MATHEMATICS

SCHEME OF WORK THIRD TERM BASIC 9

1. Revision of First term's work

2. Methods of solving simultaneous Linear Equations in one or Two Variables

    Elimination, Substitution and Graphical Methods

3. Methods of solving simultaneous Equation.

    Application of Linear Equation

    Graphical Method continued

4. Statistics II

    Application of measure of central tendency on relevant current issues

    Data collection from info on drug Abuse, voters Register, Producers (workers),

    consumers (children, aged etc)

    Importance of data on drug. Abuse, HIV patients, Voters Register, Producers,

    consumers etc

    The use of the statistical tools such as measures of central tendency in Drug abuse,

    voting and other related activities.

5. Variation

    Concept and meaning

    Types of variation with examples Direct, Inverse, Joint, and Partial.

6. Variation (continued)

    Joint and Partial Variation on simple exercises

    More exercise in the various types of variation

7. Revision

8. Trigonometric ratio of angles

    Sine, cosine, tangent of acute angles

    Application of trigonometrically ratios to solve problems on angles and sides of a

9. Angles of elevation and depression

    Clinometers to measure distances.

10.   Bearing and Distances.

        Concept of bearing and distances

        Taking of bearing

        Instrumental for taking bearing

        Scale drawing

11 – 13   Revision & Examination

WEEK 2

SOLVING OF SIMULTANEOUS LINEAR EQUATIONS

A linear equation is an equation with one solution, in equation known as linear there is only one or two variable unknown variables. But in the case where we combine two equations (linear) thereby having what is known as Simultaneous equation. E.g

$4x + y = 8$ (1)   are called simultaneous equations

$3x – y = 6$ (2)

Simultaneous Linear equations can be solved, graphically, algebraically. But in today's class we shall be considering the algebraically method of solution.

ALGEBRAIC METHOD

There are two algebraic methods of solving simultaneous equations. These are:

(a)   Substitution method

(b)   Elimination method

Substitution Method

To use substitution method

1.   Re-arrange one of the equations so that one variable is made the subject of the formula of the equation.

2.   Substitute this into the other equations.

3.   Solve the resulting equation to obtain one variable.

4.   The other variable is found by substituting your answer into the original equation.

5.   Check the solutions by substituting the two answers back into the original equation.

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Example 1

Solve the following simultaneous equations by substitution method.

i. $y = 5x + 2$ ii. $2x + 3y = 5$

       $x + 2y = 15$ $3x + y = 4$

iii. $4m - 3n = 0$ iv. $x + 6y = -2$

       $m + 2n = 3$ $3x + 2y = 10$

Solution

II. $2x + 3y = 5$ ………….   (1)

       $3x + y = 4$ ………….   (2)

Step (1)

Label the 1st equation (1) and the second equation (2) for easy reference later on.

Step (2)

From equation (2) make "y" subject of formulae $3x + y = 4$

                                                               $Y = 4 - 3x$ ……………   (3)

Step (3)

Substitute $y = 4 - 3x$ into equation (1)

$2x + 3y = 5$

$2x + 3 (4 - 3x) = 5$

Step (4)

Open the…