

Kim, Susan, Carla, and Dana each had Super Bowl watch parties at their houses. They administered a Super Bowl Survey to each adult who attended the watch parties. They wanted to generalize their results to the U.S. adult population. **The survey and the data they collected are attached.**

Indicate the type of variable for each of the Super Bowl Survey items.

Variable	Type of Variable			
Q1. Political Affiliation	Nominal	Ordinal	Interval	Ratio
Q2. Pizza Slices	Nominal	Ordinal	Interval	Ratio
Q3. Satisfaction	Nominal	Ordinal	Interval	Ratio
Q4. Wager	Nominal	Ordinal	Interval	Ratio

Calculate the mean, variance, and standard deviation for **satisfaction** at **Dana's** party. Show your work.

Test 1. Conduct the appropriate statistical analysis to determine whether the average **satisfaction** level at **Dana's** party was neutral (i.e., 3). Use an alpha of .05 to determine significance. Show your work. *[Do not write the interpretation in this section. See page 3.]*

Test 2. Use the **General Linear Model** to determine whether the satisfaction was similar for Dana's Democrats and Kim's Republicans. An alpha of .05 should be used. Show your work. *[Do not write the interpretation in this section. See page 3.]*

Test 3. Democrats, Republicans, and Independents attended Carla's party. Did they have the same average satisfaction level? Use an alpha of .05. Show your work. *[Do not write the interpretation in this section. See page 3.]*

Test 4. Susan's Analysis

Group Statistics^a

political affiliation		N	Mean	Std. Deviation	Std. Error Mean
satisfaction	Democrat	7	4.43	3.207	1.212
	Republican	5	1.40	.548	.245

a. party = Susan's

Independent Samples Test^a

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
satisfaction	Equal variances assumed	19.608	.001	2.062	10	.066	3.029	1.469	-.244	6.301
	Equal variances not assumed			2.449	6.484	.047	3.029	1.237	.056	6.001

a. party = Susan's

Summarize the results of Tests 1, 2, 3, and 4 in APA style. You may OMIT descriptive statistics (i.e., means and standard deviations).

_____ is defined as rejecting the null hypothesis when the null hypothesis is true.

_____ is defined as rejecting the null hypothesis when the null hypothesis is false.

The dependent samples t test assumes:

A researcher should have at least _____ people per group if they want to compare 5 groups, the effect size is small, and they want to use an alpha of .05.

Bradley's limits for a nominal alpha of .05 are:

A good general linear model will have a set of well-chosen variables, include enough independent variables to predict the dependent variable, and _____.

Under what conditions should the Welch Anova F test be used instead of the one-way anova F test?

Using the least squares criterion ensures the prediction errors are _____ and the estimates are _____.

The omega squared value ranges between _____.

An omega squared value of .25 would be interpreted as:

Super Bowl Survey

Q1. What is your political affiliation?

- 1 = Democrat
- 2 = Independent
- 3 = Republican

Q2. How many slices of pizza did you consume while watching the Super Bowl?

Q3. How satisfied were you with the outcome of the Super Bowl?

- | | | | | |
|----------------------|---|---|---|-------------------|
| 1 | 2 | 3 | 4 | 5 |
| Very
Dissatisfied | | | | Very
Satisfied |

Q4. How much did you wager on the Super Bowl?

- 1 = Less than \$20 2 = \$20 to \$50 3 = More than \$50
-

Dana's Survey Data

Q1. Political Affiliation	Q2. Pizza Slices	Q3. Satisfaction	Q4. Wager
1	8	3	1
1	4	3	1
1	3	4	1
1	4	5	1
1	5	4	2
1	6	5	3

Kim's Survey Data

Q1. Political Affiliation	Q2. Pizza Slices	Q3. Satisfaction	Q4. Wager
2	1	4	1
2	2	1	1
2	6	1	1
2	4	3	1
2	5	1	2
2	8	2	3

Carla's Party

Report^a

satisfaction

political affiliation	Mean	N	Std. Deviation
Democrat	4.00	15	1.604
Republican	3.00	15	1.464
Independent	2.00	15	.845
Total	3.00	45	1.552

a. party = Carla's

Reminder: Sum of Squares (SS) = Standard Deviation²(n-1)