Math Project

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We were asked to do a random sample of data collected by the math department, more

specifically the statistic classes at Longwood University. Data was first grouped based on populations

and their correlating samples. A population is the data from every individual of interest, for this

study the population was it is every student at Longwood University. A sample is a subsect of the population

that is chosen to be analyzed to look for certain data correlations. In this study the population was all of

the students in the Math 171 classes and the sample is the variable given to us by a questionnaire   
of religion and political party, that students were asked to take.

We chose the political party variable from the statistics given to us by the math department at

Longwood University who conducted a voluntary survey among undergraduate math 171 students.

Qualitative data is measuring of relating data by the quality of each of their characteristics rather

than analyzing its numerical value. Likewise, quantitative data explains how data measure or related to

a quality rather that a quality. Qualities are characteristics, and quantities are values that can be ordered.

This study was observed quantitatively, the goal was to visually display the difference between

college students identified political parties, to find out what percentage of college students identified

with which political party. If this study was conducted with the goal of identifying characteristics that

distinguish each political party from each other, this study would have been qualitative.

We determined our simple random sample random sample by inputting out data into an

excel spreadsheet. We first copied the all of the data values given to us, by the Longwood math

department, from the results of a voluntary questionnaire that was distributed online for extra

credit points. Once the data was copied, we selected which of the three variables we wanted to

compute for this study, we chose political party. We then used an excel equation to solve for a

random number sample of all three-hundred data values, the equation was =RAND(). Using the

drop down feature we copied this throughout all of the values. Then selecting the custom

sort feature in the drop down toolbar we ordered data by there corresponding given random

sample value, and selected for excel to order these by numbers least to greatest. Next we chose the

fifty top data value to input into a pie chart format that was also found on the drop down menu.

An observational study is one in which data draws inferences from a sample to a population.

An experimental study is one where an investigator manually modifies the independent variable.

We decided that this was an observational study because we were unable to manipulate any

variables. The data for this project was obtained via a convenience sample from students asked

to answer a survey in math 171 about their political beliefs and religion.

We believe that this survey represent students at Longwood, this is because Longwood University

has shown to be a Conservative based school, based on are pie chart below found through a random

sample, forty-four percent of students identify with republican political beliefs. We do not think that

this is Representative of all college students in Virginia because the state identifies as Democratic,

showing that our last few governors have been of the Democratic Party. Virginia as a state has great

variance among all locations in our state. For example, do to the large population imbalance in

Northern Virginia, who we see vote with the Democratic Party the state leans left. However, the

majority of the state tends to vote more right winged than Northern Virginia. We don’t think that this

is representative of all college students around the world. Around the world there is not only

Democrats or Republican. Certain countries have unfree dictatorial governments others have

democracies that don’t hold the same values as many American do.

In conclusion, we do not believe that this represents the larger population in question. This

survey shows results from three hundred people, where as the rest of the world represents a population   
of over seven billion people. If we wanted to explore, political opinions and affiliate

religions we would Solve for a random sample where the world's population would have

an equal shot at voicing their own views.

**Data Table**

|  |  |
| --- | --- |
| Political\_Party | Random Numbers |
| Republican | 0.3392281343 |
| Republican | 0.2725269917 |
| Democratic | 0.1868437816 |
| Democratic | 0.1768588309 |
| Other | 0.8940018204 |
| Democratic | 0.2148494129 |
| Democratic | 0.3633436948 |
| Republican | 0.1499765493 |
| Republican | 0.6068493036 |
| Other | 0.9008358765 |
| Other | 0.597403734 |
| Republican | 0.6595257978 |
| Democratic | 0.566909166 |
| Republican | 0.6472128126 |
| Republican | 0.7347148258 |
| Republican | 0.7606334867 |
| Other | 0.2255927252 |
| Republican | 0.9521293282 |
| Democratic | 0.1963787828 |
| Other | 0.7966846795 |
| Republican | 0.1700780548 |
| Other | 0.5442605173 |
| Democratic | 0.02667568217 |
| Libertarian | 0.3870249882 |
| Other | 0.5377046594 |
| Other | 0.4320414016 |
| Democratic | 0.2890225093 |
| Democratic | 0.3443743644 |
| Republican | 0.1110940831 |
| Republican | 0.08782757783 |
| Democratic | 0.04184321337 |
| Republican | 0.05567405373 |
| Republican | 0.4629237903 |
| Other | 0.9574430588 |
| Other | 0.470796277 |
| Other | 0.5563779418 |
| Republican | 0.1296324474 |
| Republican | 0.07248931729 |
| Republican | 0.8797833469 |
| Other | 0.2557379662 |
| Democratic | 0.6849370644 |
| Other | 0.6609537408 |
| Republican | 0.1503882333 |
| Republican | 0.02942325964 |
| Democratic | 0.756893547 |
| Other | 0.3010703414 |
| Republican | 0.9678727721 |
| Republican | 0.1858505672 |
| Republican | 0.4863339068 |
| Other | 0.3440488073 |

