

c) In class, we saw that FTDIFF (George Bush FT – AL Gore FT) was -3.11 for men, compared to $-.52$ for the population, with a z-score of -1.91 . Was exact p-value is associated with this Z score?

d) Similarly, FTDIFF for women was 2.72 , $Z=2.20$. What exact p-value is associated with this Z score?

3. Fill in the blanks:

Correlation is not _____

We use regression, ANOVA, and difference of means to explain the: _____

Measurements are what we can observe; we can't observe: _____

We use crosstabs to analyze what kind of variables? _____

The intercept and slope of the regression line are measured by what? _____

4. We are trying to figure out whether a Reed education is superior to a Lewis and Clark education. I have GRE scores from both schools. All I know about Lewis and Clark is that the average GRE score is 541. For Reed, the average GRE score is 585 with a standard error of 20.

State the null hypothesis, either verbally or mathematically.

Do you reject or fail to reject your null hypothesis? At what precise probability level (p-value) do you make that decision?

Ideally, what else would you like to know about the Lewis and Clark student scores?

5) A political scientist wanted to account for the percent of the total vote collected by various candidates for the U.S. House of Representatives. He gathered data on the following variables for Congressional contests in 2002:

Vote: Percent of the total vote received (0-100)
 Incumb: Incumbency dummy variable (0 for non-incumbents, 1 for incumbents)
 \$Spent: Candidate's campaign expenditures (in thousands of dollars)
 Occup: Candidate's Occupation dummy variable
 (1 = Elected public official, 0 = Not an elected official)

He regressed "Vote" on the four independent variables and got the following results

<i>Variable</i>	<i>b</i>	<i>Std Error</i>	<i>T-Statistic</i>
<i>Incumbency</i>	12.00	4.30	2.79
<i>\$ Spent</i>	1.20	.50	2.40
<i>Occupation</i>	1.50	1.30	1.15
<i>Occ * \$Spent</i>	.05	.13	.38
<i>Constant</i>	25.4	4.10	6.19

N = 714 R² = .42 Standard Error of Regression = 8.1

He made the following conclusions, based on the analysis. Where necessary, restate these statements so they are accurate (if they are accurate, simply copy them).

- a) The equation accounts for the vote totals of 42% of the candidates.

- b) Incumbency is roughly ten times as important as campaign expenditures.

- c) Elected officials received 1.5% more of the vote than unelected officials.

- d) The coefficient for $\text{Occup} * \$\text{Spent}$ is statistically significant.

Bonus:

- e) Interpret the coefficient on $\text{Occup} * \$\text{Spent}$.