



Comparing two data distributions

GRADE 7 MATH

Name _____

Date _____

Answer every item. Show the means and the MAD before comparing. One skill: **comparing two distributions**.

WORKED EXAMPLE

Two groups differ by 3. Is that a lot? It depends on how **spread out** the data is. Express the gap as a multiple of the **MAD**: a gap of 3 with a MAD of 1.2 is **2.5 MADs** — a clear difference. The same gap of 3 with a MAD of 6 is only **0.5 MADs** — the groups overlap heavily and the difference means little. Never compare means without checking the spread.

1. Group A is 18, 19, 20, 21, 22. Group B is 21, 22, 23, 24, 25. Find both means and the gap between them.

APPLICATION

Show your thinking

Answer

2. Find the MAD of Group A, then express the gap as a multiple of it.

REASONING

Show your thinking

Answer

3. Group C is 10, 15, 20, 25, 30 and Group D is 13, 18, 23, 28, 33. Find the means, the gap, and the MAD of C.

APPLICATION

Show your thinking

Answer

4. Both pairs differ by 3. Explain why the first difference matters more than the second.

REASONING

Show your thinking

Answer