1. **Variables**

For this section please determine the type of variable:

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Create a variable name | Is it Categorical or Quantitative? | Is it a Nominal, Ordinal, Interval, or Ratio measure? |
| Birth position in your family (1st, 2nd etc) | Birth\_pos | Categorical | ordinal |
| A person’s profession | Occupation | Categorical | Nominal |
| Number of baby vocalizations per minute | BB\_voc/min | Quantitative | Ratio |
| Brand of smartphone you prefer | SmrtPhn\_pref | Categorical | Nominal |

**II. Frequency Tables**

1. A licensed clinical social worker recorded the number of times that 12 clients required an emergency session over a twelve-month period. The values she found were:

**0, 2, 1, 3, 0, 1, 0, 6, 8, 2, 0, 1,**

* 1. Make a frequency table below.

|  |  |
| --- | --- |
| score | freq |
| 0 | 4 |
| 1 | 3 |
| 2 | 2 |
| 3 | 1 |
| 4 | 0 |
| 5 | 0 |
| 6 | 1 |
| 7 | 0 |
| 8 | 1 |
| 9 | 0 |
| scores | 12 |

* 1. Make an APA-style bar chart based on the frequency table (remember to label the axes and make an informative title. Remember to remove the horizontal gridlines as well)

**III. Interpreting Graphs**

For each of the graphs below, identify what type of graph it is, what variables were measured, and provide an interpretation of the information the graph displays. You will need to use both the lecture slides and your lab file to guide you.

An example is filled in below for you to get a sense of what we’re looking for.

**Example**

|  |  |  |  |
| --- | --- | --- | --- |
| Evaluate the following graph: |  | | |
|  | |  | |
| What type of graph is this? Be specific. | | A BAR GRAPH | |
|  | |  |  |
| What variables were measured to produce this graph? | | *Variable 1:* | *Variable 2:* |
| TYPE OF PET | NUMBER OF PEOPLE OWNING A PET |
|  | |  | |
| In plain English, provide an interpretation of the information displayed in this graph. | | | |
| The majority of individuals owning a pet own a cat, followed by a dog. The fewest amount of people own rabbits and hamsters. | | | |

**Possible answers you can choose from for the graph type:**

**Bar chart, histogram, line graph, pie chart, scatterplot, frequency polygon**

**Graph 1**

|  |  |  |  |
| --- | --- | --- | --- |
| Evaluate the following graph: | Image result for bar graph funny | | |
|  | |  | |
| What type of graph is this? Be specific. | | Bar graph | |
|  | |  |  |
| What variables were are in this graph? | | *Variable 1:* | *Variable 2:* |
| Procedure (ordinal) | Friends made (ratio) |
|  | |  | |
| In plain English, provide an interpretation of the information displayed in this graph. | | | |
| Measures of how many friends are made with different procedures. “Become a nice person” is least successful and ”tell everybody that you have all the seasons of Game of Thrones” is the most successful procedure | | | |
|  | | | |
|  | | | |

**Graph 2**

|  |  |  |  |
| --- | --- | --- | --- |
| Evaluate the following graph: | Image result for scatterplot | | |
|  | |  | |
| What type of graph is this? Be specific. | | Scatterplot | |
|  | |  |  |
| What variables were measured to produce this graph? | | *Variable 1:* | *Variable 2:* |
| Height (ratio) | Weight (ratio) |
|  | |  | |
| In plain English, provide an interpretation of the information displayed in this graph. | | | |
| Displays a relationship between height and weight. There seems to be an upwards trend with weight increasing with taller participants. | | | |
|  | | | |
|  | | | |

**Graph 3**

|  |  |  |  |
| --- | --- | --- | --- |
| Evaluate the following graph: | Image result for pie chart funny | | |
|  | |  | |
| What type of graph is this? Be specific. | | Pie chart | |
|  | |  |  |
| What variable was measured to produce this graph? Do not list “frequency” or “percent.” | | *Variable 1:* |  |
| Distribution of the words used in a pop song. |  |
|  | |  | |
| In plain English, provide an interpretation of the information displayed in this graph. | | | |
| Of all the words used in a pop song, the vast majority are “baby”, “ooh” and “yeah,” with actual lyrics being the least present. | | | |
|  | | | |
|  | | | |

**Graph 4**

|  |  |  |  |
| --- | --- | --- | --- |
| Evaluate the following graph: | Image result for histogram funny | | |
|  | |  | |
| What type of graph is this? Be specific. | | Histogram | |
|  | |  |  |
| What variables are depicted in this graph? | | *Variable 1:* | *Variable 2:* |
| Height (ratio) | Frequency (ratio) |
|  | |  | |
| In plain English, provide an interpretation of the information displayed in this graph. | | | |
| This distribution represents the number of trees by height in feet in a given population. | | | |
|  | | | |
|  | | | |