

# Required Information for Final Lab

## Demographic Summary

- 1) Pie Chart of Gender
- 2) Bar Chart of Age
- 3) Bar Chart of Education Level
- 4) Pie Chart of Political Affiliation
- 5) Pie Chart of Concern with Economy
- 6) Side by side Bar Chart for 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> choices to fix economy

## Statistical Summary

- 1) Sample proportion of males (specify x & n)
- 2) Sample proportion of democrats & republicans (specify x & n)
- 3) Sample proportion of those concerned with economy (specify x & n)
- 4) Sample proportions of age classifications (each individually; specify x & n)
- 5) Sample proportions of education levels (each individually; specify x & n)
- 6) 5 # summary plus mean and standard deviation and n of believed debt
- 7) 5 # summary plus mean and standard deviation and n of acceptable debt

## Confidence Intervals

- 1) For average debt using sample data. Use confidence level of 80%.

**and**

*Any 2 of the following with a confidence level of 90%*

- 2) Proportion of males  
or
- 3) Proportion of democrats **or** republicans (not both)  
or
- 4) Proportion of those concerned with economy  
or
- 5) Proportion of those in ANY one of the age classifications (not two to complete this portion)

## Hypothesis Tests

### *Tests of Means (Choose 1)*

- 1) The assumed debt is less than  $\$16.7 \times 10^{12}$ . Use a 10% significance level. Use the confidence interval to test this hypothesis.
- 2) The average acceptable debt is less than average assumed debt. Use a 10% significance level
- 3) The difference between the average citizen's assumed debt is higher than acceptable debt. Use a 10% significance level.

***Tests of Proportions (Choose 1)***

- 1) The proportion of Democrats is over 50%. Use a 5% significance level.
- 2) The proportion of Republicans is under 42%. Use a 5% significance level.
- 3) The proportion of males is different than 50%. Use a 10% significance level.
- 4) The proportion under 20 years old is higher than 7.2%. Use a 5% significance level.
- 5) The proportion over 50 is lower than 21%. Use a 5% significance level.
- 6) The proportion of people with BA/BS/Above BA/BS is different than 39.5%. Use a 10% significance level.

***Tests of 2 Proportions (Choose 1)***

- 1) Republican/Democratic Party affiliation is different for people in their 40's & 50's than in 30's/20's/Below. Use an 80% confidence level.
- 2) Proportion of democrats who want taxes raised is lower than the proportion of republicans that want taxes raised. Use an 90% confidence level.
- 3) Proportion of males and females with degree attainment of BA/BS or Above is different. Use an 80% confidence level.

***Chi-Squared Tests (Choose 1)***

- 1) The proportions of citizens who want to effect the economy with lowering taxes, raising taxes, cutting war spending/foreign spending differs by political affiliation (I suggest just using democrat & republican or putting the other 2 together). Use a 95% confidence level.
- 2) The proportions of citizens who want to effect the economy with lowering taxes, raising taxes, cutting war spending/foreign spending differs by education level (I suggest just using AS/lower & BS/higher). Use a 95% confidence level.
- 3) The proportions of citizens who want to effect the economy with lowering taxes, raising taxes, cutting war spending/foreign spending differs by age classification (I suggest 20s/Below, 30s/40s and 50s&Up instead of all classifications). Use a 95% confidence level.
- 4) Political affiliation differs due to educational attainment. Use a 95% confidence level.
- 5) Political affiliation differs due to age classification. Use a 95% confidence level.
- 6) Political affiliation differs due to gender. Use a 95% confidence level.
- 7) Concern/No Concern (leave out No Opinion) differs due to age classification. Use a 95% confidence level.

***ANOVA (Extra Credit when accompanied by another Chi-Square)***

There is at least one difference in the average assumed debt based upon age classification. Use a 90% confidence level.