1. Introduction

This assignment will help you understand the concepts learnt in the session.

2. Objective

This assignment will test your skills on the concepts of statistics.

3. Prerequisites

Not applicable.

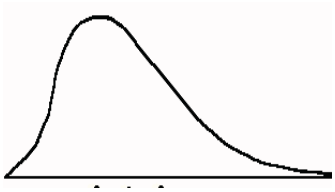
4. Associated Data Files

Not applicable.

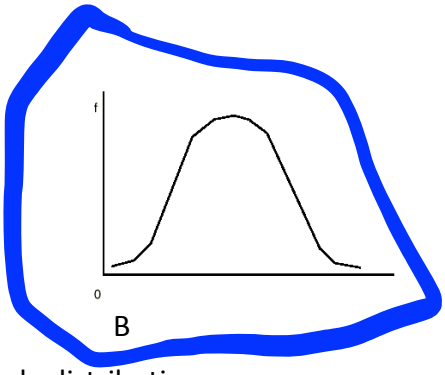
5. Problem Statement

1. If I find Covariance between same variable what will be the output? What will be correlation coefficient? **If there is no covariance, you will get 0, otherwise you will get some number between +1 (perfect positive correlation) or -1 (perfect negative correlation)**

2. Assume I have a set of numbers. The mean, median and mode of the set of numbers are equal. If I draw a Frequency plot of individual distinct numbers, how would the plot look like?



A



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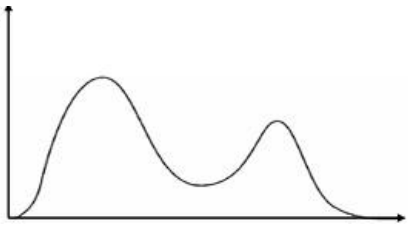

C

3. If the scores for a given sample distribution are:

32 32 35 36 37 38 38 39 39 39 40 40 42 45

Find the Variance and The Standard Deviation

12.4615 **3.530**

2. The following table shows percent variations of two financial indices, the NYSE (New York Stock Exchange) and the NASDAQ composite (National Association of Securities Dealers Automated Quotation) in 10 consecutive days:

Day	1	2	3	4	5	6	7	8	9	10
NYSE	0.58	0.01	0.43	-0.14	-1.15	0.15	-1.23	-0.88	-1.26	0.08
NASDAQ	0.70	-0.79	0.85	-0.16	-0.71	-0.02	-1.10	-0.77	-0.78	-0.35

Use a suitable measure to quantify the dependence between the variations of the two indices and comment on the result.

I used covariance and correlation to examine the dependence between the two sets of data above. The covariance between the two data sets is: 0.390. This number by itself does not tell us the strength of the connection so I calculated the correlation. The correlation for these two sets is 0.827, which means that the two sets are positively correlated. Further, the correlation is strong.

6. Expected Output

N/A

7. Approximate Time to Complete Task