Sardar Vallabhbhai Patel Institute of Technology, Vasad

Subject: Probability and Statistics Subject Code: 310006

Tutorial 2: Basic Statistics: Mean median mode std deviation

Note: Example numbers 1, 2, 3, 5, 6, 10, 11 will be solved in the tutorial. The remaining examples are for self-practice.

Q.1 Find the mean, median and Mode for the following frequency distribution:

X:	1	2	3	4	5	6	7	8	9	10
f:	4	7	8	10	6	6	4	2	2	1

Q.2 Calculate the mode for the following data:

Class interval:	0-10	10-20	20-30	30-40	40-50
Frequency:	10	14	19	7	13

Q.3 Calculate the median for the following data:

Class interval:	0-30	30-60	60-90	90-120	120-150	150-180
Frequency:	8	13	22	27	18	7

Q.4 An insurance company obtained the following data for accident claims (in thousand rupees) from a particular region. Find its mean, median and Mode.

Amount:	1-3	3-5	5-7	7-9	9-11	11-12
Frequency:	6	47	75	46	18	8

Q.5 From the following data compute arithmetic mean, median, mode and standard deviation:

Marks:	0-10	10-20	20-30	30-40	40-50	50-60
No. of Students:	5	10	25	30	20	10

Q.6 Find the quartile deviation and its coefficients. Also find inter quartile range and coefficient of variations.

Marks:	<35	35-37	38-40	41-43	>43
Students:	8	16	13	8	5

Q.7 Find the mean, median and mode from the following table.

Class:	50-53	53-56	56-59	59-62	62-65	65-68	68-71	71-74	74-77
Frequency:	3	8	14	30	36	28	16	10	3

Q.8 The article "A Thin-Film Oxygen Uptake Test for the Evaluation of Automotive Crankcase Lubricants" reported the following data on oxidation-induction time (min) for various commercial oils: 87, 103, 130, 160, 180, 195, 132, 145, 211, 105, 145, 153, 152, 138, 87, 99, 93, 119, 129

(i) Calculate the sample variance and standard deviation.

(ii) If the observations were re-expressed in hours, what would be the resulting values of the sample variance and sample standard deviation?

Q.9 Find out mean deviation about median for the following series:

Size:	4	6	8	10	12	14	16
Freq.:	1	2	4	5	4	3	1

Q.10 From the following data calculate mean, median, mode and standard deviation:

Marks	No. of Students	Marks	No. of Students
Less than 5	29	Less than 30	644
⋮ 10	224	⋮ 35	650
⋮ 15	465	⋮ 40	653
⋮ 20	582	⋮ 45	655
⋮ 25	634		

Q.11	From the following data compute the value of harmonic mean and geometric mean:					
	Class interval	10-20	20-30	30-40	40-50	50-60
	Frequency	4	6	10	7	3