- ○ 17
- ○ 17 and 53

5. A sampling approach that divides the population into groups and selects participants randomly:
- ◉ Stratified sampling
- ○ Quota sampling
- ○ Systematic sampling
- ○ Cluster sampling

6. Negative 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

7. In the Kolmogorov–Smirnov test, P = .046, means:
- ○ The data are normally distributed
- ◉ The data are not normally distributed
- ○ The data are significant
- ○ The data are not significant

8. The hypothesis "Exposure to authentic materials affects phonetic accuracy" is:
- ○ Null hypothesis
- ◉ Non-directional hypothesis
- ○ Directional hypothesis
- ○ None of the above

9. In a speech fluency task, the number of words per-minute is:
- ○ Nominal data
- ○ Ordinal data
- ○ Interval data
- ◉ Ratio data

10. The role of inferential 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	4.67	4.92
Student 2	5.49	6.37
Student 3	5.19	5.29
Student 4	6.72	6.79
Student 5	4.98	5.48
Student 6	3.86	4.76

Descriptive statistics table

TEST	Σ	$\bar{x}$	S^2	S
Pretest	30.91 (0.5pts)	5.15 (0.5pts)	0.90 (0.75pts)	0.95 (0.75pts)
Posttest	33.61 (0.5pts)	5.60 (0.5pts)	0.66 (0.75pts)	0.81 (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	1	4
Subject 2	Female	3	0
Subject 3	Male	4	2
Subject 4	Male	3	2
Subject 5	Female	4	3
Subject 6	Male	3	2
Subject 7	Female	4	2
Subject 8	Male	2	1

Descriptive statistics table

Gender	Physical library use			Online library use		
	$\bar{x}$	S^2	S	$\bar{x}$	S^2	S
Female	3.67 (0.25pts)	0.33 (0.25pts)	0.58 (0.25pts)	1.67 (0.25pts)	2.33 (0.25pts)	1.53 (0.25pts)
Male	2.60 (0.25pts)	1.30 (0.25pts)	1.14 (0.25pts)	2.20 (0.25pts)	1.20 (0.25pts)	1.10 (0.25pts)
Total	3 (0.25pts)	1.14 (0.5pts)	1.07 (0.25pts)	2 (0.25pts)	1.43 (0.5pts)	1.20 (0.25pts)