Data centres: weights, ordering and choosing a summary — Further practice

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Further practice 11

The frequencies include zeros. Find the mean of the observations actually present.

Value	Frequency / weight
10	0
20	2
30	0

Use the stated conditions and the labelled scales.

Further practice 12

Two assessment components score 80 and 90 with weights 3 and 2. Find the weighted score; the weights are not already percentages.

Value	Frequency / weight
80	3
90	2

Use the stated conditions and the labelled scales.

Further practice 13

For 2,5,8, report the mode using the convention that a mode must be a repeated most-frequent value.

Further practice 14

Only the grouped counts are known. Use group midpoints to estimate the mean, and explain why the answer is not necessarily the exact raw-data mean.

Group (lower inclusive, upper exclusive)	Frequency
[0,10)	1
[10,30)	2
[30,60)	1

Use the stated conditions and the labelled scales.

Extension 15

One group of 3 learners has mean 10 and another group of 2 has mean 20. Find the combined mean and explain why simply averaging 10 and 20 is wrong.

Value	Frequency / weight
10	3
20	2

Use the stated conditions and the labelled scales.

Extension 16

Starting with 1,2,3,4,10, replace only the last value by 1000. Find the new median and explain why it is unchanged.