

**LESSON**  
**14-4**

**Practice A**  
**Data Distributions**

**Find the mean, median, mode, and range of each data set.**

1. 7, 19, 25, 9, 10

Order the numbers: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

mean:  $\frac{\square + \square + \square + \square + \square}{\square} = \underline{\hspace{2cm}}$       median:  $\underline{\hspace{2cm}}$

mode:  $\underline{\hspace{2cm}}$       range:  $\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

2. 5, 3, 3, 5, 2, 5, 5

Order the numbers: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

mean:  $\underline{\hspace{2cm}}$       median:  $\underline{\hspace{2cm}}$

mode:  $\underline{\hspace{2cm}}$       range:  $\underline{\hspace{2cm}}$

3. 8, 12, 17, 12, 9, 8

mean:  $\underline{\hspace{2cm}}$       median:  $\underline{\hspace{2cm}}$

mode:  $\underline{\hspace{2cm}}$       range:  $\underline{\hspace{2cm}}$

**Identify the outlier in each data set, and determine how the outlier affects the mean, median, mode, and range of the data.**

4. 7, 11, 29, 3, 10

5. 52, 39, 11, 44

\_\_\_\_\_

\_\_\_\_\_

6. Mr. Bernard drove 46, 4, 64, 50, and 56 miles on his last five trips. For each question, choose the mean, median, or mode, and give its value.

a. Which value describes Mr. Bernard's average driving distance? \_\_\_\_\_

b. Which value would Mr. Bernard tell his boss to convince him that he spends too much time on the road? Explain.

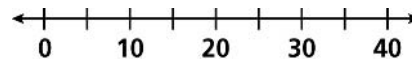
\_\_\_\_\_

7. Use the data to make a box-and-whisker plot. 18, 22, 10, 22, 30, 8, 33, 15, 14

a. Order the data: \_\_\_\_\_

b. Min: \_\_\_\_\_, Q1: \_\_\_\_\_, Med: \_\_\_\_\_,

Q3: \_\_\_\_\_, Max: \_\_\_\_\_

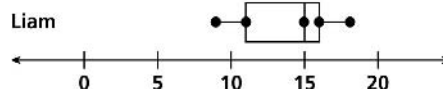


**The quiz scores of two students are shown in the box-and-whisker plots.**

8. Who has the higher median score? \_\_\_\_\_

9. Who has the highest score? \_\_\_\_\_

10. Who has the most consistent scores? \_\_\_\_\_



2. a. 0.81  
b. 0.27
3. D
4. J

### Reading Strategy

	Yes	No	Total
Children	0.40	0.04	0.44
Adults	0.36	0.2	0.56
Total	0.76	0.24	1

## 14-4 DATA DISTRIBUTIONS

### Practice A

1. 7, 9, 10, 19, 25

mean:

$$\frac{\boxed{7} + \boxed{9} + \boxed{10} + \boxed{19} + \boxed{25}}{\boxed{5}} = 14$$

median: 10

mode: none

range:  $25 - 7 = 18$

2. 2, 3, 3, 5, 5, 5, 5

mean: 4      median: 5

mode: 5      range: 3

3. mean: 11

median: 10.5

mode: 8 and 12

range: 9

4. outlier: 29, increases mean by 4.25, median by 1.5, and range by 18, no effect on mode

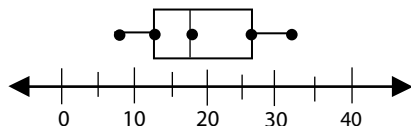
5. outlier: 11, decreases mean by 8.5, median by 2.5, no effect on mode, increases range by 28

- 6a. mean, 44

- 6b. median, 50, because it is higher than the mean.

- 7a. 8, 10, 14, 15, 18, 22, 22, 30, 33

- 7b. 8, 12, 18, 26, 33



8. Liam

9. Vicki

10. Liam

### Practice B

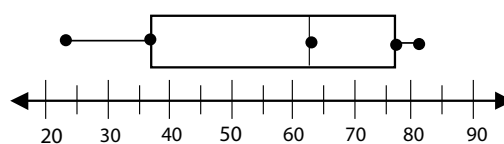
1. mean: 27.4      median: 22  
mode: 22      range: 27
2. mean: 10.5      median: 9  
mode: 8      range: 7
3. mean: 1.5      median: 1.25  
mode: none      range: 2.75
4. mean: 94      median: 94  
modes: 93, 95      range: 4
5. outlier: 98, increases mean by 10.1 and range by 57, no effect on median or mode
6. outlier: 24, decreases mean by  $9\frac{1}{3}$ , median by 3.5, increases range by 55, no effect on mode

- 7a. mean: \$80.50

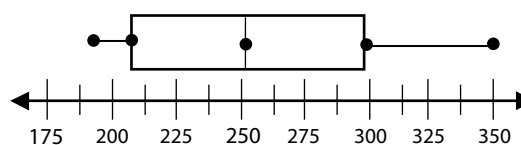
- 7b. mean, because it is the lowest of the three measures, lower because of the outlier \$15

- 7c. mode, \$99, because it is the greatest of the three measures

8.



9.



10. Tim

11. Jamal

12. Tim, his box is to the left of Jamal's.

### Practice C

1. mean: 42.6      median: 35  
mode: none      range: 97.5
2. mean: 0.75      median: 2  
mode: -6, 4      range: 12
3. mean:  $6\frac{19}{20}$       median:  $7\frac{3}{10}$   
mode: none      range:  $7\frac{4}{5}$