Name_____ Date_____ Period_____

LESSON 2-9 · SESSION 1 · PRACTICE · FORM A

Finding Mean Absolute Deviation (MAD)

Learning target – I can find the mean absolute deviation of a data set and explain what it measures. · 6.SP.B.5c

REMEMBER

- **MAD** (mean absolute deviation) = the mean of the distances from the mean.
- Steps: find the **mean**, find each value's **distance** from it (never negative), then **average** the distances.
- If all values match, the MAD is 0. A **small** MAD means values sit close to the mean.

WORKED EXAMPLE

Four plants grew 3, 7, 8 and 10 cm. Find the MAD.

Step 1 Mean: 28 ÷ 4 = 7.

Step 2 Distances from 7: 4, 0, 1, 3.

Step 3 Sum = 8, and 8 ÷ 4 = 2.

Answer **MAD = 2 cm**

WORDS **mean absolute deviation** *(desviación media absoluta)* · **deviation** *(desviación)* · **absolute value** *(valor absoluto)* · **spread** *(dispersión)*

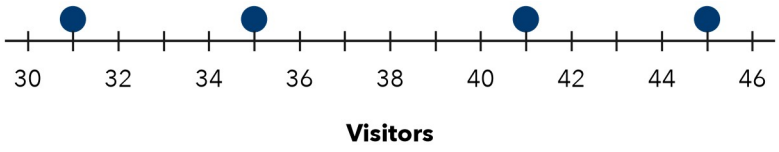
PRACTICE

show your work · label units

1. Science Quiz. The mean of 13, 15, 19, 23 and 25 is 19. Complete the table. Then find the MAD: _____

Value	13	15	19	23	25
Distance from 19					

2. Gym Visits. The dot plot shows the visitors to a gym on four evenings.



a. Mean: _____ visitors

b. MAD: _____ visitors

3. Afternoon Temps. Four afternoon temperatures were 53, 57, 59 and 63°F. Find the MAD.

Hint *Find the mean first. Measure each distance from it.*

Show your work.

Answer_____ °F

4. All the Same. Four values are 25, 25, 25, 25. Elise says the MAD cannot be found. Is she right?

Hint *Find each value's distance from the mean.*

Show your work.

MAD_____

5. Reading a MAD. Six delivery times have a mean of 45 minutes and a MAD of 3 minutes. What does the MAD tell a customer?

Show your work.

Meaning_____

6. Homework Pages. Five students turned in 12, 18, 20, 22 and 28 pages. Find the mean and the MAD.

Hint *Measure distances from the mean, not from 0.*

Show your work.

Mean, MAD_____

7. Missing Distance. Four values have mean 50 and MAD 5. Three distances from the mean are 6, 2 and 4. Find the fourth distance.

Hint *MAD × 4 gives the total of the distances.*

Show your work.

Distance_____

8. Two Groups. Free throws made — Group 1: 6, 8, 10, 12. Group 2: 4, 9, 10, 13. Both means are 9.

a. MAD of Group 1: _____

b. MAD of Group 2: _____

c. What does the MAD tell you that the mean does not? _____

Show your work.

FIND THE ERROR

explain the mistake, then fix it

9. Damaris's Work. For 17, 19, 25, 27 (mean 22), Damaris added −5, −3, +3, +5 and reported a MAD of 0. Explain her mistake and find the MAD.

_____

_____

TEST PRACTICE

choose the best answer

10. MAD stands for —

A middle and difference

B mean added data

C median absolute distance

D mean absolute deviation

11. Distances from the mean are never —

A zero **B** negative **C** whole numbers **D** decimals

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

0 I	2.5 E	12 Q	8 T	4 D	25 Z	20 A	5 E	3 V	10 X

#1	#2b	#3	#4	#6	#7	#8b

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