

Principle of Statistics & Statistical Methods

Question Bank

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Q1// A- Answer the following questions:

Define Statistics and what are the types of Statistics?

- 1- Define data and what are the Methods of Collecting the Data?
- 2- What is the difference between Historical sources and Field sources?
- 3- What are the types of Non-Random samples?

B- The following data represents the sale of refrigerator sets in a showroom in first 6 months of the year.

Months	Jan	Feb	March	April	May	June
No. of Refrigerators Sold	20	25	15	40	35	30

Draw the bar graph for the data given

Q2//A- What is the type of the following variables:

the number of subjects your school offered last year.

1. the length of time of a telephone call.
2. Stage of cancer (stage I, II, III, IV).
3. the distance between your house and college.
4. the number of pages in a dictionary.

B- The following data represent the average number of points scored by each of ten volleyball team members.

5.4, 9.7, 8.2, 5.8, 11.1, 9.7, 11, 9.4, 9.5, 12

Construct a stem-and-leaf plot

Q3// The table contains data from a study of daily study time for 40 students from Statistics.

Classes	0-15	15-30	30-45	45-60	60-75	75-90
Frequency	2	4	8	18	4	4

Find:

- 1.Center of Classes
 2. Descending cumulative frequency
 - 3.Relative Frequency
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Q4//

A- The following data represent the weekly pocket expenses (in \$) of a group of 25 students selected at random.

37, 41, 39, 34, 41, 26, 46, 31, 48, 32, 44, 39, 35, 39, 37, 49, 27, 37, 33, 38, 49, 45, 44, 37, 36

Construct the frequency distribution

B- Evaluate the following if $X_i = 4, -2, 6, 2, 1$

$$1. \prod_{i=2}^5 4 \qquad 2. \sum_{i=1}^3 (3x_i - 1)^2$$

$$3. \sum_{i=1}^2 2^i x_{3+i} \qquad 4. \sum_{i=3}^4 (2 \text{ Log } 3x_i)$$

Q5// Answer the following questions.

1. If the mean of six values is 11 and five of the values are 12, 7, 6, 16 and 8, find the sixth value.
2. The mean of 9 items is 43. If an item of value 3 is added to the set find the mean of the 10 items.
3. A data set consisting of 10 observations has a mean equal to zero and a variance equal to (C). Find $\sum x_i^2$.
4. Two Variables have a positive linear correlation. Does the dependent variable increase or decrease as the independent variable increases?

Q6// From the following frequency distribution

Classes	0-10	10-20	20-30	30-40	40-50
Frequency	6	28	51	11	4

Find:

1. Mean deviation
2. Mode
3. Seventh Deciles

Q7//From the following data:

x_i	7	3	9	17	4	6	10
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Find:

1. Geometric mean 2. Kurtosis 3. Third Quartile
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Q8// Which of the two students is better from looking at their marks (homogeneity)?

Student I	90, 50, 52, 60, 95, 55
Student II	67, 73, 80, 70, 50, 55

Q9// The data shows the relation between a company's production and its employees' salaries in 5 years.

Production	1 000	2 000	2 500	4 000	2 300
Salaries	150	200	250	700	180

Find the Spearman's correlation coefficient between production and salaries.