

Mean - the average

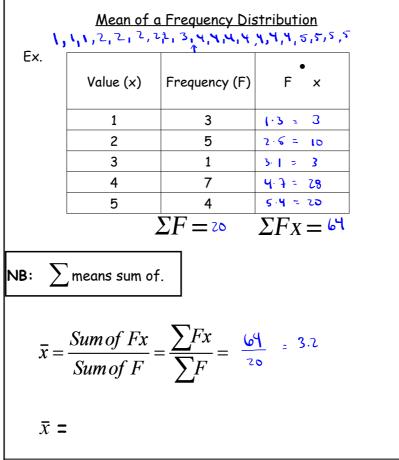
Ex: Math grades (all worth the same amount)

91, 68, 72, 86, 60

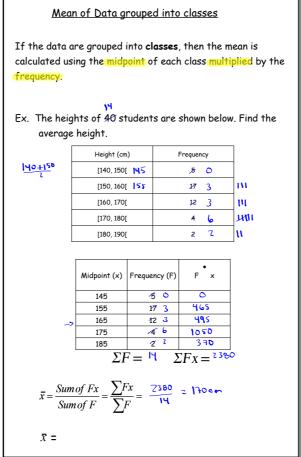
To calculate the mean, add them up and divide by the number of data values: 60 63 77, 8691

Mean = $(91 + 68 + 72 + 86 + 60) = \frac{311}{5} = 75.4$

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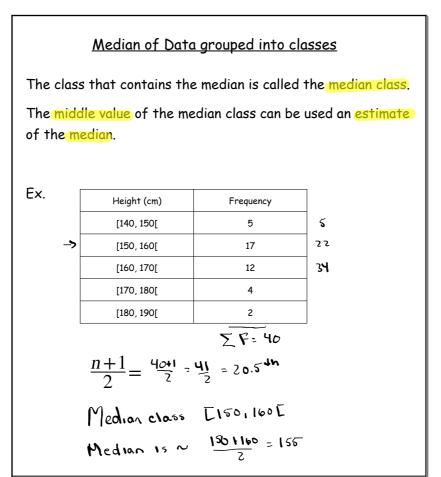


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Weighted Mean If the values are not worth the same amounts, the mean is called the weighted mean. Ex. A Math course has 3 terms and each term is worth : Grade (%) Weight (%) Term 20 - 0.2 1 70 20 20 - 0.2 2 72 30 20 <u>60</u> <u>-</u> 0.6 3 80 50 60 100 % Final grade = 70(0.2) + 72(0.2) + 80(0.6)+ 48 = 76.4 14 14.4 +

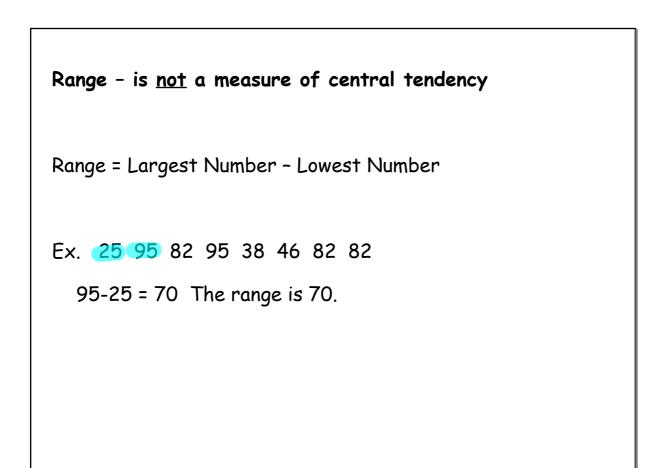
Median - the middle number (when all values are in increasing order) · Case 1 - an <u>odd</u> number of data 5 6 10 10 11 15 15 Use the formula (n + 1) / 2 formula; where n is the number of data, to determine the LOCATION of the median. $(7+1) = 4^{\text{th}}$ number $\rightarrow 5 \ 6 \ 10 \ 10 \ 11 \ 15 \ 15$ 2 · Case 2 - an even number of data 32 38 46 49 50 52 Use the formula (n + 1) / 2 formula; where n is the number of data, to determine the LOCATION of the median. $(6+1) = 3.5^{\text{th}}$ number \rightarrow 32 38 (46,49) 50 52 2 3.5th number . 47.5 Since the median is in between two number, take the average of the two numbers on either side of the line. <u>(46 + 49)</u> = 47.5 2

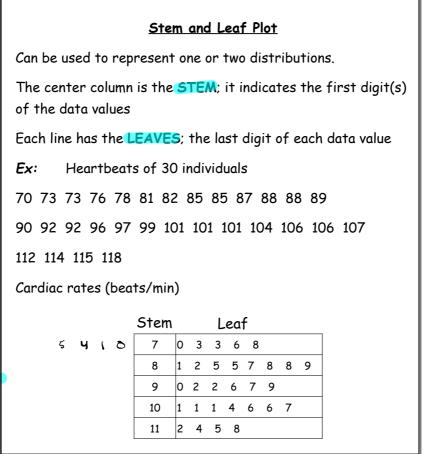
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Mode - the most frequent data value					
Ex. 25 95 82 95 38 46 82 82 🔹 82 is the mode					
- <u>If</u> we would have added another 95, there would have been two modes or <u>bimodal</u> (82 & 95) टुर्द्र ३३ ५७ <u>१२७२ १२ ९६९९</u> ६					
- If every number shows up only once, there is <u>NO MODE</u>					
 If the data are grouped into classes, then the class with the highest frequency is called the modal class IS Ex. The heights of 40 students are shown below. 					
	Height (cm)	Freque	ncy		
	[140, 150[Þ	0		
	[150, 160[17	34		
	[160, 170[12	3		
	[170, 180]	Å	6		
	[180, 190[2			
ر ۲۶۵ د The modal class is [150, 160 [
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Or you can see TWO distributions on one table: Ex. Lengths of male and female salmon (in millimetres) $1 \le \sqrt{5} \times \sqrt{1 \le 6}$ Males $\sim 1 \le 6$ $1 \le \sqrt{5} \times \sqrt{1 \le 6}$ $1 \le \sqrt{5} \times \sqrt{5} \times \sqrt{1 \le 6}$ $1 \le \sqrt{5} \times \sqrt{5} \times \sqrt{5}$ $1 \le \sqrt{5} \times \sqrt{5} \times \sqrt{5}$ $1 \ge \sqrt{5} \times \sqrt{5} \times \sqrt{5}$ $1 \ge \sqrt{5} \times \sqrt{5} \times \sqrt{5} \times \sqrt{5}$ $1 \ge \sqrt{5} \times \sqrt{5}$ <u>Practice</u>

Textbook 1:

P. 73 #1, 3, 4 & 5

P. 74 #6 & 7

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