

# Statistics Basic-2

## Assignment Questions



**Q1. What are the three measures of central tendency?**

**Q2. What is the difference between the mean, median, and mode? How are they used to measure the central tendency of a dataset?**

**Q3. Measure the three measures of central tendency for the given height data:**

[178,177,176,177,178.2,178,175,179,180,175,178.9,176.2,177,172.5,178,176.5]

**Q4. Find the standard deviation for the given data:**

[178,177,176,177,178.2,178,175,179,180,175,178.9,176.2,177,172.5,178,176.5]

**Q5. How are measures of dispersion such as range, variance, and standard deviation used to describe the spread of a dataset? Provide an example.**

**Q6. What is a Venn diagram?**

**Q7. For the two given sets  $A = (2,3,4,5,6,7)$  &  $B = (0,2,6,8,10)$ . Find:**

(i)  $A \cap B$

(ii)  $A \cup B$

**Q8. What do you understand about skewness in data?**

**Q9. If a data is right skewed then what will be the position of median with respect to mean?**

**Q10. Explain the difference between covariance and correlation. How are these measures used in statistical analysis?**

**Q11. What is the formula for calculating the sample mean? Provide an example calculation for a dataset.**

**Q12. For a normal distribution data what is the relationship between its measure of central tendency?**

**Q13. How is covariance different from correlation?**

**Q14. How do outliers affect measures of central tendency and dispersion? Provide an example.**

**Note:** Create your assignment in Jupyter notebook and upload it in GitHub & share that github repository link through your dashboard. Make sure the repository is public.