

Push Tasks



The IQR resists outliers; the range does not. Use this when comparing spread.

1. For 4, 6, 8, 10, 12, 14, 30, find Q_1 , Q_2 , Q_3 , and the IQR.

2. For 4, 6, 8, 10, 12, 14, 30, is the IQR or the range a better measure of spread? Why?

3. Set A: $Q_1 = 14$, $Q_3 = 26$. Set B: $Q_1 = 18$, $Q_3 = 22$. Both have median 20. Which set is more consistent?

4. Create 7 ordered numbers with $Q_1 = 8$, median 12, and $Q_3 = 18$.

5. Create 8 ordered numbers with $Q_1 = 15$ and $Q_3 = 27$. Then find the IQR.

6. A student says, "IQR 12 means 12 of the data is in the middle." What is wrong?

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Box plots make it easy to compare distributions – read the five-number summary carefully.

7. Box plot: min 5, $Q_1 = 11$, median 16, $Q_3 = 24$, max 40. Find the IQR and the range.

8. For min 5, $Q_1 = 11$, median 16, $Q_3 = 24$, max 40, which measure is affected most by the maximum? Explain.

9. Set A summary: 2, 8, 12, 20, 22. Set B summary: 2, 10, 12, 14, 22. Which set has the larger IQR?

10. If $Q_1 = 14$ and the IQR is 9, find Q_3 .

11. If $Q_1 = 18$ and $Q_3 = 30$, what part of the data lies in the box?

12. For 7, 9, 10, 12, 15, 18, 21, 24, 30, find Q_1 , Q_2 , and Q_3 .

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Compare the four quarters of a dataset by their width, not just their count.

13. For 7, 9, 10, 12, 15, 18, 21, 24, 30, compare the spread of the bottom quarter (min to Q_1) with the top quarter (Q_3 to max).

14. Two sets both have IQR 10. Set A has range 18. Set B has range 35. Compare them.

15. Write a rule for finding the IQR from a box plot, then apply it to: min 6, $Q_1 = 13$, median 17, $Q_3 = 21$, max 28.

16. Can the median ever lie outside the box (between Q_1 and Q_3)? Explain.