→ Measures of Dispersion - 12. →

Discrete Series.

Learning by doing.

(1). Find out quartile deviation and the coefficient of quartile deviation of the following data:-

Age	20	30	40	50	60	70	80
Member	3	61	132	153	140	51	3.

Ans. QD = 10, Coefficient of QD = 0.2.

(2) Estimate quartile deviation and the coefficient of quartile deviation of the following series.

Height	58	59	60	61	62	63	64	65	66
No. of student	15	20	32	35	33	22	20	10	8.

Ans → QD = 1.5, Coefficient of QD = 0.024.

(3.) Frequency Distribution Series. →

Learning by doing

(1) Find out quartile deviation and the coefficient of quartile deviation of the following data:

Age	0-5	5-10	10-15	15-20	20-25	25-30	
Members	21	6	3	8	12	7	

Ans → QD = 6.87 Coefficient of QD = 0.4.

(2) Find out quartile deviation and coefficient of quartile deviation from the following data: →

Class Interval	0-10	10-20	20-30	30-40	40-50	50-60
frequency	4	8	5	4	9	10

Ans → QD = 16.25 Coefficient of QD = 0.48

classmate
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Merits and Demerits of Quartile Deviation

Merits

(i) Simple :→ It is very simple calculate and understand.

(ii) Less Effect of Extreme Values :→ Quartile deviation is less affected by extreme value of the series.

Demerits

(1) Not Based on all Values :→ The calculation of quartile deviation is not based on all value of the series. It is therefore, less representative.

(2). Formation of Series not Known :→ This method does not show complete formation of the series.

(3). Instability :→ The calculation of quartile deviation is significantly influenced by change in sample of the population. Accordingly, it suffers from instability.

Thank you.