1. Consider the following data obtained in a study of food additives and hyperactive behavior in 3-yearold children. The 17 children whose scores are listed below each consumed 85% or more of the active mix (food additive) drinks during the three weeks of the study. These data represent scores on an ADHD rating scale (higher scores indicate less attentive/more hyperactive):

25, 23, 18, 24, 14, 21, 17, 12, 19, 15, 6, 22, 16, 20, 20, 21, 18 1.

* 1. Construct an ungrouped frequency distribution for these data.
  2. In a single table: Construct a grouped frequency distribution for these data, using class intervals of size 2.
  3. Construct a relative frequency distribution for the grouped data using %f.
  4. Construct a cumulative percentage frequency distribution for the grouped data.
  5. Using MS Excel, create a histogram for these data.

1. Consider these ADHD scores obtained in the same study from 30 children who consumed 85% or more of the placebo drinks during the three weeks of the study. 7, 8, 15, 11, 25, 17, 9, 21, 10, 13, 6, 9, 8, 6, 11, 8, 11, 5, 7, 8, 10, 15, 10, 8, 6, 12, 7, 6, 3, 10 4.
   1. Construct a grouped frequency distribution for these data, using a class interval of size 2.
   2. Create columns for cumulative frequency and cumulative percent for these data. Plot the cumulative percentage in a cumulative percentage polygon.
   3. Construct a relative frequency distribution for comparing the ADHD scores of the children in the experimental group with those of the children in the placebo group.
   4. Construct a relative frequency polygon to display these relative frequencies. Interpret this graph – what does it tell you, generally?
2. Make the stem and leaf plot for the given data. Determine the minimum value, maximum value, key, median, mode, mean and range of the data for each one.
   1. 31, 48, 29, 34, 94, 36, 41, 45, 27, 49, 56, 49, 36, 52, 48, 96, 50, 54, 30, 29
   2. 48.3, 53.5, 38.9, 48.4, 53.7, 38.5, 53, 48.6, 25.6, 48.9, 38, 53.8, 48.1, 48.5, 38.7
   3. 523, 369, 700, 834, 953, 366, 528, 645, 950, 526, 365
3. The stem-and-leaf plot shows the number of digs for the top 15 volleyball players at a recent women’s AVP Miami Open.
   1. How many players had more than 60 digs?
   2. Find the mean, median, mode, and range of the data.
   3. Describe the distribution of the data.
   4. Which data value is the outlier? Describe how the outlier affects the mean.

Stem | leaf

4 | 1 1 3 3 5

5 | 0 2 3 4

6 | 2 3 3 7

7 | 5

8 |

9 | 7

Key : 5 | 0 = 50