

STANDARD DEVIATION

SKILLS QUESTIONS

Calculate the mean and the standard deviation for the following sets of data. Some help has been given.

Mean $\bar{x} = \frac{\sum fx}{\sum f}$	Standard Deviation = $\sqrt{\frac{\sum f(x - \bar{x})^2}{\sum f}}$
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Q1. Data = 1, 1, 3, 2, 3, 1, 2, 3, 1, 1, 2, 2, 1, 3, 1

x	f	fx	$(x - \bar{x})$	$(x - \bar{x})^2$	$f(x - \bar{x})^2$
1	7	7			
2	4	8			
3	4	12			
$\sum f = 15$		$\sum fx = 27$			$\sum =$

Q2. Data = 1, 1, 4, 3, 5, 4, 2, 1, 3, 5, 3, 5, 4, 5

x	f	fx	$(x - \bar{x})$	$(x - \bar{x})^2$	$f(x - \bar{x})^2$
1	3	3			
2	1	2			
3	3	9			
4	3				
5	4				
$\sum f = 14$		$\sum fx =$			$\sum =$

Q3. Data = 10, 12, 15, 11, 14, 13, 26, 27, 26, 25, 29, 32, 33, 20, 16

Class	x	f	fx	$(x - \bar{x})$	$(x - \bar{x})^2$	$f(x - \bar{x})^2$
10 - 14	12	5	60			
15 - 19	17	2	34			
20 - 24	22	1	22			
25 - 29	27	5				
30 - 34	32	2				
$\sum f = 15$		$\sum fx =$				$\sum =$

ANSWERS

Q1.

Mean = 1.8

Standard Deviation = 0.8

Q2.

Mean = 3.3

Standard Deviation = 1.5

Q3.

Mean = 21

Standard Deviation = 7.6