

Use the following information for numbers 1 – 4:
 Below is some information about the first ten United States Presidents.

Name	Political Party	Age at Inauguration	Age at Death	State of Birth
George Washington	Federalist	57	67	Virginia
John Adams	Federalist	61	90	Massachusetts
Thomas Jefferson	Democratic-Republican	57	83	Virginia
James Madison	Democratic-Republican	57	85	Virginia
James Monroe	Democratic-Republican	58	73	Virginia
John Quincy Adams	Democratic-Republican	57	80	Massachusetts
Andrew Jackson	Democrat	61	78	South Carolina
Martin Van Buren	Democrat	54	79	New York
William H. Harrison	Whig	68	68	Virginia
John Tyler	Whig	51	71	Virginia

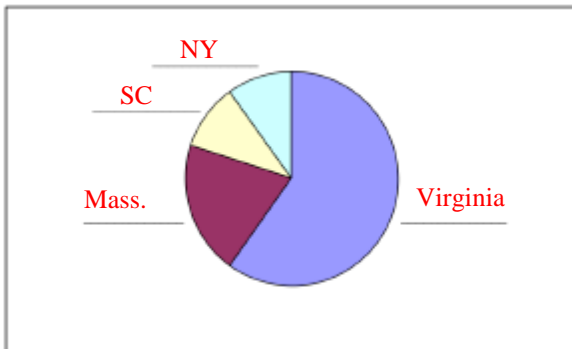
1. What are the individuals in this data set?

Individuals are the ten presidents.

2. Identify the variables that were recorded, and indicate whether each one is categorical or quantitative.

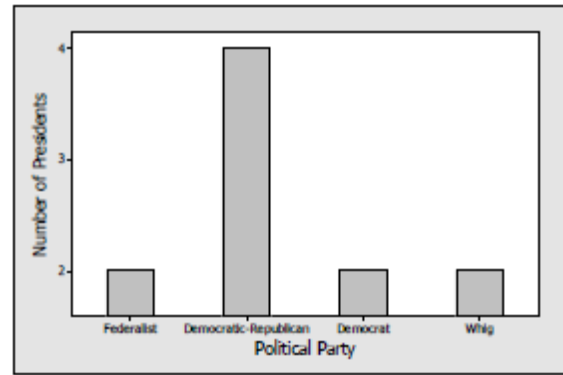
Categorical Variables	Quantitative Variables
Political Party State of Birth	Age at Inauguration Age at Death

3. Here is a pie chart for the distribution of the variable “State of birth.” Fill in the blanks with the appropriate values of the variable.



4. Below is a bar graph of the number of presidents of each political party. What is wrong with the way information is presented in this graph?

Because the vertical scale starts just below 2 instead of starting at 0, the differences Number of Presidents are exaggerated, making it appear that there were many more Democratic-Republicans.



5. You suspect that there is a relationship between teenagers' preference in movies and their preference in pizza. You ask 110 students at your school to choose between three movies and three pizza types. Here are your results.

Movie Preference	Pizza Preference		
	Pepperoni	Meatball	Mushroom
Men in Black	20	15	10
The Big Lebowski	8	16	11
Monsters, Inc.	15	2	13

a) Calculate the marginal distribution of movie preference in percents.

Men in Black	40.9%
The Big Lebowski	31.8%
Monsters, Inc.	27.3%

b) Find the conditional distribution of pizza preference for each movie preference, in percents.

	Pepperoni	Meatball	Mushroom
Men in Black	44.4%	33.3%	22.2%
The Big Lebowski	22.9%	45.7%	31.4%
Monsters, Inc.	50%	6.7%	43.3%