





SPSS



SPSS is a statistical software program that allows users to analyze quantitative data.



A Spreadsheet

	A	B	C	D	E	F
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						

Hypotheses

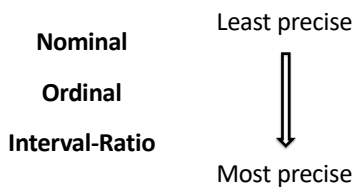
- Directional hypotheses** Reflects a difference between groups, but a direction is specified.
- Nondirectional hypotheses** Reflects a difference between groups, but no direction is specified.
- Null hypotheses** A statement that there is no relationship between concepts.

Independent & Dependent Variables

X	Y
Independent Variable	Dependent Variable
Income	Party identification
Citizen engagement	Bureaucratic efficiency
Race of legislator	Content of legislation

Levels of Measurement

Levels of Measurement: The particular levels at which we measure our outcomes; a classification system



Example Data

gender	major	classtanding	midterm
1	1	1	78
0	7	4	94
0	6	4	92
1	1	3	52
0	5	4	76
1	3	2	81
1	5	1	91

Nominal Variables

Defined by the characteristics of an outcome that fit into one and only one class of category.

The variable is measured in categories; non-rankable, non-ordered intervals

Examples: gender, race, marital status, major

gender
1
0
0
1
0
1
1

Ordinal Variables

Defined by the characteristics of an outcome that are able to be ordered.

The variable is measured in categories; rankable and ordered intervals

Examples: party ideology, income (in categories), class standing

classtanding
1
4
4
3
4
2
1

Interval-Ratio Variables

Interval and ratio variables are identical. The only difference is that ratio variables can identify an absolute zero value.

Together, interval and ratio variables are also known as **continuous variables, scale variables, OR interval-ratio variables.**

Examples: GDP, percentages, test score

midterm
78
94
92
52
76
81
91

Descriptive Statistics

After the methodology portion of your paper, you should spend time describing your questions by using descriptive statistics.

Level of Measurement	Central Tendency	Variance
Nominal	Mode	Range
Ordinal	Mode	Range
Interval-Ratio	Mean if no outliers in variable	Standard deviation & range
	Median if outliers in variable	

Graphs

You can also draw graphs of the variables you're using.

Level of Measurement	Type of Graph
Nominal	Bar Graph
Ordinal	Bar Graph
Interval-Ratio	Histogram

Test Statistics

After describing your variables, you have to figure out what test to perform.

Independent	Dependent	Test Statistic
Nominal (bivariate)	Interval-ratio	T-test
Nominal/ordinal	Interval-ratio	ANOVA
Nominal/ordinal	Nominal/ordinal	Chi-square
Interval-Ratio	Nominal/ordinal	Recode your independent variable
Interval-Ratio	Interval-Ratio	Correlation and/or Regression
