SOLVE CORRECTLY

Because the data sets are asymmetric, IQR is the best measure of spread to use to compare the data sets.

Lower Half of Data Set 1: 3, 3, 5, 6, 8; first quartile is 5.

Upper Half of Data Set 1: 9, 10, 15, 26, 45; third quartile is 15.

The IQR of Data Set 1 is $15 - 5 = 10$

Lower Half of Data Set 2: 2, 10, 15, 27, 36; first quartile is 15.

Upper Half of Data Set 2: 39, 40, 43, 44, 44; third quartile is 43.

The IQR of Data Set 2 is $43 - 15 = 28$

The IQR of Data Set 2 is much greater than the IQR of Data Set 1. This suggests that the variability of the data in Data Set 2 is greater. Inspection of the data sets verifies this fact. Data Set 1 has its values bunched close to the median with two high outliers, while Data Set 2 has values bunched toward the maximum but spread throughout its range.
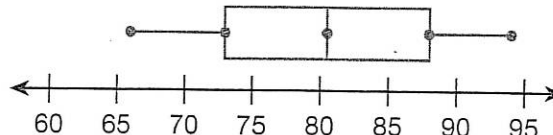
③ LESSON PRACTICE

(26)

Answer Key

1. B
2. B
3. A
4. A
5. D
6.

Statistic	Christiana's Data	David's Data	Eduardo's Data
minimum	12	14	16
maximum	31	28	29
first quartile	19	17.5	16
median	20.5	22	20.5
third quartile	24.5	24.5	24
interquartile range	5.5	7	8

7. **Jamie's Temperature Data (in °F)**

8. **Odd:** maximum, first quartile, interquartile range; **Even:** minimum, median, third quartile

9. Sample answer: I would choose to eat at Restaurant B. There is a greater selection of pizzas at a lower price because the spread is smaller, as evidenced by the size of the box on the box plot, and the median price is lower, as evidenced by the location of the middle bar on the box.
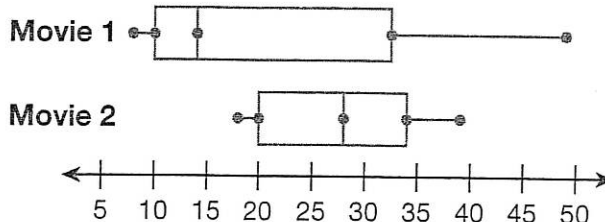
10. **Part A**
Movie 1: 8 9 10 10 12 14 14 20 26 28 37 41 49;
Movie 2: 18 18 19 21 24 26 28 29 30 33 35 36 39
Part B

Ages of Movie Attendees

Part C Sample answer: The data for Movie 1 has a greater range, a greater IQR indicating more variability, and a median that is relatively low in value and close in value to the first quartile. This data set is asymmetric and suggests the movie appeals to teens. The data for Movie 2 has a more narrowly defined range of ages, a lower IQR indicating less variability, and a median that is greater and at the center of the box. This data set is symmetric and indicates the movie appeals to young adults.