Name_____ Date_____ Period_____

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

Comparing Data Sets Using MAD

Learning target – I can compare two data sets that share a mean by comparing their mean absolute deviations. · 6.SP.B.5c

REMEMBER

- Two sets can share a mean and still have different MADs. The **mean** is the center; the **MAD** is the spread.
- The set with the **smaller MAD** is steadier (more consistent). If the MADs are given, just compare them.

WORKED EXAMPLE

Baker A made 8, 9, 11, 12 cookies per tray. Baker B made 4, 8, 12, 16. Both means are 10. Who is steadier?

Step 1 A's distances: 2, 1, 1, 2. MAD = 6 ÷ 4 = 1.5.

Step 2 B's distances: 6, 2, 2, 6. MAD = 16 ÷ 4 = 4.

Step 3 1.5 < 4, so Baker A is steadier.

Answer **Baker A**

WORDS **variation** *(variación)* · **consistent** *(consistente)* · **mean absolute deviation** *(desviación media absoluta)*

PRACTICE

show your work · label units

1. **Snack Sales.** Both shops have a mean of 72. **Shop 1:** 66, 70, 74, 78. **Shop 2:** 57, 69, 75, 87.

a. Shop 1 MAD: ___ **b.** Shop 2 MAD: ___ **c.** Steadier: ____

2. **Two Trails.** Both means are 35 min. **Trail A:** 28, 32, 38, 42. **Trail B:** 29, 33, 37, 41.

Hint *Work one trail at a time: distances first, then average.*

a. Trail A MAD: _____

b. Trail B MAD: _____

c. More predictable: _____

Show your work.

3. **Same MAD.** Set G has mean 90 and MAD 3. Set H has mean 45 and MAD 3. Ruben says the sets are identical. Is he right?

Hint *The mean is the center; the MAD is the spread.*

Show your work.

Answer_____

4. **Picking a Team.** Team M averages 82 points with MAD 14. Team N averages 82 points with MAD 3. Which team is more reliable?

Show your work.

Team_____

5. **Garden Beds.** Both means are 47 cm. **Bed 1:** 38, 44, 50, 56. **Bed 2:** 29, 43, 51, 65.

a. Bed 1 MAD: _____

b. Bed 2 MAD: _____

c. More even: _____

Show your work.

6. **Same Mean, Same MAD.** Set J is 40, 46, 54, 60. Set K is 43, 43, 57, 57. Both means are 50.

Hint *Find each MAD on its own, then look at the values.*

a. MAD of J: _____

b. MAD of K: _____

c. Are the sets the same? Explain. _____

Show your work.

7. **Choose a Supplier.** Supplier 1: mean 5 days, MAD 0.5 day. Supplier 2: mean 4 days, MAD 3 days. Which would you pick to meet a deadline? Why?

Hint *Weigh the faster average against how reliable each is.*

Show your work.

Supplier_____

8. Two Archers. Both archers have a mean score of 8. Archer 1: 7, 8, 9, 8. Archer 2: 4, 10, 6, 12.

a. Archer 1 MAD: _____

b. Archer 2 MAD: _____

c. Pick an archer for a tie-breaking shot. Explain. _____

Show your work.

FIND THE ERROR

explain the mistake, then fix it

9. Leilani's Work. Leilani wrote: "Set R has the larger mean, so Set R must have the larger MAD." Explain her mistake.

_____

_____

TEST PRACTICE

choose the best answer

10. Two sets share a mean. The steadier set has the –

A larger MAD **B** smaller MAD **C** larger mean **D** smaller mean

11. Same means. Set A has MAD 2; Set B has MAD 9. Which is more consistent?

A Set A **B** Set B **C** They are equal. **D** Cannot tell

SELF-CHECK CODE

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

5 S	4 D	12 Z	0.5 C	3 E	9 I	7 N	6 T	11 A	24 Q

#1a	#1b	#2a	#5a	#5b	#6a	#8a	#8b

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