

Lab #4: Exam 1 Review

- 1) Hazel and Cecil want to study the effects of loud music on hearing. They also want to know if age is related to hearing ability as well. Set up research questions for the IV's, operationally define relevant terms, describe the IV's and there levels, describe the DV, and name two possible EV's. Are you doing a between, within, or mixed factorial design? How many groups are there?
- 2) What is the main distinction between a retrospective case study and a longitudinal case study?
- 3) Define probability and alpha level.
- 4) Classify the following example in the appropriate scale of measurement category (i.e., nominal, ordinal, interval, ratio).
 - a. I'm the third oldest of six kids.
 - b. Do you smoke?
 - c. She bench pressed the weight 50 times
 - d. degrees in Fahrenheit
 - e. degrees in Kelvin
 - f. Male=1, Female=2
 - g. She is smarter than me
- 5) What are the mathematical properties of each of the scales of measurement?
- 6) Round the following numbers to hundredths and then state the rounded numbers' exact limits
 - a. 36.997
 - b. 2.3654
 - c. 3.445
 - d. 729.565
 - e. 32.275
 - f. 29
 - g. 56.00000000007
- 7) Explain the limits of a summation.
- 8) Create an ungrouped frequency distribution including the frequency, relative frequency, percents, cumulative frequency, cumulative proportions, and cumulative percents, using the following data (number of free throws made out of 10 for a group of 12 college students playing basketball).
1 2 2 4 5 6 7 7 7 8 9 9

- 9) Create a grouped frequency distribution including the interval, exact limits, midpoints, frequency, proportion, percent, cumulative frequency, cumulative proportion, and cumulative percents, using the following data (points scored by football teams in 1 week).

6 7 10 10 13 13 14 17 20 21 24 24 27 30 35 38

For the remaining questions, use the graphing rules presented in class, graph paper, and a ruler/straight edge.

- 10) Plot a histogram **and** a frequency polygon for the numbers of credits that students in a class (perhaps ours) have completed.

Interval	Midpoint	frequency
135-139	137	2
130-134	132	3
125-129	127	2
120-124	122	4
115-119	117	5
110-114	112	3
105-109	107	4
100-104	102	1
95-99	97	3
90-94	92	5
		N=32

- 11) Plot a bar graph for the Percent of Undergraduates who Live Off-Campus:
- | | |
|------------|-----|
| Freshmen | 15% |
| Sophomores | 20% |
| Juniors | 80% |
| Seniors | 95% |

