Name_____ Date_____ Period_____

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

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.

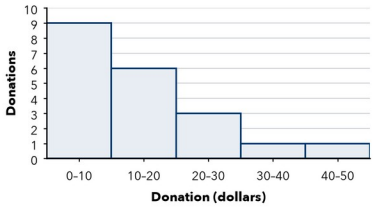
a. 31, 33, 35, 37, 39 _____

b. 31, 33, 35, 37, 290 _____

c. 44, 46, 48, 50, 52, 54, 56 _____

d. 12, 13, 15, 17, 19, 21, 400 _____

2. **Donations.** The histogram shows the sizes of 20 donations.



a. Shape: _____

b. Pair to report: _____

3. **Balanced Scores.** Set W is 52, 54, 56, 58, 60. 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 12, 13, 15, 17, 19, 21 and 400.

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

a. Median: _____

b. IQR: _____

Show your work.

5. Mismatched Pair. Fernanda reports a median of 70 for a skewed set, with the MAD for spread. What spread should she use?

Hint *Which center is the MAD built from?*

Show your work.

Spread_____

6. Heartbeats. Heartbeats per ten seconds: 25, 27, 29, 31, 33, 35, 37. Name the pair to report. Find the center.

Show your work.

Center_____

7. One New Value. The set 80, 82, 84, 86, 88 is symmetric. Then a new value, 500, joins the set.

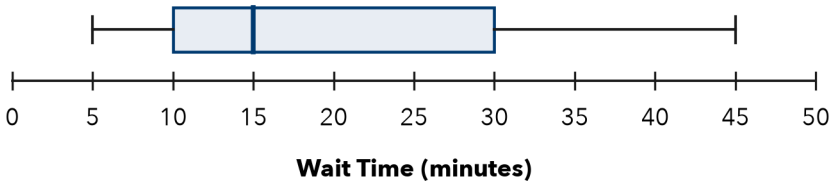
a. Pair to report before: _____

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

_____

_____

TEST PRACTICE

choose the best answer

10. Symmetric data with no outlier is best summarized by –

A mean and MAD **B** median and MAD **C** mean and IQR **D** range only

11. Which pairing is incorrect?

A mean with MAD

B median with IQR

C mean with IQR

D center with spread

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

20	84	15	2.4	8	85	56	31	12	17
Y	**Z**	**R**	**Y**	**M**	**T**	**S**	**E**	**Q**	**M**

#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 #___