Name_____ Date_____ Period_____

LESSON 2-5 · SESSION 1 · PRACTICE · FORM B

Range and IQR

Learning target – I can find the range and the interquartile range of a data set. · 6.SP.B.5c

REMEMBER

- **Range** = greatest − least. It uses only the two extreme values.
- **IQR** = Q3 − Q1. It is the spread of the **middle half** of the data.
- For these seven-value sets, increasing the maximum leaves Q1 and Q3 unchanged. Recheck quartiles for other sets. Missing max = min + range.

WORKED EXAMPLE

Hikes (km): 5, 12, 8, 20, 15, 10, 18.

Step 1 Order: 5, 8, 10, 12, 15, 18, 20.

Step 2 Range = 20 − 5 = 15 km.

Step 3 Q1 = 8, Q3 = 18, so IQR = 18 − 8 = 10 km.

Answer **Range 15 km; IQR 10 km**

WORDS **range** *(rango)* · **interquartile range (IQR)** *(rango intercuartil)* · **variability** *(variabilidad)*

PRACTICE

show your work · label units

1. **Bike Rides.** Seven rides covered 6, 14, 9, 22, 17, 11, 19 miles.

Hint *Order first. Range uses the ends; IQR uses Q1 and Q3.*

a. Range: __ **b.** Q1: __ **c.** Q3: __ **d.** IQR: __

2. **Car Wash.** Seven sales earned 52, 66, 58, 74, 55, 69, 62 dollars.

a. Range: ___

b. IQR: ___

3. **Band Rehearsals.** Seven lasted 50, 68, 58, 84, 62, 75, 66 minutes.

Hint *Leave the median out of both halves.*

a. Range: ___

b. IQR: ___

4. **Swapped Value.** A data set is 10, 15, 17, 21, 26, 28, 34. Someone replaces 34 with 90. Darnell says both the range and the IQR grow.

Hint *Only the greatest value changed.*

a. Range before; after: _____

b. IQR before; after: _____

c. Is he right? Explain.

5. Missing Maximum. Seven values have min 9, range 41, Q1 = 18 and Q3 = 37.

Hint *Add the range to the minimum.*

a. Maximum: ___ **b.** IQR: ___

6. Same Range? Set C: 10, 15, 20, 25, 30, 35, 40. Set D: 10, 11, 13, 25, 37, 39, 40.

a. Range of C: ___ **b.** IQR of C: ___ **c.** Range of D: ___ **d.** IQR of D: ___

7. Which Spread? Hourly wages: min $12, Q1 $15, median $18, Q3 $21, max $70.

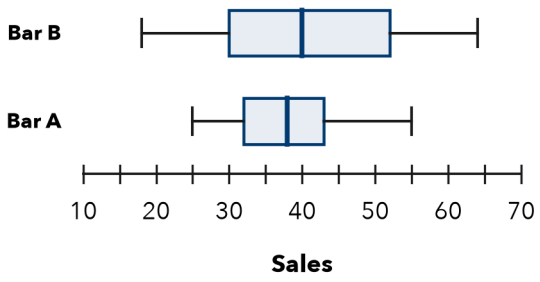
a. Range: ___ **b.** IQR: ___ **c.** Better for typical spread: ___

8. Two Snack Bars. The box plots show daily sales.

a. Range and IQR of each bar:

b. Which bar has the steadier middle half? _____

c. Why could the ranges mislead if one day had unusual weather?



FIND THE ERROR

explain the mistake, then fix it

9. Marisol's Work. For 5, 9, 14, 18, 25, 31, 40, Marisol wrote: "The IQR is 35, the greatest value minus the least." Explain the mistake and find the IQR.

TEST PRACTICE

choose the best answer

10. The IQR describes the spread of the –

A whole data set **B** middle half **C** lowest values **D** highest values

11. What is the range of 12, 19, 8, 25, 16?

A 17 **B** 13 **C** 8 **D** 25

SELF-CHECK CODE

find your answer · copy its letter into that problem's box · spell a math word

26 Q	16 M	32 Z	50 U	14 A	19 R	17 S	8 X	10 E	58 E

#1a	#1d	#2b	#3b	#5a	#5b	#7a

CHECK YOURSELF	☐ I can do this on my own	☐ I need a little help	☐ I have a question about #___