**PRESIDENT’S OFFICE, REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**

**SONGEA DC**

**SCHEME OF WORK**

**Name of teacher: JACKSON ROBERT ISANGI Name of School: MUHUKURU SECONDARY SCHOOL**

**Year: 2025 Term: 1 & 2**

**Class/Stream: FORM ONE Subject: BASIC MATHEMATICS**

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| **MAIN COMPETENCE** | **SPECIFIC COMPETENCE** | **TEACHING ACTIVITIES** | **MONTH** | **WEEK** | **PERIODS** | **REFERENCE** | **TEACHING/LEARNING TOOLS** | **ASSESSMENT TOOLS** | **COMMENTS** |
| **ORIENTATION COURSE(2ND WEEK OF JANUARY TO 3RD WEEK OF FEBRUARY)** | | | | | | | | | |
| **NUMBERS** | 1.0  Base ten numerals | Write and read numbers in words and numerals up to one billion, to identify the place values of each digit in base ten numeration | **FEBRUARY**  **Marh** | 4TH | 6 | TIE (2009) Secondary basic mathematics for secondary schools book one DSM; Educational publishers LTD | Number cards  Number charts | Exercise  Homework  Test  Classwork |  |
| 1.1  Even, odd and prime number | Discussing with students on the types of numbers i.e. whole, natural, even, odd and prime numbers | **MARCH** | 1ST | 6 | Number cards  Number charts  Abacus | Exercise |  |
| 1.2 operation with whole numbers | Discussing with student on the operation on whole numbers To lead students in the discussion of word problem on whole numbers | 2ND | 6 | Abacus Number cards  Number charts  Abacus | Homework |  |
| 1.3  Factors and multiples of numbers | To prepare students in the discussion of finding factors of numbers and using it to find LCM and GCF of numbers | Factor tree  Factor chart | Test |  |
| 1.4  Integers | Discussing with student on how to find some operation on whole numbers using number line and  doing some mixed operation on integers | 3RD | 12 | Factor tree  Factor chart | Classwork |  |
| **MID-TERM ASSESSMENT (4TH WEEK OF MARCH)**  **MID-TERM BREAK (31/03/2023 - 11/04/2023)** | | | | | | | | | |
| **FRACTIONS** | 2.0  Proper, improper and mixed numbers | To prepare students to brainstorm on meaning of fraction  Discussing with student on proper, improper and mixed numbers. | **APRIL** | 2ND  TO  3RD | 6 |  | Oranges  Paper  Cards, Knife,  Razorblade  Pair of scissors | Quiz |  |
| 2.1  Comparison of fraction | prepare the students to find comparison of fraction and representing fraction on a number line | 4TH | 6 | TIE (2009) Secondary basic mathematics for secondary schools book one DSM; Educational publishers LTD publishers LTD  TIE (2009) Secondary basic mathematics for secondary schools book one DSM; Educational publishers LTD | Number line  Manila papers  Cuisenaire rod | Exercise |  |
| 2.2: Operation on fractions | Discussing with students on how to find some operation on fractions and mixed operation on fractions | **MAY** | 1ST | 6 | Factor tree  Factor chart  Number line  Manila papers | Homework |  |
| 2:3: World problem on fraction | Discussing with students on how to find solution on world problems on fraction | 2ND | 6 | Manila paper | Test |  |
| **3.0 DECIMAL AND PERCENTAGE** | 3.0 Decimals | To prepare students to brainstorm on meaning of decimals and  Discussing on how to change fractions into decimals and decimals into fractions.  Discussing with students on how to change repeating decimal into fractions | 3RD | 6 | Shillings, cents | Classwork |  |
| **TERMINAL ASSESSMENT (4TH WEEK OF MAY)**  **FIRST TERM BREAK (31/05/2023 - 03/07/2023)**  **UMISSETA SPORTS COMPETITIONS (15/06/2023 – 26/06/2023)** | | | | | | | | | |
|  | 3.1  operation on decimals | Discussing with students on how to find some operation on decimals and word problems on decimals | **JULY** | 1ST | 6 |  | Shillings, cents | Exercise |  |
| 3.2  percentages | To prepare students to brainstorm on meaning of percentage  Discussing with students on how to change fractions into percentage and percentage into fraction and decimals  Discussing with students on application of percentage | 2ND | 6 | TIE (2009) Secondary basic mathematics for secondary schools book one DSM; Educational publishers LTD publishers LTD | Shillings, cents | Exercise |  |
| **4.0 UNITS** | 4.0  Units of length | Discussing with students on how to change one unit of length into another unit.  Demonstrating how to do some operation on units of length (+,- ÷ and ×) | 3RD | 3 | Shillings, cents | Homework |  |
| 4.1  Units of mass | Discussing with students on  the meaning of units of mass and converting one unit of mass into another unit and doing some operation on units of mass | 3 | Shillings, cents | Test |  |
| 4.2  Units of time | Discussing with students on the different types of units of time  and reading time using 12hours and 24hours Demonstrating how to change one unit of time to another | 4TH | 3 | TIE (2009) Secondary basic mathematics for secondary schools book two DSM; Educational publishers LTD | Clocks  Clock faces  Timetables  12hour clock  24hour clock | Exercise |  |
| 4.3  Units of capacity | Discussing with students on  The uses of liter in daily life and solving problems involving units of capacity.  Discussing with students on conversion of units of capacity to another units | 3 | Container with capacity in liter | Homework |  |
| **APPROXIMATION** | 5.0  Rounding off numbers | prepare the students to the discussion on how to rounding off numbers  e.g 2.645 to 2dp = 2.64  2.635 to 2dp = 2.64  (old and even criteria for 5) | **AUGUST** | 1ST | 2 | Number  Charts  Number patterns  Marker pens | Test |  |
| 5.1  Approximation in calculation | Discussing with students on how to do approximation in calculation. | 2 | TIE (2009)  Secondary basic mathematics for secondary schools book one DSM; Educational publishers LTD publishers LTD | Number charts  Manila paper  Marker pens | Classwork |
| 5.2  Significant figures | Discussing with students on the meaning of significant figure, writing numbers to the required significant figure | 2 | Number charts  Manila paper  Marker pens  Mathematical set | Exercise |
| **b11 INTROD** | 5.3  Decimal places | Discussing with students on the meaning of decimal place and how to write a number to the required decimal place and solving related problems in approximation | 2ND | 6 | Number charts  Manila paper  Marker pens  Mathematical set | Homework |  |
| 6.0  Points and lines | Discussing with students on how to draw lines and to identify line segment | Mathematical set, Chalk board ruler | Test |  |
| **INTRODUCTION TO GEOMETRY** | 6.1  An angle and types of angles | Discussing with students on how to measure angles using protractors | 3RD | 2 | Manila paper  Marker pens  M/instrument | Classwork |  |
| 6.2  M/ angles using Protractor | Discussing with students on how to construct angles and naming the types of angles | 10 | Protractor  M/ instrument  manila | Exercise |
| 6.3  Perpendicular lines | 1. Discussing with students on how to make perpendicular bisect of angles | Protractor  Mathematical instrument | Homework |
| **MID-TERM ASSESSMENT (4TH WEEK OF AUGUST)**  **MID-TERM BREAK (01/09/2023 - 18/09/2023)** | | | | | | | | | |
|  | 6.4  Construction of angle 600 | Discussing with students on how to construct angles 600 using protractor | **SEPTEMBER** | 3RD | 3 | TIE (2009) Secondary basic mathematics for secondary schools book one DSM; Educational publishers LTD publishers LTD | Protractor  Mathematical instrument | Test |  |
| 6.5  Parallel lines | Discussing with students on how to draw parallel lines and naming the angles such as vertical opposite, corresponding angles, alternative angles, complementary and supplementary angles etc. | Protractor  Mathematical instrument  Manila | Classwork |
|  | 6.6  Polygon and polygon figure | Discussing with students on different types of polygons such as pentagon, hexagon, heptagon octagon also Discussing on properties of polygons e.g. square, rectangle, parallelogram etc. | 4TH | 3 | Protractor  Mathematical instrument  manila | Exercise |  |
| 6.7  Circle | Discussing with students on meaning of an arc, segment, sector, chord, diameter, radius etc. | 3 |  | Protractor  Mathematical instrument  manila | Quiz |  |
| 7.1  Equation of a straight line | prepare the student to the discussion of forming equation of a straight line  Given two points, finding equation of the line given slope and a point | **OCTOBER** | 1ST | 2 | TIE (2009) Secondary basic mathematics for secondary schools book one DSM; Educational publishers LTD publishers LTD | Manila paper  Graph paper  Geo-board  Rubber band  Graph paper | Exercise |  |
| 7.2  Graphs of a straight line | prepare the student to the discussion of drawing graphs of equation of straight line given equation. | 2ND  TO  3RD | 3 | Graph paper  Geo-board  Rubber band  Graph paper | Homework |  |
| 7.3  Solving linear simultaneous equation graphically. | Discussing with students on how to solve linear simultaneous equation graphically by first drawing graphs and finding point of intersect of the two lines | 3 | Graph paper  Geo-board  Rubber band  Graph paper | Test |  |
| **RATIO, PROFIT AND LOSS** | 8.0  ratio | Discussing with students on the meaning of ratios  Discussing with students on how to express ratios in its lowest term and dividing quantity into two or more parts which are in ratios example a/(a+b) | 4TH | 2 | Money  Real object  Physical item | Classwork |  |
| 8.1  Profit and loss | Discussing with students on how to find profit and loss of transactions and how to find percentage loss and also percentage profit | **NOVEMBER** | 1ST | 2 | TIE (2009) Secondary basic mathematics for secondary schools book one DSM; Educational publishers LTD publishers LTD | Work sheet  Money | Exercise |
| 8.2  Simple interest | Discussing with students on how to find simple interest, principal, amount, time or rate on the given transaction. | 2 | Work sheet Money  Bank statement | Homework |
| **PERIMETER AND AREA** | 9.0  Perimeter |  | 2ND | 1 | Triangles  Quadrilaterals  Tape measure  Ruler | Test |  |
| Discussing with students on how to find the perimeter of triangle, rectangle, pentagon  and other polygons |
| 9.1  Circumference | Discussing with students on the meaning of circumference of circle and finding the circumference, radius or diameter of the circle | 3 | Circular object  Rope, thread  Ruler  Work sheet | Exercise |
| 9.2  Area | Discussing with students on the meaning of area; and how to find the area of rectangle, square, circle, triangle, parallelogram and trapezium | 5 | Manila paper  Marker pens  Geo-board | Homework |
|  | 10.0  Rational numbers | Discussing with students on  The meaning of rational numbers and how to representing rational numbers on a number line | 3RD | 4 | Number line  Manila paper | Test |  |
| **10 REAL NUMBERS** | 10.1 Operation on rational numbers | Discussing with students on Operation on rational numbers | 4TH | 4 | Number line  Manila paper  Work sheet | Classwork |  |
| 10.2  Irrational numbers | Discussing with students on  The meaning of irrational numbers and how to represent on a number line | 2 | Charts  Number line  Manila paper  Work sheet | Exercise |
| 10.3  Representation of real numbers on a number line | Discussing with students on how to represent of real on a number line prepare the students to find absolute value of a real number, showing example how to solve absolute value. | 2 | Charts  Number line  Manila paper  Work sheet | Quiz  Assignment |
| **ANNUAL ASSESSMENT (1ST WEEK OF DECEMBER)**  **END OF YEAR BREAK (07/12/2023)** | | | | | | | | | |