Name: _____ Date: _____

1. Find the upper and lower quartiles of the following sets.

   a. $4, 5, 7, 10, 2, 3, 8, 12, 11$

   b. $9, 19, 24, 8, 17, 16, 12, 5$

2. Find the IQR and range of the following sets.

   a. $6, 20, 8, 11, 19, 7, 17$

   b. $42, 60, 53, 112, 110, 93, 46, 58$

3. Suppose there are 20 numbers in a data set and that they are all different.

   a. How many of the values in this data set are between the first quartile and the third quartile?

   b. How many of the values in this data set are between the first quartile and the median?

4. Havel and Vera record the lengths of time that they each spend practicing their musical instruments each day after school. They then record their times in the chart below so they can compare.

Day	Havel's practice time (minutes)	Vera's practice time (minutes)
Monday	40	50
Tuesday	60	30
Wednesday	50	70
Thursday	65	85
Friday	45	25

a. Who had more variability in the amount of time they practiced? Justify your response.

b. Who practiced more in total?

5. Thomas knows the following information about a data set:

- The lowest value is 15.
- The range is 40.

He knows that the quartiles divide the data into equal quarters, so he divides the range by 4 to get 10. He reasons that the lower quartile is 25, the median and 35, and the upper quartile is 45.

Do agree with Thomas's reasoning? Explain why or why not.

6. Kaya is trying to figure out if adding values to a data set changes the IRQ and range of the set. She creates a set to use shown below:

$1, 3, 5, 6, 8, 10, 12, 15$

a. Kaya starts by finding the range and IQR of the set. What are these two values?

b. Then Kaya adds the number 7 to her set, what happens to the IQR and range?

c. Instead of 7 Kaya tries adding the number 20, what happens to the IQR and range?

d. What if Kaya were to add the number 2, what would happen to the IQR and range then?

7. Here are five dot plots that show the amounts of time that ten sixth-grade students in five countries took to get to school. Match each dot plot with the appropriate median and IQR.

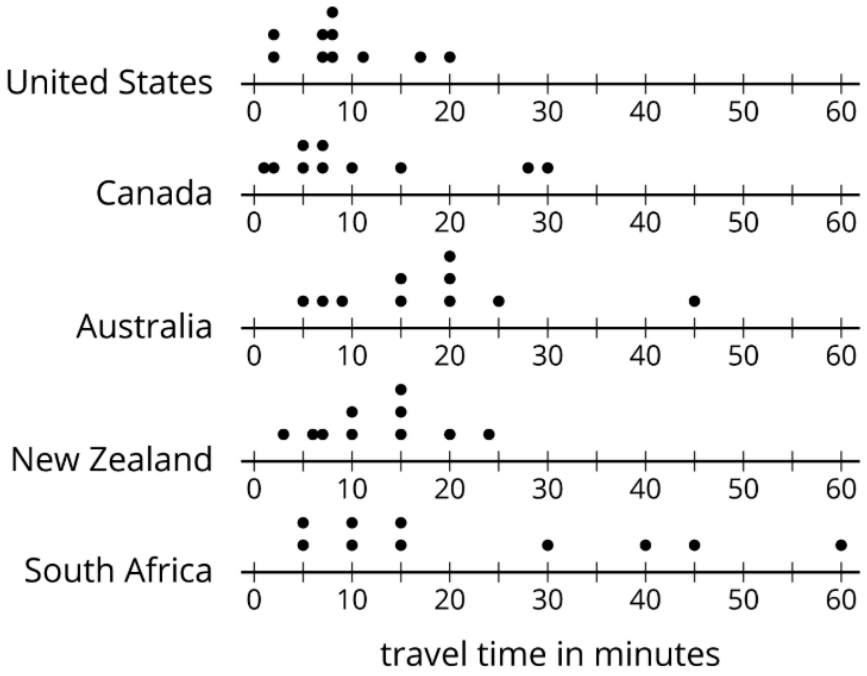
a. Median: 17.5, IQR: 11

b. Median: 15, IQR: 30

c. Median: 8, IQR: 4

d. Median: 7, IQR: 10

e. Median: 12.5, IQR: 8



Sources

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