**Measures of Center (KEY)**

Use the example data set to complete the table: 3, 4, 14, 6, 7, 9, 2, 10, 11, 7, 12, 8

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Measure** | **Definition** | **How to Calculate** | **Example Calculation** | **When to Report** |
| **Mean** | The sum of data divided by the number of items in the data set, also called the **average**. | Add up all the data values. Then divide by the number of values given. | 7.75 | Data set is numerical and does not have any major outliers or extreme values. |
| **Median** | In a set of data, the middle number of the ordered data, or the mean of the two middle numbers. | Order the data from least to greatest. Find the number in the middle. If there are two numbers in the middle, calculate the mean of the two middle numbers. | 7.5 | Data set is numerical and there are major outliers that may skew the mean. |
| **Mode** | The number or numbers that occur most often in a set of data. |  | 7 | Data set is categorical, not numerical. |
| **Minimum** | The smallest value in a data set. |  | 2 |  |
| **Maximum** | The largest value in a data set. |  | 14 |  |
| **Range** | The difference between the largest and smallest numbers in a data set. | Subtract the Minimum from the Maximum. | 12 |  |
| **Lower Quartile** | The median of the lower half of a set of data. | Order the data from least to greatest, and then split the values in half (about the median). Determine the median of the *first half* of the values. | 5 |  |
| **Upper Quartile** | The median of the upper half of a set of data. | Order the data from least to greatest, and then split the values in half (about the median). Determine the median of the *second half* of the values. | 10.5 |  |