Name_____ Date_____ Period_____

LESSON 2-4 · SESSION 2 · PRACTICE · FORM A

Comparing Box Plots

Learning target – I can compare two groups by reading the medians and box widths of their box plots. · 6.SP.B.4

REMEMBER

- Put both box plots on the **same scale**.
- Compare **medians** for center: which group is typically higher, and by how much?
- Compare **box widths** (Q3 − Q1) for spread: the narrower box is more **consistent**.

WORKED EXAMPLE

Trail X: Q1 18, median 20, Q3 22. Trail Y: Q1 19, median 26, Q3 33 (minutes).

Step 1 Medians: 26 − 20 = 6, so Y is typically 6 min longer.

Step 2 Box widths: X is 22 − 18 = 4; Y is 33 − 19 = 14.

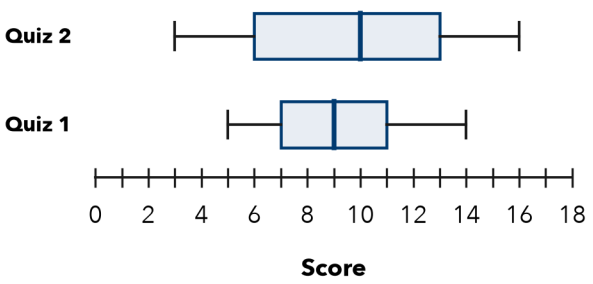
Answer **Y is longer; X is more consistent**

WORDS **center** *(centro)* · **spread** *(dispersión)* · **consistent** *(constante)*

PRACTICE

show your work · label units

1. Two Quizzes. The box plots show scores on two quizzes.



Hint *The line inside each box is the median.*

a. Higher median: _____

b. By how many points: _____

c. Wider box: _____

2. Two Teams. Team Red points: 42, 50, 46, 54, 48, 56, 52. Team Blue points: 41, 45, 49, 43, 55, 37, 58. Complete the table. Which team was more consistent?

Hint *The narrower box is the more consistent team.*

Team	Min	Q1	Median	Q3	Max
Red					
Blue					

More consistent_____

3. Same Median. Two plots have a median of 30. Box C runs from 27 to 33. Box D runs from 18 to 42.

a. Width of box C: ___

b. Width of box D: ___

4. More Consistent? Plot P has Q1 = 22 and Q3 = 30. Plot Q has Q1 = 18 and Q3 = 36. Which middle half is more consistent?

Hint *Find each box width: Q3 − Q1.*

☐ P ☐ Q

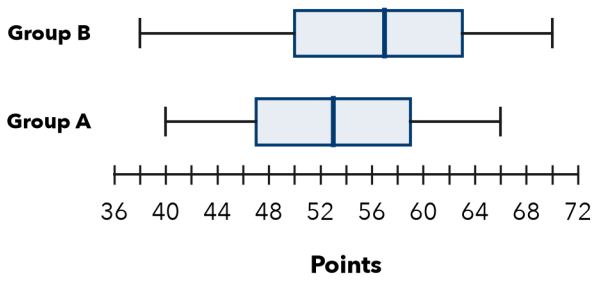
Widths_____

5. Equal Spread? Plot M runs from 20 to 90 with a box from 45 to 65. Plot N runs from 50 to 70 with a box from 55 to 60. Jamal says they are equally spread. Is he right? Compare the spans and the boxes.

☐ Yes, equal spread ☐ No, M is more spread out ☐ No, N is more spread out

6. Two Groups. Which group has the higher median, and by how much?

Group; difference_____



7. Matching Boxes. Plot W runs from 10 to 60. Plot Z runs from 28 to 44. Both boxes run from 30 to 40. Omar says they show the same spread.

a. Whole span of W (max − min): _____

b. Whole span of Z: _____

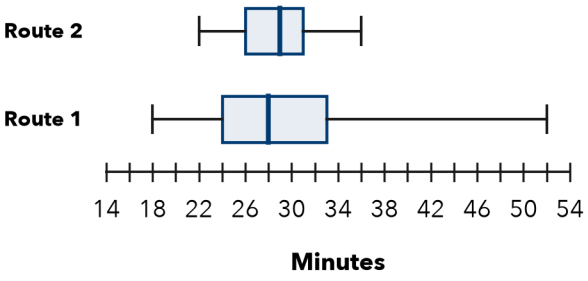
c. Is Omar right? Explain.

8. Two Bus Routes. Travel times (minutes) for two routes.

a. Higher median: _____

b. More predictable (use box widths): _____

c. A rider must not be late. Which route? Why?



FIND THE ERROR

explain the mistake, then fix it

9. Bianca's Work. Comparing two box plots, Bianca wrote: "Plot E has a longer right whisker, so Plot E has the greater median." Explain the mistake.

TEST PRACTICE

choose the best answer

10. The line inside a box plot's box shows the –

A mean **B** median **C** range **D** Q1

11. Group A's median is 50 and Group B's is 62. Group B's center is higher by –

A 12 **B** 112 **C** 62 **D** 10

SELF-CHECK CODE

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

24	Route 1	Route 2	1	60	Red	4	Blue	50	16
R	X	S	S	Q	P	E	Z	A	D

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

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