

Mean from Grouped Frequency Tables Example

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The frequency table shows pupil ages. Find the mean.

Age	Frequency
8 - 10	12
11 - 13	25
14 - 16	37
17 - 19	14



STEP 1: Find the midpoints

Age	Frequency (f)	Midpoint (x)
8 - 10	12	9
11 - 13	25	12
14 - 16	37	15
17 - 19	14	18

STEP 2: Work out fx

Age	Frequency (f)	Midpoint (x)	fx
8 - 10	12	9	$12 \times 9 = 108$
11 - 13	25	12	$25 \times 12 = 300$
14 - 16	37	15	$37 \times 15 = 555$
17 - 19	14	18	$14 \times 18 = 252$

STEP 3: Work out the total of fx

fx
$12 \times 9 = 108$
$25 \times 12 = 300$
$37 \times 15 = 555$
$14 \times 18 = 252$
= 1215

STEP 4: Work out the total frequency

Frequency (f)
12
25
37
14
= 88



STEP 5: Divide the total fx by the total frequency (f)

$$1215 \div 88 = 13.8$$

The mean is 13.8 years