**10-3 Practice**

***Measures of Spread***

**Find the minimum, lower quartile, median, upper quartile, and maximum values for each data set.**

**1. BOOK STORE** Emma purchased the following number of books each month for the last nine months: 12, 15, 8, 10, 7, 14, 13, 9, 11.

**2. HEIGHTS** The following heights, in inches, of people in line at the grocery store were recorded for one hour: 62, 77, 54, 66, 70, 68, 56, 42, 55, 67, 73, 48, 50, 63, 60, 58, 69, 71.

**3. SALES** An employee tracked the daily of sales of a store. Find the mean and median of the data set, and then identify any outliers. If the set has an outlier, find the mean and median without the outlier, and state which measure is affected more by the removal of this value.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number of Sales** | | | | | |
| 24 | 36 | 35 | 42 | 22 | 98 |
| 40 | 25 | 33 | 41 | 28 | 38 |

**Find and interpret the standard deviation of each set of data.**

**4.** {6, 11, 19, 9} **5.** {2, 5, 8, 11, 4}

**6.** {145, 166, 171, 150, 188} **7.** {13, 24, 22, 17, 14, 19, 15, 22}

**8. QUALITY CONTROL** An inspector checks each automobile that comes off of the assembly line. He keeps a record of the number of defective cars each day: {3, 1, 2, 0, 0, 4, 3, 6, 1, 2}. Find and interpret the standard deviation.

**9. FOOTBALL** A coach for the Hawks football team compares the number of points the Hawks score with the number of points the Hawks’ opponents score each game. Compare the mean and standard deviation of each set of data.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Hawks’ Opponents** | | | | |
| 31 | 19 | 6 | 13 | 24 |
| 28 | 35 | 34 | 16 | 23 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Hawks** | | | | |
| 14 | 28 | 10 | 21 | 24 |
| 35 | 7 | 6 | 17 | 20 |