

Estimated mean from a grouped table

Use it when the data is in a grouped frequency table.

1

Midpoint
Halfway between the two ends of each class.

Class	Frequency	Midpoint
lower to upper		
lower to upper		
lower to upper		

Total

$(lower + upper) \div 2$

2

Frequency $\times$ midpoint
Multiply each frequency by its midpoint.

Class	Frequency	Midpoint	$f \times x$
lower to upper			
lower to upper			
lower to upper			

Total

$frequency \times midpoint, on every row$

3

Totals
Add up the frequency column and the $f \times x$ column.

Class	Frequency	Midpoint	$f \times x$
lower to upper			
lower to upper			
lower to upper			

Total

total f

total $f \times x$

$not\ the\ midpoint\ column$

4

Divide
Divide the total of $f \times x$ by the total frequency.

Mean $\approx$

total $f \times x$

total frequency

$an\ estimate: the\ exact\ values\ are\ not\ known$
 $it\ must\ be\ inside\ the\ classes$

The Maths Habit

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