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# Week 1 Homework

1. Mean – a measure of centra tendency; the “average”. This is computed by adding together all values in a vector, and then diving this value by the count of values in a vector
   - Median – the halfway value of sorted values (from smallest to larges) in a vector
   - Mode – the value that occurs most frequently in a vector
   - Variance – the sum of squared deviations from the mean, divided by the number of observations (or count of values in a vector)
   - Standard Deviation – the square root of the variance
   - Histogram – a visualization of frequency of distribution of values in a vector
   - Normal Distribution – the classic bell-shaped curve, with symmetric tails and gradual curves toward a peak in the middle
   - Poisson Distribution – different shapes at different levels of lambda – all observations are positive
2. …
3. Data: Orange
   - Age
     - Mean: 922.1
     - Median: 1004.0
   - Circumference
     - Mean: 115.9
     - Median:  115.0
   - The mean is the average of all values in a vector, that is the sum of all values in a vector, divided by the number of vectors in the value.
   - The median is the halfway value of sorted values (from smallest to largest) in a vector.
4. The distribution of the Lake Huron dataset is Poisson. The dataset is mildly skewed to the left (negative skewed). However, data with normal distribution are symmetric.