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The older men were shorter, on average.

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Compare the groups first, and then the numerical averages.

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A class has two sections.

	average
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But is it OK to just take the average of the averages?

No. The question can't be answered with the information given.

The class average has to be between 60 and 70, but exactly where in that interval depends on the **section sizes**.

Combining averages

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$$\text{class average} \; = \; \frac{\text{total score of class}}{\text{class size}} \; = \; \frac{\text{total score of class}}{50}$$

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total score of class $= (20 \times 60) + (30 \times 70) = 3300$

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total score of class $= (20 \times 60) + (30 \times 70) = 3300$

class average $= 3300/50 = 66$

Weighted average of averages

	average	section size	section proportion
Section 1	60	20	2/5
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The class average is the weighted average of the section averages; the weights are the section proportions.