Name: _____ Date: _____

BLM 3–11

Section 3.5 Measures of Spread

1. For each variance, determine the standard deviation. Round your answer to one decimal place, if necessary.
- **a)** 85 m
- **b)** 27 g
- **c)** 38 L
- **d)** 91 km
- **e)** 214 kg
- **f)** $225

2. For each standard deviation, determine the variance.
- **a)** 18.8 cm
- **b)** 2.7 mg
- **c)** 11 min
- **d)** 7.6 m
- **e)** 14.5 h
- **f)** 28.6 L

3. Find the range for each set of data.
- **a)** 82, 71, 52, 15, 85, 88, 92, 87, 56, 53
- **b)** 4.2, 8.8, 1.1, 5.4, 11.3, 4.7, 8.8
- **c)** 2, 7, 9, 8, 7, 11, 4, 1, 8, 7, 5, 7, 12, 8, 6, 6, 2, 3, 15
- **d)** 112, 185, 214, 87, 125, 167, 181, 93, 154, 162, 111, 84

4. Explain why the range is unaffected by the number of values in a set of data.

5. Find the median, first and third quartiles, and the interquartile range for each set of data. Then display the data using a box-and-whisker plot.
- **a)** minutes used per week by Elise on her cell phone: 63, 42, 49, 62, 67, 54, 83, 71, 77, 55, 70, 63
- **b)** three dart totals: 180, 160, 151, 180, 177, 145, 120, 121, 148, 100, 120
- **c)** marks on a science test: 84, 72, 54, 81, 67, 75, 41, 53, 93, 58, 77, 73, 85, 81

6. Find the range and the mean for the data in question 5.

7. Find the range, the variance, and the standard deviation for each set of data.
- **a)** earnings per week, in dollars: 265, 314, 310, 290, 282, 300, 281, 290, 293, 287, 288, 292
- **b)** archery scores in a flight of three arrows: 21, 28, 31, 26, 26, 30
- **c)** marks on a mathematics test: 55, 67, 62, 71, 77, 74, 62, 68, 71, 73

8. Explain how two sets of data compare if they have the same mean but a different standard deviation.

9. A high school basketball coach is a little worried about the upcoming play-off game. She found that the mean heights of her team and the opposing team are both 188 cm, but the standard deviation for her team is 12.4 cm while the opposing team has a standard deviation of 7.5 cm. Explain why she would be concerned.