1. What is the meaning of six sigma in statistics? Give proper example

The term "Six Sigma" refers to a statistical measure of how far a process deviates from perfection. A process that operates at six sigma has a failure rate of only 0.00034%, which means it produces virtually no defects.The Six Sigma method uses a step-by-step approach called DMAIC, an acronym that stands for Define, Measure, Analyze, Improve, and Control.

Microsoft is one of the largest software producers in the world. It used Six Sigma to help eradicate defects in its systems and data centers and systematically reduce IT failures.The company first established standards for all of its hardware and software to create a baseline measurement for detecting defects. It then used root-cause analysis, including collecting data from past high-priority incidents, server failures, and recommendations from product group members and customers, to pinpoint potential problem areas.Large amounts of data were collected on a daily and weekly basis from various servers. The incidents were prioritized based on how severely the defects affected the business and the company's underlying services. Data analysis and reporting identified the specific defects, after which remediation steps for each defect were established.As a result of Six Sigma, Microsoft says it improved the availability of its servers, boosted productivity, and increased customer satisfaction.

3.What is the meaning of the five-number summary in Statistics? Give proper example

The 5 number summary is an exploratory data analysis tool that provides insight into the distribution of values for one variable. Collectively, this set of statistics describes where data values occur, their central tendency, variability, and the general shape of their distribution.

The five number summary provides this information using various descriptivestatistics. These statistics are all order statistics—each one describes where a particular value falls in the distribution. The five statistics in this summary are the following, from highest to lowest data values:Highest value in the dataset.Third quartile (Q3)—greater than 75% of the values in the dataset.Median or second quartile (Q2)—splits the dataset in half.First quartile (Q1)—greater than 25% of the values.Lowest value in the dataset.

2.What type of data does not have a log-normal distribution or a Gaussian distribution? Give proper example.

Many real-world phenomena, such as financial returns, rainfall patterns, failure rates, and medical test results, exhibit non-Gaussian behavior.they dont have bell shaped curve.