

	A	B	C	D
18	marks(x)	Measures	Value	Formula
19	24	AM	25.8	=AVERAGE(A2:A11)
20	30	S	22	=MIN(A2:A11)
21	28	L	30	=MAX(A2:A11)
22	23	Median	25.5	=MEDIAN(A2:A11)
23	25	Range	8	=MAX(A2:A11)-MIN(A2:A11)
24	22	Q1	24.25	=QUARTILE.INC(A2:A11,1)
25	26	Q3	27.75	=QUARTILE.INC(A2:A11,3)
26	27	QD	1.75	=(C8-C7)/2
27	28	Standard Deviation (σ)	2.35796522	=STDEV.P(A2:A11)
28	25	Coefficient of Range	0.15384615	=(C4 - C3)/(C4 + C3)
29		Coefficient of Quartile Deviation	0.06730769	=(C8 - C7)/(C8 + C7)
30		Coefficient of Variation (CV)	9.1394001	=(C10 / A11) * 100

Name	Absolute Measures		
	Formula		
	Individual series	Discrete series	Continuous series
Range	$Range = L - S$	$Range = L - S$	$range = upperlimit \text{ of highest class interval} - lower \text{ limit of lowest class interval}$
Quartile Deviation	$Q.D = \frac{1}{2} (Q_3 - Q_1)$		
Quartiles	$Q_i = \text{Value of } \frac{i(n+1)^{th}}{4} \text{ item}$ $i=1,2,3$	$Q_i = \text{Value of } \frac{i(N+1)^{th}}{4} \text{ item}$	$Q_i = l + \frac{h}{f} \left(\frac{iN}{4} - cf \right)$
Standard deviation	$\sigma = \sqrt{\frac{1}{n} \sum X^2 - \bar{X}^2}$	$\sigma = \sqrt{\left(\frac{1}{N} \sum fX^2 - \bar{X}^2 \right)}$	$\sigma = \sqrt{\frac{1}{N} (\sum fX^2 - \bar{X}^2)}$ where X= mid value of class interval
	Relative Measure		
Coefficient of Range	$\text{Coeff. of range} = \frac{L-S}{L+S}$		
Coefficient of Q.D	$\text{Coeff. of Q.D} = \frac{Q_3 - Q_1}{Q_3 + Q_1}$		
Coefficient of variation(C.V)	$C.V = \frac{\sigma}{\bar{X}} \times 100\%$		

	A	B	C	D	E	F	G	H	I	J	K	L	M
18	WAGES	F	LSB	USB	MID VALUE(X)	H	CF	MEASURES	POSITION	FORMULA	CLASS	VALUE	FORMULA
19	0-100	20	0	100	50	100	20	AM				384	=SUMPRODUCT(B19:B26,E19:E26)/G26
20	100-200	45	100	200	150	100	65	S				0	=MIN(C19:C26)
21	200-300	85	200	300	250	100	150	L				800	=MAX(D19:D26)
22	300-400	160	300	400	350	100	310	Median	250	=0.5*G26	300-400	362.5	=C22+F22*(I22-G21)/B22
23	400-500	70	400	500	450	100	380	Range				800	=L21-L20
24	500-600	55	500	600	550	100	435	Q1	125	=0.25*G26	200-300	270.5882	=C21+F21*(I24-G20)/B21
25	600-700	35	600	700	650	100	470	Q3	375	=0.75*(G26)	400-500	492.8571	=C23+F23*(I25-G22)/B23
26	700-800	30	700	800	750	100	500	QD				111.1345	=(L25-L24)/2
27								Standard Deviation (σ)				171.5925	=SQRT(SUMPRODUCT(B19:B26,E19:E26^2)/G26-L19^2)
28								Coefficient of Range				1	=(L21-L20)/(L21+L20)
29								Coefficient of Quartile Deviation				0.291139	=(L25-L24)/(L25+L24)
30								Coefficient of Variation (CV)				44.68556	=(L27/L19)*100
31													

	A	B	C	D	E	F	G	H
18	X	F	CF	Measures	Position	Formula	Values	Formula
19	5	5	5	AM			11.946	=SUMPRODUCT(A19:A26,B19:B26)/C26
20	7	44	49	S			5	=MIN(A19:A26)
21	9	60	109	L			19	=MAX(A19:A26)
22	11	75	184	Median	195	=0.5*(C26+1)	13	=A23
23	13	95	279	Range			14	=G21-G20
24	15	82	361	Q1	97.5	=0.25*(C26+1)	9	=A21
25	17	24	385	Q3	292.5	=0.75*(C26+1)	15	=A24
26	19	4	389	QD			3	=(G25-G24)/2
27				Standard Deviation (σ)			3.03699	=SQRT(SUMPRODUCT(B19:B26,A19:A26^2)/C26-G19^2)
28				Coefficient of Range			0.58333	=(G21-G20)/(G21+G20)
29				Coefficient of Quartile Deviation			0.25	=(G25-G24)/(G25+G24)
30				Coefficient of Variation (CV)			25.4226	=(G27/G19)*100
31								