



**SECOND TERM E-LEARNING NOTE**

**SUBJECT: MATHEMATICS**

**CLASS: SS2**

**SCHEME OF WORK**

<b>WEEKS</b>	<b>TOPICS</b>
1	Inequalities – Review of Linear Inequality in One Variable and Graph of Linear Inequality.
2	Inequalities in Two Variables: Graphs of Linear Inequalities in Two Variables; Maximum and Minimum Values of Simultaneous Linear Inequalities.
3	Application of Linear Inequalities in Real Life; Introduction to Linear Programming.
4	Algebraic Fractions: Simplification; Operation of Fractions.
5	Algebraic Fractions: Substitution in Fractions; Simultaneous Equations Involving Fractions; Undefined Fractions.
6	Review of the First Half Term Work and Periodic Test.
7	Logic: Meaning of Simple and Compound Statements; Logical Operations and the Truth Tables; Conditional Statements and Indirect Proofs.
8	Deductive Proof of Circle Geometry.
9	Circle Theorems: Theorem and Proofs Relating to Circle Theorem.
10	Tangent from an External Point.

**REFERENCE BOOKS**

1. New General Mathematics SSS2 by M.F. Macrae et al.
2. Essential Mathematics SSS2 by A.J.S. Oluwasanmi.

**WEEK ONE**      **DATE:** \_\_\_\_\_

**TOPIC: LINEAR INEQUALITIES IN ONE VARIABLE**

**CONTENT**

- Linear Inequalities
- Inequalities with Reversing Symbols
- Representing the Solutions of Inequalities on a Number Line and on Graphs
- Combining Inequalities

**LINEAR INEQUALITIES**

There are different signs used in inequalities.



- > Greater than
- < Less than
- $\geq$  Greater or equal to
- $\leq$  Less or equal to

= Not equal to

### Example 1

Consider a bus with  $x$  people in it.

(a) If there are 40 people then  $x = 40$ , this is an equation not inequality.  $\square$

(b) If there are less than 30 people in the bus then  $x < 30$  where  $<$  means less than ; this is an inequality. It literally means that the no of people in the bus is not up to 30.

### Example 2

Find the range of value of  $x$  for which

$$7x - 6 \geq 15$$

$$7x \geq 15 + 6$$

$$7x \geq 21$$

$$x \geq 3$$

### Example 3: Solve the inequality

$$12x - 7 \geq 13 + 2x$$

$$12x - 2x \geq 13 + 7$$

$$10x \geq 20$$

$$x \geq 2$$

### Evaluation

Solve the...