Universidade de São Paulo Faculdade de Filosofia, Letras e Ciências Humanas

Departamento de Ciência Política

FLS-6183 Métodos Quantitativos de Pesquisa II

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Lista 1

Data de entrega: 31/8/2017

PART 1. Review of Types of Variables, Descriptive Statistics, Hypothesis Testing and the Normal Distribution

1. **For the cases below, please fill in the table with the descriptive statistics and graphs that would be most appropriate for each situation.**

Variables:	Measures of Central Tendency and Dispersion	Types of Graphs
Continuous		
Nominal		
Ordinal		

2. **Classify the following variables as nominal, ordinal or continuous.**

Variable	Answer
GDP Growth (%)	
Presidential Approval (Yes or No)	
Presidential Approval (%)	
Age	
Religion (Catholic, Protestant, etc.)	
Race (White, Black, etc.)	
Percent of Asian population in a certain country	

3. For the following types of cases, which are the types of statistical tests that are most appropriate?

Variables:	Null Hypothesis	Statistical test:
Continuous (y)		
Two nominal variables: x1 and x2 (E.g. Do men and women differ in their political party preferences (Republican or Democrat in a specific city?).		

One continuous and one nominal variable (E.g. Does the percentage of Democrats differ in two cities?)		
Two continuous variables (y and v).(E.g. Are increases in x associated with increases in y?)		

4. Normal distribution and Student´s T-distribution. Please respond whether each sentence below is true or false. Justify your response if false.

Sentence:	True or False?
a) In a normal distribution, the mean and the median are equal (μ), but they differ from the mode.	
b) If the distribution is normal, at least 99% of the observations must be in the range [μ-3σ, μ+3σ]. When we have 2σ, 95%. For only one σ, 68%.	
c) If a distribution is skewed, it's not a normal distribution.	
d)The student´s t-distribution tends to a normal as the number of observations decreases	

PART 2. Correlation and Linear Regression

4. Please review the Lab 2 do-file. What is the null and alternative hypothesis being tested in the correlation test between x and y? In the specific case, what can we conclude?

5. What is the interpretation of the coefficient and the constant term in the following regression model y= *a + bx.*

6. Under what situations would we prefer a hypothesis of correlation between two variables as opposed to a regression model?