**CCM6 Mean and Median with and without Outliers**

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| Mean | The average of a set of data. Add up all the data values and divide by how many data values there are. (The data values do not have to be in order to find the mean) |
| Median | The middle of a set of data. Order the data values from least to greatest. Find the data value that is in the middle. If there are two data points in the middle, find the mean of these two data values. |
| Outlier | A data value that is much higher or much lower than the other values in the data set. |
| Measures of Center | Measurements that establish a central location in the data set |

1. Shoe prices at REI: $20, $45, $48, $31, $20, $122, $37, $20 Outlier: 122

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|  | With the Outlier | Without the Outlier | Affects of the Outlier |
| Mean | $42.88 | $31.57 | Including the outlier in the data set raises the average price of shoes by $11.31 |
| Median | $34 | $31 | Including the outlier in the data set raises the median price of shoes by $3 |

2. The calories in different flavor cookies: 124, 177, 180, 210, 195, 200 Outlier: 124

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|  | With the Outlier | Without the Outlier | Affects of the Outlier |
| Mean | 181 | 192.4 | Including the outlier in the data set lowers the average calories per cookie by 11.4 calories |
| Median | 187.5 | 195 | Including the outlier in the data set lowers the median calorie per cookie by 7.5 calories |

1. The times (in minutes) it takes 6 students to travel to school: 8, 10, 10, 15, 20 and 45 Outlier: 45

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|  | With the Outlier | Without the Outlier | Affects of the Outlier |
| Mean | 18 | 12.6 | Including the outlier in the data set raises the average travel time to school by 5.4 minutes |
| Median | 12.5 | 10 | Including the outlier in the data set raises the median travel time to school by 2.5 minutes |