

**Elementary Statistics Makeup Exam Review  
Psychology 311**

NAME: \_\_\_\_\_

STUDENT ID#: \_\_\_\_\_

This is the cumulative makeup exam for Elementary Statistics, covering everything we've talked about throughout the semester: frequency distributions, measures of central tendency and variability, hypothesis testing, t-statistics, estimation, ANOVAs, correlation, regression, and chi-squares. There are a total of 50 possible points. You have the full final period to complete this exam. Please remember that to receive full credit for your answers, you must show ALL your work. When in doubt, write it out...

A researcher was interested in studying the effects of job insecurity on employee job attitudes. Half of the research participants were randomly assigned to experience high insecurity (manipulated by announcing 50% layoffs) and half were assigned to experience low insecurity (announcement of 5% layoffs). In addition, the researcher was also interested in whether or not the method by which the layoffs were to occur would influence job attitudes and perceived fairness. Therefore, half of the research participants were assigned to a fair layoff condition (i.e., layoffs determined by job performance) and half were assigned to an unfair condition (i.e., layoffs determined by favoritism). Employees were asked to make ratings on several issues: how important their jobs were ("job importance"), the extent to which they intended to quit working for the organization ("turnover intentions"), their perceived chances of being laid off ("chances of being laid off"), and perceptions of fairness ("perceived fairness"). Finally, they were asked to decide whether they wanted to quit working for the organization or remain employed with the organization ("decision to quit"). Use the following data set gathered from these employees to answer all the questions on today's exam.

5 or 50% Layoff Condition	Fair/Unfair Method	Job Importance	Turnover Intentions	Chances of Being Laid Off	Perceived Fairness	Decision to Quit
1	1	4	3	5	7	1
1	2	3	4	75	2	1
1	1	2	1	10	5	1
1	2	4	3	5	5	2
1	1	3	2	5	5	2
1	1	4	3	5	7	2
1	2	3	4	75	2	2
1	1	2	1	10	5	2
1	2	3	4	75	2	1
1	1	2	1	10	5	2
2	2	3	2	75	7	1
2	1	6	4	50	3	2
2	2	2	2	50	3	1
2	1	6	3	25	3	2
2	2	2	3	50	2	1
2	1	2	2	50	5	2
2	2	4	3	50	2	1
2	2	2	3	50	2	1
2	1	2	2	25	5	2
2	2	4	3	50	2	1

Coding Manual: Layoff Condition: 1 = 5% 2 = 50%  
 Fairness Condition: 1 = Fair 2 = Unfair  
 Decision to Quit: 1 = Quit 2 = Remain

## REVIEW TOPICS

Using the data set shown above, you will be asked to perform the following computations using one or more of the variables described above.

- (1) Frequency distribution
- (2) Histogram
- (3) Measures of central tendency.
  - Mean
  - Mode
  - Median
- (4) Measures of variability.
  - Range
  - Variance
- (5) Single Sample t-test
- (6) 95% Confidence Interval for Single-Sample t-test
- (7) Independent Samples t-test
- (8) 99% Confidence Interval for Independent Samples t-test
- (9) Fill in the blanks ANOVA
- (10) Correlation
- (11) Regression
- (12)  $\chi^2$  Test for Independence