Name_____ Date_____ Period_____

LESSON 2-10 · SESSION 2 · PRACTICE · FORM B

Matching Center and Spread

Learning target – I can match a measure of center and a measure of spread to the shape of a data set. · 6.SP.B.5d

REMEMBER

- Symmetric, no outlier: **mean and MAD**. Skewed or outlier: **median and IQR**.
- **Never mix the pairs.** MAD is built from the mean; IQR is built from the median.
- A long tail to the right means **skewed right**; to the left means **skewed left**.

WORKED EXAMPLE

Set C: 20, 22, 24, 26, 28. Set D: 20, 22, 24, 26, 150. Pick a pair for each.

Step 1 C is symmetric: mean 24, MAD 12 ÷ 5 = 2.4.

Step 2 D has an outlier (150): median 24, with the IQR.

Answer **C: mean and MAD. D: median and IQR.**

WORDS **symmetric** *(simétrico)* · **skewed** *(asimétrico)* · **mean and MAD** *(media y DMA)* · **median and IQR** *(mediana y rango intercuartil)*

PRACTICE

show your work · label units

1. Write the pair you would report: mean and MAD, or median and IQR.

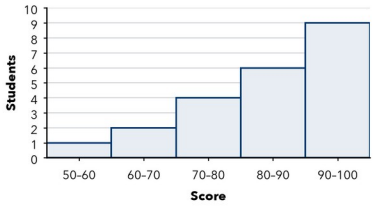
a. 52, 54, 56, 58, 60 _____

b. 52, 54, 56, 58, 310 _____

c. 63, 65, 67, 69, 71, 73, 75 _____

d. 1, 45, 47, 49, 51 _____

2. **Test Scores.** The histogram shows the scores of 22 students.



a. Shape: _____

b. Pair to report: _____

3. **Balanced Scores.** Set R is 40, 43, 45, 47, 50. It is symmetric.

Hint *Find the mean first. MAD = average distance from it.*

a. Mean: _____

b. MAD: _____

Show your work.

4. **One Big Night.** Ticket sales for seven shows were 14, 16, 17, 19, 22, 24 and 350.

Hint *Q1 is the middle of the lower half; Q3 of the upper half.*

a. Median: _____

b. IQR: _____

Show your work.

5. Mismatched Pair. Ana reports a mean of 64 for a symmetric set, with the IQR for spread. What spread should she use?

Hint *Which center is the IQR built from?*

Show your work.

Spread_____

6. Book Fair. Daily sales: 63, 65, 67, 69, 71, 73, 75. Name the pair to report. Find the center.

Show your work.

Center_____

7. One New Value. The set 60, 62, 64, 66, 68 is symmetric. Then a new value, 400, joins the set.

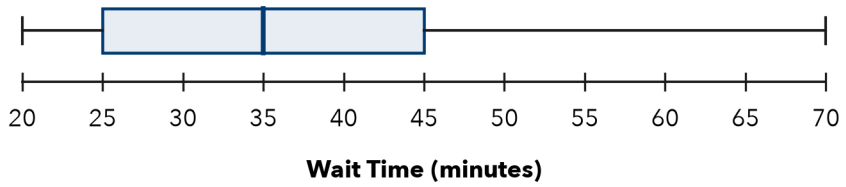
a. Pair to report before: _____

b. Pair to report after: _____

c. New median: _____

Show your work.

8. Deli Wait Times. The box plot shows wait times, in minutes.



a. Shape: _____

b. Median: _____ min

c. IQR: _____ min

FIND THE ERROR

explain the mistake, then fix it

9. Priya's Work. Priya saw a set with one huge outlier and chose the mean and MAD, saying "the mean always uses every value." Explain her mistake.

_____

_____

TEST PRACTICE

choose the best answer

10. A long tail to the right means the data is –

A symmetric **B** skewed right **C** skewed left **D** clustered

11. An outlier makes you switch from the mean to the –

A MAD **B** range **C** total **D** median

SELF-CHECK CODE *find your answer · copy its letter into that problem's box · spell a math word*

20	19	45	2.8	8	69	14	65	64	35
D	L	B	A	A	N	Q	C	Z	E

#3a	#3b	#4a	#4b	#6	#7c	#8b	#8c

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