

FIRST TERM E-LEARNING NOTE

SUBJECT: ECONOMICS

CLASS: SSS 2

SCHEME OF WORK

WEEK	TOPIC
1	Measure of Central Tendency of Group Data
2.	Measure of Dispersion of Variation of Grouped Data
3	Theory of Consumer Behaviour
4	Demand And Supply
5	Elasticity of Demand
6	Elasticity of Supply
7	Income Elasticity of Demand
8	Cross Elasticity of Demand
9	Price Control / Legislation
10	Rationing & Hoarding
11	Revision
12	Examination

REFERENCE BOOKS

- Amplified and Simplified Economics for Senior Secondary School by Femi Longe
- Comprehensive Economics for Senior Secondary School by J.V. Anyaele
- Fundamentals of Economics for SSS By. R.A.I. Anyanwuocha

WEEK ONE

MEASURES OF CENTRAL TENDENCY

CONTENT

- MEAN
- MODE
- MEDIAN

MEASURES OF CENTRAL TENDENCY: are the values which show the degree to which a given data or any given set of values will converge toward the central point of the data. Measures of central tendency, also called measures of location, is the statistical information that gives the middle or centre or average of a set of data. Measures of central tendency include arithmetic mean, median and mode.

MEAN: This is the average of variables obtained in a study. It is the most common kind of average. For group data the formula for calculating the mean is $\frac{\sum fx}{\sum f}$.

$$\frac{\sum fx}{\sum f}$$

Where, Σ = Summation
 F = frequency
 X = observation

MEDIAN: It is the middle number in any given distribution. The formula is

$$\text{Median} = L + \frac{(N/2 - F_b)c}{f}$$

Where; L = Lower class limit.
 N = Summation Of the frequency.
 F_b = Cumulative frequency before the median class.
 f = frequency of the median class.
 c = Class size.

MODE: It is the number that appears most in any given distribution, i.e the number with the greatest frequency. When a series has more than one mode, say two, it is said to be bi-modal or tri-modal for three.

$$\text{Mode} = L + \frac{D_1}{D_1 + D_2}$$

Where, M = mode
 L = the lower class boundary of the modal class.
 D₁ = the frequency of the modal class minus the frequency of the class before the modal class.
 D₂ = the frequency of the modal class minus the frequency of the class after it.
 C = the width of the modal class.

Example: The table below shows the marks of students of JSS 3 mathematics.

Marks	1-5	6-10	11-15	16-20	21-25	26-30
Frequency	2	3	4	5	6	7

Use the information above to calculate the following:

- A. the mean
- B. the median
- C. the mode

Solution

mark	frequency	mid-point	fx
1-5	2	3	6
6-10	3	8	24
11-15	4	13	52
16-20	5	18	90
21-25	6	23	138
26-30	7	28	196

27

506

A. Mean = $\frac{\sum fx}{\sum f} = \frac{506}{27} = 18.7$

B. median

Mark	F	Cf
1-5	2	2
6-10	3	5
11-15	4	9
16-20	5	14
21-25	6	20
26-30	7	27

L₁ = 15.5

