

NAME: \_\_\_\_\_

## UNIT 4 • DESCRIBING DATA

### Lesson 1: Working with a Single Measurement Variable

#### Practice 4.1.1: Summarizing Numerical Data Sets\*

Elizabeth records her scores each time she goes bowling. The scores from her last 13 games are in the table below. Use the data to complete problems 1–6.

| Game | Score |
|------|-------|
| 1    | 206   |
| 2    | 210   |
| 3    | 198   |
| 4    | 209   |
| 5    | 194   |
| 6    | 200   |
| 7    | 216   |
| 8    | 212   |
| 9    | 196   |
| 10   | 224   |
| 11   | 228   |
| 12   | 231   |
| 13   | 207   |

1. What is the mean of the data set?
2. What is the median of the data set?
3. Which measure of center best describes this data? Explain.
4. What is the mean absolute deviation of the data set?
5. What is the interquartile range of the data set?
6. Describe the variation of the data using both mean absolute deviation and interquartile range. Include comments about any striking deviations.

*continued*

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### Lesson 1: Working with a Single Measurement Variable

Two science classes conducted an experiment. Each student measured the same amount of water in a beaker, and then heated the water until it boiled. The students recorded the time it took the water to boil in the tables below. Use the table to complete problems 7–10.

| Class 1 |                 |
|---------|-----------------|
| Student | Time in seconds |
| A       | 61              |
| B       | 58              |
| C       | 56              |
| D       | 60              |
| E       | 57              |
| F       | 63              |
| G       | 65              |
| H       | 62              |

| Class 2 |                 |
|---------|-----------------|
| Student | Time in seconds |
| A       | 55              |
| B       | 68              |
| C       | 64              |
| D       | 51              |
| E       | 60              |
| F       | 50              |
| G       | 49              |
| H       | 60              |
| I       | 52              |

- For each class, what is the mean time it took the water to boil? For each class, what is the median time it took the water to boil?
- For each class, what is the interquartile range of the data? For each class, what is the mean absolute deviation?
- Why do you think the interquartile range is different for the two classes? Think about how the students set up the experiment and recorded the information.
- What overall patterns do you notice in the data sets? Are there any striking deviations?