Example Question

5. The following data are from a nominal scale and represent the entire Population of fixlet scores. Thoroughly describe that data. [Note: Not looking for word descriptions but statistical descriptions using the descriptive statistical techniques you have learned that are appropriate for this type of data (check Week05 Review of Descriptive Statistics)].
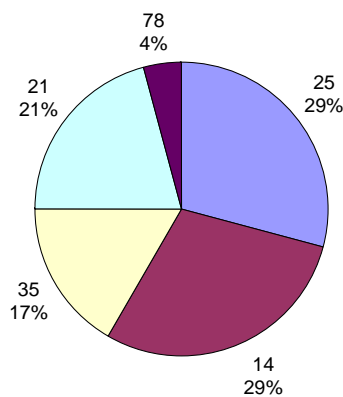
25	21	25	14	25
14	14	14	25	25
35	35	14	25	21
21	21	14	35	35
21	14	25	78	

Example Answer

$N = 24$

Fixlet Score	Freq	Relative Freq.
25	7	.2917
14	7	.2917
35	4	.1667
21	5	.2083
78	1	.0417

The data are bimodal with modes at 25 and 14

Example Explanation

- First, just count how many numbers you have in total. In this case, we have 24 numbers, so N = 24.
- Next, set up a table with three columns. The first column is named Fixlet Scores because that is what the problem is about. The second column we name after Uncle Frank, we label it "Freq." The final column we name after Uncle Frank's family: "Relative Freq." Note, we do not have a cumulative frequency column as this would require us to put the data in order, and nominal data has no order. The numbers are just names, and a 35 is not higher than a 14 – they are just names. We also do not have a percentile column for the same reason we do not have a cumulative frequency column.
- Under the **Fixlet Score** column, we list every value that we find in our data set. However, because the data are nominal scale, we do not put the values in order.
- Under the **Freq** column, we put how many each value showed up in our data set. For example, there are seven 25s in our data set.
- Under the **Relative Freq** column just divide the frequency by N. Round to four decimal places (four digits following the decimal point). Do not put a zero before the decimal point.
  - In rounding, if the fifth digit following the decimal point is 4 or less, just drop it and all the digits that follow it (e.g., .0987234 becomes .0987). If the fifth digit following the decimal point is 5 or more, add 1 to the fourth digit then drop the fifth digit and all the digits that follow it (e.g., .0987534 becomes .0988).
  - APA says no leading 0 on relative frequencies. Page 128 of the APA says:
    "Use a zero before the decimal point when numbers are less than 1.
      0.23 cm, 0.48 s
    Do not use a zero before a decimal fraction when the number cannot be greater than 1 (e.g., correlations, proportions, and levels of statistical significance).
      $r(24) = -.43, p < .05$"
- For graphing, we could do either a bar chart or a pie chart. In this case, we have only a few categories (i.e., 5) so we use a pie chart. You should just do this by hand just estimating the size of each piece using the relative frequencies.