

Do They Overlap?

Compare where two groups of data fall.

GRADE 7 • NY-7.SP.3

NY-7.SP.3 "Informally assess the degree of visual overlap of two quantitative data distributions."

NAME _____

DATE _____

SPOT THE SHARED REGION

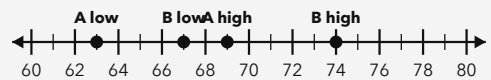
Look at where each group's data begins and ends. If the spans share little or none, there is little overlap. If many values fall in the same region, there is a lot of overlap.

WORKED EXAMPLE

Group A recorded 63, 65, 67, 69.

Group B recorded 67, 68, 70, 74.

Assess the overlap.



1. Group A spans from 63 to 69.

2. Group B spans from 67 to 74.

3. The shared span is 67 to 69.

Answer: The groups have some overlap, from 67 to 69.

PRACTICE 4 problems

- 1** Group A: 0, 1, 2, 4. Group B: 11, 12, 13, 15.
Do the ranges overlap?

ANSWER _____

- 2** Group A: 16, 17, 18, 19. Group B: 17, 18, 19, 20. State the shared span. Is the overlap little, some, or a lot?

ANSWER _____

- 3** Group A: 21, 22, 23, 24. Group B: 24, 25, 26, 27. What value is shared? Is the overlap little, some, or a lot?

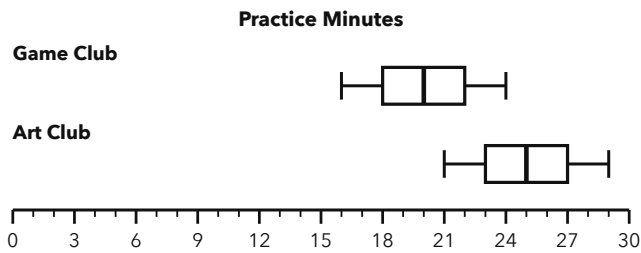
ANSWER _____

- 4** Group A: 30, 31, 31, 32, 33. Group B: 31, 32, 32, 33, 34. Assess the overlap.

ANSWER _____

APPLY IT Show your work

- 1** Two clubs tracked practice minutes after school. Use the box plots to assess overlap. Do the clubs' typical practice times overlap?



ANSWER _____

- 2** Two book clubs counted pages read in 20 minutes. Solar: 40, 42, 44, 46. Lunar: 45, 46, 47, 48, 50. Assess the degree of overlap.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Group A: 51, 52, 53, 54, 55, 56. Group B: 54, 54, 55, 55, 56, 57. Maya says there is a lot of overlap. Is her claim supported? Explain using the shared region and the data values.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Group A: 0, 1, 2, 4. Group B: 11, 12, 13, 15. Do the ranges overlap?	No. There is no overlap.
2	Group A: 16, 17, 18, 19. Group B: 17, 18, 19, 20. State the shared span. Is the overlap little, some, or a lot?	Shared span: 17 to 19. There is a lot of overlap.
3	Group A: 21, 22, 23, 24. Group B: 24, 25, 26, 27. What value is shared? Is the overlap little, some, or a lot?	24 is shared. There is little overlap.
4	Group A: 30, 31, 31, 32, 33. Group B: 31, 32, 32, 33, 34. Assess the overlap.	The shared span is 31 to 33. There is a lot of overlap.

PART 2 • APPLY IT

1. **There is some overall overlap, from 21 to 24, but the typical times do not overlap.** The whiskers share 21 through 24. The boxes, which show the middle half of each group, do not overlap because one ends at 22 and the other begins at 23.
2. **There is little overlap. The shared span is 45 to 46.** Solar spans 40 to 46, and Lunar spans 45 to 50. Only the small region from 45 to 46 is shared.

CHALLENGE

Yes. The shared region is 54 to 56. Three of Group A's six values and five of Group B's six values are in that region, so there is a lot of overlap.

Accept equivalent wording for little, some, or a lot when it matches the shared span and data placement. For box plots, accept an answer that notes some overall overlap but no overlap in the boxes or middle halves.