**MATHEMATICS SCHEMES OF WORK**

**FORM ONE 2016**

**TERM I**

**REFERENCES:**

1. Advancing in Mathematics BK 4 By Longhorn Kenya Publishers
2. Secondary Mathematics BK 4 By KLB
3. Macmillan Secondary Maths BK 2
4. Explore Mathematics

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **L/ACTIVITIES** | **L/T AIDS** | **REFERENCE** | **REMARKS** |
| 4 |  | **REPORTING** | | | | | |  |
| 5 | 1-2 | Natural Numbers | Place Value of Numbers | By the end of the lesson, the learner should be able to:  Identify, read and write natural numbers in symbols and words  Identify the place value of a number | Discussions  Solving problems in groups and individually  Illustrations | Charts showing place value of a number  The Abacus  Bank cheques and statements | Discovering secondary mathematics Book 1 Pages 1-3  Secondary mathematics KLB book 1 pages 1-2  Advantages in mathematics book 1 pages 1-2 |  |
| 3-4 | Natural Numbers | Round off Numbers | By the end of the lesson, the learner should be able to:  Round off numbers to the nearest tens hundreds, thousands, millions and billions | Discussions  Solving problems involving rounding off numbers  Guiding  Illustrations | Charts to show the rounding off of numbers  Number line  Scales on a ruler, thermometer, vernier calipers | Discovering secondary mathematics book 1 page 3  KLB book 1 page 3  Secondary mathematics KIE book 1 page 2  Advancing in mathematics book 1 pages 3-4 |  |
| 5-6 | Natural Numbers | Classification and operation on natural numbers | By the end of the lesson, the learner should be able to:  Classify numbers as odd, even and prime  Solve word problems involving natural numbers | Discussions  Solving problems involving even, odd and prime nimbers  Carrying out operations on natural numbers  Classification  Guiding | Charts to show the natural numbers  Number line  Place value charts  Abacus | Discovering secondary mathematics book 1 pages 4-8  Secondary mathematics KLB book 1 pages 4-9  Advancing mathematics book 1 pages 4-5  Secondary mathematics KIE book 1 pages 9-11 |  |
| 6 | 1 | Factors | Factors of composite numbers | By the end of the lesson, the learner should be able to:  Find factors of various composite numbers  Express composite numbers in factor form | Solving problems involving factors of composite numbers  Discussions  Illustrations | Charts to show the factorization of numbers  Factor – tree diagram | Discovering Secondary mathematics book 1 pages 9  Secondary mathematics KLB book 1 page 10  Secondary mathematics KIE book 1 page 12-14  Advancing in mathematics book 1 page 7 |  |
| 2 | Factors | Prime Factors | By the end of the lesson, the learner should be able to:  Define the term prime factor  Express numbers as products of prime factors | Discussions  Demonstrations  Listing the prime factors of numbers  Solving problems involving prime factors  Guiding | Charts to show the factorization of numbers  Multiplication tables | Discovering secondary mathematics book 1 page 10  KLB book 1 pages 10-11  Advancing mathematics book 1 page 9  Secondary mathematics KIE book 1 page 12 |  |
| 3-4 | Factors | Factors in power form | By the end of the lesson, the learner should be able to:  Express factors in power form | Solving problems involving factors expressed in power form  Discussion  Guiding the learner to express prime factors in power | Charts to show the factorization of numbers  Multiplication table | Discovering secondary mathematics book 1 page 10  KLB book 1 pages 10- 11  Advancing mathematics book 1 page 9  Secondary mathematics KIE book 1 page 12 |  |
| 5-6 | Divisibility Test | Divisibility of numbers by 2, 3, 4, 5 | By the end of the lesson, the learner should be able to:  Test the divisibility of numbers by 2, 3, 4, 5 | Discussions  Solving problems involving divisibility of numbers by 2, 3, 4,5  Dividing numbers  Listing the prime factors of numbers  Illustrations | Divisibility test charts  Multiplication table  Prime numbers | Discovering secondary mathematics book 1 page 10  KLB book 1 pages 11-15  Advancing mathematics book 1 page 10-11  Secondary mathematics KIE book 1 page 14 |  |
| 7 | 1-2 | Divisibility Test | Divisibility of numbers by 6, 8, 9 | By the end of the lesson, the learner should be able to:  Test the divisibility of numbers by 6, 8, 9 and use the knowledge of divisibility to solve problems | Discussions  Solving problems involving the divisibility of numbers of 6, 8, and 9  Illustrating to the learner how to test divisibility of numbers by 6, 8, 9, 10 and 11 | Divisibility test charts  Multiplication table  Multiples of numbers  Factors of numbers  Prime numbers | Discovering secondary mathematics book 1 page 10 - 11  KLB book 1 pages 16 - 17  Advancing mathematics book 1 page 11  Secondary mathematics KIE book 1 page 14 |  |
| 3-4 | Divisibility Test | Divisibility of numbers 10 and 11 | By the end of the lesson, the learner should be able to:  Carry out the divisibility test of 10 and 11 | Dividing numbers  Discussions  Solving problems | Divisibility test charts  Multiplication table  Multiples of numbers  Factors of numbers  Prime numbers | Discovering secondary mathematics book 1 page 10  KLB book 1 pages 19 - 21  Advancing mathematics book 1 page 12  Secondary mathematics KIE book 1 page 14 |  |
| 5 | Greatest Common Divisor (Gcd) | GCD of a set of numbers | By the end of the lesson, the learner should be able to:  Find the GCD of a set of numbers  Apply GCD in real – life situations | Discussions  Probing learners understanding of GCD  Reinforcing earlier knowledge  Solving problems involving GCD | Charts to show how to get GCD  Multiplication tables  Containers of different capacities | Discovering secondary mathematics book 1 page 10 - 11  KLB book 1 pages 22 - 23  Advancing mathematics book 1 page 13  Secondary mathematics KIE book 1 page 15 |  |
| 6 | Least Common Multiple (Lcm) | Multiples of numbers | By the end of the lesson, the learner should be able to:  List the multiples of numbers | Discussions  Working out the multiples of numbers  Solving problems involving multiples of numbers  Guiding learner exercises to list down multiples of numbers. | Prime numbers  Multiplication tables  Natural numbers  Even numbers  Odd numbers  Containers of different capacities  Flickering light | Discovering secondary mathematics book 1 page 11  KLB book 1 pages 22 - 24  Advancing mathematics book 1 page 14  Secondary mathematics KIE book 1 page 15 |  |
| 8 | 1-2 | Least Common Multiple (Lcm) | LCM of a set of numbers | By the end of the lesson, the learner should be able to:  Find the least common multiple of a set of numbers  Apply the knowledge of LCM in real – life situations | Discussions  Working out the multiples of numbers  Illustrating and solving problems involving multiples of numbers  Solving word problems from everyday life situations | Multiplication tables  Natural numbers  Prime numbers  Multiples of numbers  Even numbers  Odd numbers Bells Flickering lights  Alarms  Containers of different capacities | Discovering secondary mathematics book 1 page 11  KLB book 1 pages 25 - 26  Advancing mathematics book 1 page 15  Secondary mathematics KIE book 1 page 15 |  |
| 3-4 | Integers | Integers | By the end of the lesson, the learner should be able to:  Define integers  Identify integers on a number line | Discussions  Reading numbers on a number line  Showing numbers on a number line  Solving problems involving integers and the number line  Definition | Number line  Stairways  Natural numbers  Whole Numbers | Discovering secondary mathematics book 1 page 14  KLB book 1 pages 27- 29  Advancing mathematics book 1 page 18  Secondary mathematics KIE book 1 page 1-3 |  |
| 5-6 | Integers | Operations of integers | By the end of the lesson, the learner should be able to:  Perform the four basic operations on integers using the number line | Demonstrations  Discussions  Illustrating and solving problems involving four basic operations on integers  Explanations  Discussing exercises | Charts showing integers  Number line  Stair case  Ladder  Thermometer  Real life situations | Discovering secondary mathematics book 1 page 16-20  KLB book 1 pages 30-36  Advancing mathematics book 1 page 22-29  Secondary mathematics KIE book 1 page 3-8 |  |
| 9 | 1-2 | Integers | Combined operations | By the end of the lesson, the learner should be able to:  *© Education Plus Agencies*  Work out problems involving combined operations on integers in the correct order | Discussions  Demonstrations  Guiding the learner to perform operations on integers on correct order  Solving problems involving combined operations on integers | Number line  Stair case  Ladder  Thermometer | Discovering secondary mathematics book 1 page 20-22  Secondary mathematics KLB book 1 pages 37-39  Advancing mathematics book 1 page 30-33  Secondary mathematics KIE book 1 page 9-11  Discovering secondary mathematics teachers book 1 pages 6-7 |  |
| 3-4 | Fractions | The meaning of fractions | By the end of the lesson, the learner should be able to:  Define fractions  Identify and write fractions in figures (proper and improper) | Definition  Discussions  Solving problems involving fractions | Charts  Illustrating operations on fractions | Discovering secondary mathematics book 1 page 11  Discovering secondary mathematics teachers guide pages 8-11  Secondary mathematics KLB book 1 pages 40-41  Advancing mathematics book 1 page 36  Secondary mathematics KIE book 1 page 18 |  |
| 5-6 | Fractions | Equivalent fractions | By the end of the lesson, the learner should be able to:  Identify and write equivalent fractions | Discussions  Dividing equally  Measuring  Weighing  Solving problems | Sticks  Pieces of paper  Ruler  Real life - situation | Discovering secondary mathematics book 1 page 24  teachers book pages 8-11  KLB book 1 pages 42-44  Advancing mathematics book 1 pages 37-38  Secondary mathematics KIE book 1 page 19-20 |  |
| 10 | 1-2 | Fractions | Naming fractions | By the end of the lesson, the learner should be able to:  Name fractions correctly and convert an improper fraction to a mixed number and vise versa | Discussions  Sharing equally  Solving problems  Converting fractions  Doing excesses | Counters such as seeds, bottle tops, stones  Pieces of paper  Sticks | Discovering secondary mathematics book 1 pages 25-26  Discovering secondary mathematics teachers guide pages 8-11  KLB book 1 page 44  Advancing mathematics book 1 page 38-39  Secondary mathematics KIE book 1 page 20 |  |
| 3-4 | Fractions | Adding and subtracting fractions | By the end of the lesson, the learner should be able to:  Add and subtract fractions | Showing  Discussions  Adding  Subtracting  Converting Fractions | Oranges  Sticks  Pieces of paper  Counters | Discovering secondary mathematics book 1 pages 25-26  KLB book 1 page 45-48  Advancing mathematics book 1 page 41  Secondary mathematics KIE book 1 page 21-22 |  |
| 5-6 | Fractions | Multiplication and division of fractions | By the end of the lesson, the learner should be able to:  Perform multiplication and division of fractions | Discussions  Multiplication  Division  Converting fractions  Showing the learner how to manipulate fractions | Sticks  Stones  Seeds  Pieces of paper | Discovering secondary mathematics book 1 pages 27-29  Discovering secondary mathematics teachers guide pages 8-11  KLB book 1 page 49-54  Advancing mathematics book 1 page 42-45  Secondary mathematics KIE book 1 page 23-26 |  |
| 11 | 1-2 | Fractions | Order of operations | By the end of the lesson, the learner should be able to:  Carry out combined operations on fractions on the correct order | Discussions  Addition’  Subtraction  Multiplication  Division  Conversion of fractions | Multiplication tables  Conversion tables  Real objects | Discovering secondary mathematics book 1 pages 29-30  Discovering secondary mathematics teachers guide pages 8-11  KLB book 1 page 54-57  Advancing mathematics book 1 page 47  Secondary mathematics KIE book 1 page 28-31 |  |
| 3-4 | Fractions | Application of fractions in a real life situation | By the end of the lesson, the learner should be able to:  Solve world problems involving fractions in real life situations | Discussions  Solving problems involving fractions in real life situation | Multiplication tables  Conversion tables  Real objects  Counters | Discovering secondary mathematics book 1 pages 30-31  Discovering secondary mathematics teachers guide pages 8-11  Secondary mathematics KLB students book 1 page 57  Advancing mathematics book 1 page 47  Secondary mathematics KIE book 1 page 31 |  |
| 5-6 | Fractions | Revision | By the end of the lesson, the learner should be able to:  Answer the questions in the student’s book.  Further exercises |  |  |  |  |
| 12,13 | **TOPICAL EXAMINATION** | | | | | | | |
| 14 | **END OF TERM EXAMS** | | | | | | | |
| 15 | **PREPARATION OF REPORTS AND CLOSING** | | | | | | | |

**MATHEMATICS SCHEMES OF WORK**

**FORM ONE 2016**

**TERM II**

**REFERENCES:**

1. Advancing in Mathematics BK 4 By Longhorn Kenya Publishers
2. Secondary Mathematics BK 4 By KLB
3. Macmillan Secondary Maths BK 2
4. Explore Mathematics

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **L/ACTIVITIES** | **L/T AIDS** | **REFERENCE** | **REMARKS** |
| 1 |  | **REPORTING AND REVISION OF LAST TERMS EXAMS** | | | | | |  |
| 2 | 1-2 | Decimals | Fractions and decimals | By the end of the lesson, the learner should be able to:  Define decimals  Convert fractions into decimals | Definition  Discussions  Doing exercises  Illustration  Demonstrations  Dividing  Multiplying | Equivalent fractions  Multiplication tables  Real life situations | Discovering secondary mathematics Book 1 Pages 32-34  Discovering secondary mathematics teachers guide pages 12-15  Secondary mathematics KLB book 1 pages 58-60  Secondary mathematics KIE book 1 page 32-34  Advancing in mathematics book 1 pages 48 |  |
| 3-4 | Decimals | Recurring decimals | By the end of the lesson, the learner should be able to:  Identify and write recurring decimals | Discussions on recurring decimals  Doing exercises  Dividing  Multiplying  Demonstrations  Explanation | Equivalent fractions  Multiplication tables  Real – life situation | Discovering secondary mathematics book 1 page 34  KLB book 1 pages 61-62  Secondary mathematics KIE book 1 page 43-44  Advancing in mathematics book 1 pages 59  Discovering secondary mathematics teachers guide pages 12-15 |  |
| 5-6 | Decimals | Recurring decimals and fractions | By the end of the lesson, the learner should be able to:  Identify recurring decimals  Convert recurring decimals into fractions | Guiding learner to identify recurring decimals  Discussion on recurring decimals  Doing exercises  Conversion  illustrations | Equivalent fractions  Percentages  Multiplication tables | Discovering secondary mathematics book 1 pages 35  Discovering secondary mathematics teachers guide pages 25-30  Secondary mathematics KLB book 1 pages 4-9  Advancing mathematics book 1 pages 59  Secondary mathematics KIE book 1 pages 44 |  |
| 3 | 1 | Decimals | Rounding off decimals | By the end of the lesson, the learner should be able to:  Round off a decimal number to the required number of decimal places | Discussions  Estimation  Rounding off  Demonstrations  Doing exercises | Place value charts  Ruler  Tape measure  Objects | Discovering Secondary mathematics book 1 pages 36  Secondary mathematics KLB book 1 page 64  Secondary mathematics KIE book 1 page 42  Advancing in mathematics book 1 page 56-57 |  |
| 2 | Decimals | Standard form | By the end of the lesson, the learner should be able to:  Write numbers in standard form and apply in real life situations | Discussions  Writing whole numbers and decimal numbers in standard form  Doing exercises  Illustrations  explanations | place value charts  measuring instruments  objects | Discovering secondary mathematics book 1 page 36-37  KLB book 1 pages 62  Advancing mathematics book 1 page 51-55  Discovering secondary mathematics teachers guide pages 12-15  KLB teachers book 25-30 |  |
| 3 | Decimals | Addition and subtraction of decimals | By the end of the lesson, the learner should be able to:  Add decimals  Subtract decimals | Discussions  Demonstrations  Explanations  Adding  Subtracting | Place value charts  Measuring instruments such as tape measure, ruler, meter rule  Regular shaped objects | Discovering secondary mathematics book 1 page 37-38  KLB book 1 pages 63  Advancing mathematics book 1 page 49  Secondary mathematics KIE book 1 page 36-37  KLB teachers book 25-30 |  |
| 4-5 | Decimals | Multiplication and division | By the end of the lesson, the learner should be able to:  Multiply decimals  Divide decimals | Discussions  Demonstrations  Multiplying  Correcting errors caused by failure to manipulate decimal point correctly  Doing exercises | Mathematical table  Multiplication table  Place value chart  Measuring instruments  Regular shaped objects | Discovering secondary mathematics book 1 page 38-42  KLB book 1 pages 64  Advancing mathematics book 1 page 42-45  Secondary mathematics KIE book 1 page 38-40 |  |
|  | 6 | Decimals | Combined operation on decimals | By the end of the lesson, the learner should be able to:  Carry out operations in the correct order  Apply the knowledge of decimals to real life situations | Discussions  Application of decimals to real life situations  Adding  Multiplying  Dividing  Subtracting  Solving puzzles  Playing games | Place value charts  Multiplication tables  Mathematical tables  Tape measure  Metre rule  Ruler  Strings  Regular shaped objects | Discovering secondary mathematics book 1 page 42-43  KLB book 1 pages 71-72  Advancing mathematics book 1 page 60  Secondary mathematics KIE book 1 page 44  KLB teachers book 25-30  Golden tips (KCSE) mathematics page 14 |  |
| 4 | 1-2 | Squares And Square Roots | Squares of numbers | By the end of the lesson, the learner should be able to:  Define the term square  Find squares of numbers by multiplication and factorization | Discussions  Multiplication  Memorizing  Doing short test  Solving puzzles | Multiplication tables  Mathematical tables  Calculators (scientific) | Discovering secondary mathematics book 1 page 44-46  KLB book 1 pages 73  Advancing mathematics book 1 page 61-62  Secondary mathematics KIE book 1 page 96-97  mathematics page 60 |  |
| 3 | Squares And Square Roots | Squares of numbers greater than 1 and less than 10 | By the end of the lesson, the learner should be able to:  read the mathematical table  find the squares of numbers from the mathematical tablle | Discussions  Reading the mathematical table  Emphasizing standard form  Doing short tests  Playing games | Mathematical tables  Multiplication tables  Calculators (scientific) | Discovering secondary mathematics book 1 page 45  KLB book 1 pages 75  Advancing mathematics book 1 page 62-63  Secondary mathematics KIE book 1 page 97 Golden tips (KCSE) mathematics page 61 |  |
| 4 | Squares And Square Roots | Squares of numbers greater than 10 | By the end of the lesson, the learner should be able to:  Find the square of numbers greater than 10 from the mathematical table. | Discussion  Exercises  Reading mathematical tables  Illustrations | Mathematical tables  Multiplication tables  Calculators (Scientific) | KLB book 1 pages 75  Discovering secondary mathematics book 1 page 45  Advancing mathematics book 1 page 63  Secondary mathematics KIE book 1 page 97  Golden tips (KCSE) mathematics page 61 |  |
|  | 5 | Squares And Square Roots | Squares of numbers less than 1 | By the end of the lesson, the learner should be able to:  Find the squares of numbers less than 1 from mathematical tables | Discussions  Doing exercises  Reading mathematical tables  Solving puzzles | Mathematical tables  Multiplication tables  Calculators (Scientific) | KLB book 1 pages 76  Discovering secondary mathematics book 1 page 46  Advancing mathematics book 1 page 63  Secondary mathematics KIE book 1 page 97-98  Golden tips (KCSE) mathematics page 61 |  |
| 6 | Squares And Square Roots | Finding square roots by factorization | By the end of the lesson, the learner should be able to:  Find square roots of numbers by factorization | Discussions  Factorizing numbers  Doing short tests  Demonstrations  Dividing numbers | Mathematical tables  Multiplication tables | Discovering secondary mathematics book 1 page 46-47  Secondary mathematics KLB book 1 pages 77  Advancing mathematics book 1 page 64-65  Secondary mathematics KIE book 1 page 99-101  Golden tips (KCSE) mathematics page 62 |  |
| 5 | 1-2 | Squares And Square Roots | Square root tables | By the end of the lesson, the learner should be able to:  Read the square root table  Read square roots of numbers 1< A <10 from mathematical tables | Guiding the learner to read square roots from tables  Discussions  Doing exercises | Mathematical tables  Multiplication tables | Discovering secondary mathematics book 1 pages 47-48  KLB book 1 page 78  Advancing mathematics book 1 page 66  Secondary mathematics KIE book 1 page 102-103 |  |
| 3-4 | Squares And Square Roots | Square roots of numbers less than one and greater than 100 | By the end of the lesson, the learner should be able to:  Get the Square roots of numbers less than one and greater than 100 form their mathematical tables | Discussions  Mathematical table  Doing exercises | Mathematical tables  Multiplication tables | Discovering secondary mathematics book 1 pages 48-49  KLB book 1 page 78  Advancing mathematics book 1 page 67-68  Secondary mathematics KIE book 1 page 102-103 |  |
| 5-6 | Squares And Square Roots | Revision | By the end of the lesson, the learner should be able to:  Solve problems involving squares and square roots | Discussions  Illustrations  Doing exercises  Supervised practice | Mathematical table  Charts | Discovering secondary mathematics book 1 pages 49  KLB book 1 page 79  Advancing mathematics book 1 page 69-72  Secondary mathematics KIE book 1 page 104 |  |
| 6 | 1 | Angles | Measuring and drawing angles | By the end of the lesson, the learner should be able to:  Measure and draw an angle using a protractor | Discussions  Demonstration  Measuring angles  Illustrations | Protractor  Ruler  Models of figures  Charts | Discovering secondary mathematics book 1 pages 50-52  KLB book 1 page 19757  Advancing mathematics book 1 page 173-175  Secondary mathematics KIE book 1 page 62 |  |
| 2 | Angles | Types of angles | By the end of the lesson, the learner should be able to:  Name and draw different types of angles | Discussions  Drawing angles  Measuring angles  Naming angles | Protractor  Ruler  Models of triangles, rectangles etc  Charts | Discovering secondary mathematics book 1 pages 51-52  Secondary mathematics KLB students book 1 page 197-198  Advancing mathematics book 1 page 175-177  Secondary mathematics KIE book 1 page 62-64 |  |
| 3-4 | Angles | Angles on a straight line, vertically opposite angles and angles at a point | By the end of the lesson, the learner should be able to:  Identify and draw angles on a line vertically opposite angles and angles at a point | Discussions  Drawing angles  Doing exercises  Naming angles | Protractor  Ruler  Models of triangles, rectangles etc | Discovering secondary mathematics book 1 pages 52-54  Secondary mathematics KLB students book 1 page 200-201  Advancing mathematics book 1 page 177-179  Secondary mathematics KIE book 1 page 66-67 |  |
|  | 5-6 | Angles | Parallel lines corresponding alternate and interior angles | By the end of the lesson, the learner should be able to:  Identify and draw parallel lines, corresponding alternate and interior angles | Discussions  Drawing angles  Measuring angles  Identifying angles | Protractor  Ruler  Real objects | Discovering secondary mathematics book 1 pages 55-57  Secondary mathematics KLB students book 1 page 206-210  Advancing mathematics book 1 page 180-181  Secondary mathematics KIE book 1 page 70-72 |  |
| 7 | 1-2 | Polygons | Triangles | By the end of the lesson, the learner should be able to:  Define a polygon and identify and draw different triangles. | Discussions  Drawing triangles  Measuring Angles  Measuring lengths  Definitions | Protractor  Ruler  Models of different triangles | Discovering secondary mathematics book 1 pages 58-61  Secondary mathematics KLB students book 1 page 211  Advancing mathematics book 1 page 182-183  Secondary mathematics KIE book 1 page 75-76 |  |
|  | 3-4 | Polygons | Interior and exterior angles of a polygons | By the end of the lesson, the learner should be able to:  Identify and draw interior and exterior angles of a quadrilateral | Discussions  Drawing quadrilaterals  Measuring angles  Measuring lengths  Illustrations | Protractor  Ruler  Strings  Real Objects | Discovering secondary mathematics book 1 pages 63-66  Secondary mathematics KLB students book 1 page 212-213  Advancing mathematics book 1 page 182-183  Secondary mathematics KIE book 1 page 76-77 |  |
|  | 5-6 | Polygons | Quadrilaterals | By the end of the lesson, the learner should be able to:  Identify and draw different quadrilaterals | Discussions  Drawing quadrilaterals  Measuring angles  Measuring lengths | Protractor  Ruler  Strings  Real Objects | Discovering secondary mathematics book 1 pages 60-63  Secondary mathematics KLB students book 1 page 219-220  Advancing mathematics book 1 page 185-186  Secondary KIE book 1 page 82-83 |  |
| 8 | 1-2 | Length | Units of length | By the end of the lesson, the learner should be able to:  State the units of measuring length and express length to a given significant figure | Discussions  Definitions  Rounding off  Measuring lengths  Solving problems involving units of length | Tape measure  Rulers  Strings  Measuring instruments | Discovering secondary mathematics book 1 pages 67-68  Secondary mathematics KLB students book 1 page 110  Advancing mathematics book 1 page 100-101  Secondary mathematics KIE book 1 page 106 |  |
|  | 3 | Length | Conversion of units of length | By the end of the lesson, the learner should be able to:  Convert the units of length | Discussions  Conversions of units of length  Measuring length in different units  Solving problems | Tape measure  Rulers  Strings  Conversion charts for length  Real objects | Discovering secondary mathematics book 1 pages 68-71  Secondary mathematics KLB students book 1 page 110-112  Advancing mathematics book 1 page 100-101  Secondary mathematics KIE book 1 page 107-108 |  |
|  | 4 | Length | Perimeter of plain figures | By the end of the lesson, the learner should be able to:  Find the perimeter of a plain figure | Discussions  Measuring length  Solving problems | Tape measure  Rulers  Strings  Conversion charts for length  Real objects | Discovering secondary mathematics book 1 pages 71-73  Secondary mathematics KLB students book 1 page 113-116  Advancing mathematics book 1 page 103-104  Secondary mathematics KIE book 1 page 109-112 |  |
|  | 5-6 | Length | Circumference | By the end of the lesson, the learner should be able to:  Find the circumference of a circle | Discussions  Measuring length  Solving problems on circumference  Demonstrations | Circular objects  Tape measure  Rulers  Strings Conversion charts for length | Discovering secondary mathematics book 1 pages 73-76  Secondary mathematics KLB students book 1 page 116-119  Advancing mathematics book 1 page 105-106  Secondary mathematics KIE book 1 page 116-118 |  |
| 9 | 1-2 | Geometric Constructions | Construction of a perpendicular bisector of a line | By the end of the lesson, the learner should be able to:  Use a pair of compasses and ruler only to construct a perpendicular bisector of a line | Discussions  Construction of a perpendicular bisector of a line  Drawing shapes | Plane figures  Geometrical sets  Polygonal shapes  Ruler  Pair of compasses | Discovering secondary mathematics book 1 pages 77-78  Secondary mathematics KLB students book 1 page 227  Advancing mathematics book 1 page 197-198  Secondary KIE book 1 page 153 |  |
|  | 3-4 | Geometric Constructions | Construction of parallel lines | By the end of the lesson, the learner should be able to:  Construct parallel lines using a ruler and a set square or at a given distance | Discussions  Constructions  Demonstrations  Measuring angles | Set squares  Ruler  Pair of compass | Discovering secondary mathematics book 1 pages 78-79  Secondary mathematics KLB students book 1 page 235  Advancing mathematics book 1 page 202  Secondary mathematics KIE book 1 page 154-155 |  |
|  | 5-6 | Geometric Constructions | Dividing a line proportionally | By the end of the lesson, the learner should be able to:  Divide a line proportionally using a ruler and a set square | Discussions  Dividing lines proportionally  Drawing straight lines  Measuring angles and lengths | Set squares  Ruler  Pair of compass | Discovering secondary mathematics book 1 pages 79-80  Secondary mathematics KLB students book 1 page 236  Advancing mathematics book 1 page 203  Secondary mathematics KIE book 1 page 156 |  |
| 10 | 1-2 | Geometric Constructions | Reproducing and bisecting angles | By the end of the lesson, the learner should be able to:  Reproduce and bisect an angle | Discussions  Demonstrations  Illustrations  Drawing angles | Ruler  Pair of compass | Discovering secondary mathematics book 1 page80  Secondary mathematics KLB students book 1 page 233  Advancing mathematics book 1 page 202  Secondary mathematics KIE book 1 page 149-150 |  |
|  | 3-4 | Geometric Constructions | Constructing angles | By the end of the lesson, the learner should be able to:  Construct angles at 60 degrees | Discussions  Measuring angles  Bisecting angles  Constructing angles  Solving problems on construction of angles | Ruler  Pair of compass  Protractor  Real objects | Discovering secondary mathematics book 1 page 80-82  Secondary mathematics KLB students book 1 page 233-234  Advancing mathematics book 1 page 201-202  Secondary mathematics KIE book 1 page 149-150-151 |  |
|  | 5-6 | Geometric Constructions | Constructing polygons | By the end of the lesson, the learner should be able to:  Construct regular and irregular polygons | Discussions  Measuring angles and lengths  Bisecting angles  Constructing angles | Ruler  Pair of compass  Protractor  Real objects | Discovering secondary mathematics book 1 page 83-84  Secondary mathematics KLB students book 1 page 237-240  Advancing mathematics book 1 page 207-208  Secondary KIE book 1 page 158-159 |  |
| 11 | 1-2 | Algebraic Expressions | Representing numbers by letters | By the end of the lesson, the learner should be able to:  Use letters to represent numbers | Discussions  Doing exercises  Guessing  Demonstrations | Counters  Groups of items | Discovering secondary mathematics book 1 page 85-86  Secondary mathematics KLB students book 1 page 80-81  Advancing mathematics book 1 page 73-74  Secondary mathematics KIE book 1 page 47-48 |  |
|  | 3-4 | Algebraic Expressions | Simplifying algebraic expressions | By the end of the lesson, the learner should be able to:  Simplify algebraic expressions | Discussions  Doing exercises  Grouping items together  Adding objects  Multiplying and dividing | Counters  Groups of items  charts | Discovering secondary mathematics book 1 page 86-88  Secondary mathematics KLB students book 1 page 82-84  Advancing mathematics book 1 page 74-75  Secondary mathematics KIE book 1 page 49-51 |  |
|  | 5 | Algebraic Expressions | Multiplying algebraic expressions | By the end of the lesson, the learner should be able to:  Multiply algebraic expressions | Discussions  Simplification of algebraic expressions  Multiplying algebraic expressions  Grouping like items  Doing exercises | Groups of unlike items  Groups of like items | Discovering secondary mathematics book 1 page 87  Secondary mathematics KLB students book 1 page 89  Advancing mathematics book 1 page 75  Secondary mathematics KIE book 1 page 49-51 |  |
|  | 6 | Algebraic Expressions | Dividing algebraic expressions | By the end of the lesson, the learner should be able to:  Divide algebraic expressions | Discussions  factorization  Grouping like items  Doing exercises  Puzzles  games | Groups of like items | Discovering secondary mathematics book 1 page 87-88  Secondary mathematics KLB students book 1 page 89  Advancing mathematics book 1 page 76  Secondary mathematics KIE book 1 page 49-51 |  |
| 12 | 1-2 | Algebraic Expressions | Use of brackets in algebraic expressions | By the end of the lesson, the learner should be able to:  Use of brackets in algebraic expressions | Discussions  Adding  Subtracting  Demonstrations  Matching items  Dividing  Doing exercises | Groups of like items/objects | Discovering secondary mathematics book 1 page 88-89  Secondary mathematics KLB students book 1 page 85  Advancing mathematics book 1 page 77  Secondary KIE book 1 page 52-53 |  |
|  | 3-4 | Algebraic Expressions | factorization in algebraic expressions | By the end of the lesson, the learner should be able to:  Use factorization in algebraic expressions | Discussions  Factorizing  puzzles  Adding  Substitutions  Doing exercises  Playing games | Groups of like items/objects | Discovering secondary mathematics book 1 page 88-91  Secondary mathematics KLB students book 1 page 90  Advancing mathematics book 1 page 81-83  Secondary mathematics KIE book 1 page 57-58 |  |
|  | 5-6 | Algebraic Expressions | Substitution and factorization | By the end of the lesson, the learner should be able to:  Substitute and factorize algebraic expressions | Discussions  Dividing  multiplying  Adding  Subtracting  Solving puzzles  Substitutions  Doing exercises  Playing games | Groups of like items/objects | Discovering secondary mathematics book 1 page 91-94  Secondary mathematics KLB students book 1 page 91-92  Advancing mathematics book 1 page 80& 84  Secondary mathematics KIE book 1 page 59-62 |  |
| 13 | 1-2 | Linear Equations | Solving equations | By the end of the lesson, the learner should be able to:  Solve linear equations in one unknown | Discussions  Demonstrations  Solving problems on linear equations  Puzzles | Beam balance  See – saw  Games | Secondary mathematics KLB students book 1 page 160-162  Advancing mathematics book 1 page 134  Secondary mathematics KIE book 1 page 173-174 |  |
|  | 3-4 | Linear Equations | Forming linear equations | By the end of the lesson, the learner should be able to:  Form linear equations | Discussions  Forming linear equations  Demonstrations  Doing exercises | Beam balance  Real life experience | Secondary mathematics KLB students book 1 page 163-168  Advancing mathematics book 1 page 139  Secondary mathematics KIE book 1 page 176-178 |  |
|  | 5-6 | Linear Equations | Simultaneous equations and forming simultaneous equations | By the end of the lesson, the learner should be able to:  Solve simultaneous equations by substitution and elimination and form simultaneous equations | Discussions  Solving simultaneous equations by substitution and elimination  Forming simultaneous equations  Playing games | Beam balance  Real life experience | Secondary mathematics KLB students book 1 page 168-169  Advancing mathematics book 1 page 137-138  Secondary mathematics KIE book 1 page 178-180 |  |
| 14 | **END – TERM EXAMS** | | | | | | | |

**MATHEMATICS SCHEMES OF WORK**

**FORM ONE 2016**

**TERM III**

**REFERENCES:**

1. Advancing in Mathematics BK 4 By Longhorn Kenya Publishers
2. Secondary Mathematics BK 4 By KLB
3. Macmillan Secondary Maths BK 2
4. Explore Mathematics

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **L/ACTIVITIES** | **L/T AIDS** | **REFERENCE** | **REMARKS** |
| 1 |  | **REPORTING AND REVISION OF LAST TERMS EXAMS** | | | | | |  |
| 2 | 1-2 | Coordinates And Graphs | The Cartesian plane | By the end of the lesson, the learner should be able to:  Draw and label the Cartesian plane | Discussions  Labeling the Cartesian plane  Writing scale  Drawing the axes of the Cartesian plane  Reading points from the Cartesian plane | Graph papers  Square board  Cartesian plane  Typographical maps  Ruler | Discovering secondary mathematics Book 1 Pages 103-104  Secondary mathematics KLB book 1 pages 182-183  Secondary mathematics KIE book 1 page 223-224  Advancing in mathematics book 1 pages 161-162 |  |
|  | 3-4 | Coordinates And Graphs | Plotting graphs and linear graphs | By the end of the lesson, the learner should be able to:  Plot points on a Cartesian plane  Read points on linear graphs on the Cartesian plane | Discussions  Labeling the Cartesian plane  Writing scale  Plotting points on the Cartesian plane  Reading points from the Cartesian plane  Drawing axes of a Cartesian plane | Graph papers  protractor  Square boards  Chalk boards  Grid boards  Typographical maps  Ruler | Discovering secondary mathematics Book 1 Pages 1014-108  Secondary mathematics KLB book 1 pages 185-186  Secondary mathematics KIE book 1 page 226  Advancing in mathematics book 1 pages 163-164 |  |
|  | 5-6 | Coordinates And Graphs | Plotting linear graphs and linear equations of lines | By the end of the lesson, the learner should be able to:  Plot a linear graph  Work out the equation of a line | Discussions  Labeling the Cartesian plane  Writing scale  Plotting points on the Cartesian plane  Reading points from the Cartesian plane  Drawing axes of a Cartesian plane | Graph papers  protractor  Square boards  Creo boards  Grid boards  Typographical maps | Discovering secondary mathematics Book 1 Pages 108-111  Secondary mathematics KLB book 1 pages 185-186  Secondary mathematics KIE book 1 page 226  Advancing in mathematics book 1 pages 165-166 |  |
| 3 | 1-2 | Coordinates And Graphs | Graphical solutions | By the end of the lesson, the learner should be able to:  Solve simultaneous linear equations graphically | Discussions  Writing scale  Labeling the Cartesian plane  Solving linear equations graphically  Illustrations  Drawing the axes of a Cartesian plane | Graph papers  protractor  Square boards  Typographical maps  Ruler  Grid boards | Discovering secondary mathematics Book 1 Pages 111-113  Secondary mathematics KLB book 1 pages 188-189  Secondary mathematics KIE book 1 page 229-232  Advancing in mathematics book 1 pages 167-170 |  |
|  | 3-4 | Area | Area of combined and conversion of units of area | By the end of the lesson, the learner should be able to:  Define and work out area of combined rectangular shapes  Convert units of area fron one form to another | Drawing rectangular shapes  Working out the area of rectangles  Discussions  Solving problems on conversion of units of area | Regular flat surfaces  Square paper  Square boards  Rectangular objects | Discovering secondary mathematics Book 1 Pages 114-117  Secondary mathematics KLB book 1 pages 123-124  Secondary mathematics KIE book 1 page 109  Advancing in mathematics book 1 pages 109 |  |
|  | 5-6 | Area | Area of a triangle and rectangle | By the end of the lesson, the learner should be able to:  Calculate the area of a triangle and rectangle | Discussions  Measuring length  Calculating the area of a triangle | Triangular flat surfaces  Square paper  Square boards  Triangular objects | Discovering secondary mathematics Book 1 Pages 117-118  Secondary mathematics KLB book 1 pages 124-125  Secondary mathematics KIE book 1 page 110  Advancing in mathematics book 1 pages 109-110 |  |
| 4 | 1-2 | Area | Area of a parallelogram and trapezium | By the end of the lesson, the learner should be able to:  Calculate the area of a  Parallelogram  trapezium | Discussions  Measuring length  Calculating the area of a parallelogram  Calculating the area of a trapezium | Square board  Trapezoidal objects  Shapes with a shape of a parallelogram | Discovering secondary mathematics Book 1 Pages 118-121  Secondary mathematics KLB book 1 pages 125-126  Secondary mathematics KIE book 1 page 110-111  Advancing in mathematics book 1 pages 111-113 |  |
|  | 3-4 | Area | Area of a circle | By the end of the lesson, the learner should be able to:  Calculate the area of a circle | Discussions  Demonstrations  Measuring the radius/diameter  Calculating the area of a circle | Circular shapes  Or objects  Square paper  Square board | Discovering secondary mathematics Book 1 Pages 121-123  Secondary mathematics KLB book 1 pages 129-132  Secondary mathematics KIE book 1 page 123-125  Advancing in mathematics book 1 pages 115 |  |
|  | 5-6 | Area | Area of irregular plane | By the end of the lesson, the learner should be able to:  Work out the area of an irregular plane figure | Discussions  Demonstrations  Measuring length  Estimating area  Converting units of areas | Irregular objects/shapes  Square paper  Square board | Discovering secondary mathematics Book 1 Pages 123-124  Secondary mathematics KLB book 1 pages 111  Secondary mathematics KIE book 1 page 115-116  Advancing in mathematics book 1 pages 141-142 |  |
| 5 | 1-2 | Area | Surface area of a cuboid | By the end of the lesson, the learner should be able to:  Work out the surface area of a cuboid | Discussions  Demonstrations  Measuring length  Estimating area  Converting units of areas | Regular flat shapes  Square paper  Square board  Model cubes and cuboids | Discovering secondary mathematics Book 1 Pages 124-125  Secondary mathematics KLB book 1 pages 135  Secondary mathematics KIE book 1 page 130  Advancing in mathematics book 1 pages 118 |  |
|  | 3-4 | Area | Surface area of a prism | By the end of the lesson, the learner should be able to:  Work out the surface area of a prism | Discussions  Demonstrations  Measuring length  Estimating area  Converting units of areas | Regular cylinders and prisms  Square paper  Square board  Model of a prism | Discovering secondary mathematics Book 1 Pages 125-126  Secondary mathematics KLB book 1 pages 135-136  Secondary mathematics KIE book 1 page 131-132  Advancing in mathematics book 1 pages 118 |  |
|  | 5-6 | Area | Surface area of a cylinder | By the end of the lesson, the learner should be able to:  Work out the surface area of a cylinder | Discussions  Demonstrations  Measuring length  Estimating area  Converting units of areas  Doing exercises | Regular cylinders  Square paper  Square board  Model of a cylinder | Discovering secondary mathematics Book 1 Pages 126-128  Secondary mathematics KLB book 1 pages 137-138  Secondary mathematics KIE book 1 page 131-132  Advancing in mathematics book 1 pages 118 |  |
| 6 | 1-2 | Volume & Capacity | Units of volume | By the end of the lesson, the learner should be able to:  State the units of volume in cubic units and convert one from another | Discussions  Measuring length, width and height  Measuring volume  Calculating the volume of a cuboid | Equipment for measuring volume | Discovering secondary mathematics Book 1 Pages 129  Secondary mathematics KLB book 1 pages 143  Secondary mathematics KIE book 1 page 131-136  Advancing in mathematics book 1 pages 121 |  |
|  | 3-4 | Volume & Capacity | Volume of cuboids and cylinders | By the end of the lesson, the learner should be able to:  Calculate the volume of cuboids and cylinders | Discussions  Demonstrations  Measuring lengths  Calculating volume | Cubes, cuboids and cylinders  Models of cubes cuboids and cylinders  Measuring instruments for volume | Discovering secondary mathematics Book 1 Pages 130-131  Secondary mathematics KLB book 1 pages 143-145  Secondary mathematics KIE book 1 page 136-138  Advancing in mathematics book 1 pages 121 |  |
|  | 5-6 | Volume & Capacity | Capacity | By the end of the lesson, the learner should be able to:  Show the relationship between volume and capacity and solve problems involving volume and capacity | Discussions  Demonstrations  Measuring capacity  Calculating capacity  Converting capacity to volume and vise versa | Measuring instruments for capacity | Discovering secondary mathematics Book 1 Pages 131-133  Secondary mathematics KLB book 1 pages 146  Secondary mathematics KIE book 1 page 136-138  Advancing in mathematics book 1 pages 123-124 |  |
| 7 | 1-2 | Mass, Weight And Density | Units of mass, weight and density | By the end of the lesson, the learner should be able to:  Define mass, weight and density  State their units and relate mass weight and density | Discussions  Measuring  Calculating  Converting | Masses  Measuring cylinders  Weights  Spring balance  Beam balance  lactometer | Discovering secondary mathematics Book 1 Pages 134-135  Secondary mathematics KLB book 1 pages 149-151  Secondary mathematics KIE book 1 page 140-141  Advancing in mathematics book 1 pages 126-127 |  |
|  | 3 | Time | Converting units of time | By the end of the lesson, the learner should be able to:  Convert the units of time from one form to another | Discussions  Converting time, events  Calculating | Clock,  Watches  Conversion tables  Travel timetable for trains, busses, ships and aero planes | Discovering secondary mathematics Book 1 Pages 136-137  Secondary mathematics KLB book 1 pages 153-154  Secondary mathematics KIE book 1 page 142  Advancing in mathematics book 1 pages 129 |  |
|  | 4-5 | Time | The 12 hour and 24 hour clocks | By the end of the lesson, the learner should be able to:  State time in the 12 hour and 24 hour clocks | Discussions  Timing, events  Reading time  Converting time | Clock,  Watches  Conversion tables  Travel timetable for trains, busses, ships and aero planes | Discovering secondary mathematics Book 1 Pages 138-141  Secondary mathematics KLB book 1 pages 154-155  Secondary mathematics KIE book 1 page 129-130  Advancing in mathematics book 1 pages 142 |  |
|  | 6 | Time | Travel timetables | By the end of the lesson, the learner should be able to:  Read and interpret travel timetable  Solve problems involving travel timetable | Discussions  Solving problems  Reading the travel timetable  Travelling | Clock,  Watches  Conversion tables  Travel timetable for trains, busses, ships and aero planes | Discovering secondary mathematics Book 1 Pages 141-143  Secondary mathematics KLB book 1 pages 156-157  Advancing in mathematics book 1 pages 131-132 |  |
| 8 | 1-2 | Rate, Ratio, Percentages And Proportion | Rates and ratio | By the end of the lesson, the learner should be able to:  Define rate and ratio  Solve problems involving rates  Use ratio to compare increase and decrease quantities | Discussions  Solving problems  Sharing things equally  Doing exercises  Sharing quantities in given ratio | Real life experience  Currency  Counters | Discovering secondary mathematics Book 1 Pages 144-151  Secondary mathematics KLB book 1 pages 96-98  Secondary mathematics KIE book 1 page 162-164  Advancing in mathematics book 1 pages 86-88 |  |
|  | 3-4 | Rate, Ratio, Percentages And Proportion | Proportion | By the end of the lesson, the learner should be able to:  Change quantities in a given ratio and proportion | Discussions  Doing exercises  Sharing out quantities in a given ratio | Currency  Counters  Real life experience | Discovering secondary mathematics Book 1 Pages 151-153  Secondary mathematics KLB book 1 pages 97-102  Secondary mathematics KIE book 1 page 165-166  Advancing in mathematics book 1 pages 88-93 |  |
|  | 5-6 | Rate, Ratio, Percentages And Proportion | percentages | By the end of the lesson, the learner should be able to:  Convert fractions and decimals to percentages  Calculate the percentage change in a quantity | Discussions  Doing exercises | 100 square grid  100 items  Counters | Discovering secondary mathematics Book 1 Pages 153-157  Secondary mathematics KLB book 1 pages 105-106  Secondary mathematics KIE book 1 page 169-170  Advancing in mathematics book 1 pages 94-97 |  |
| 9 | 1-2 | Commercial Arthimetric | Currency conversion | By the end of the lesson, the learner should be able to:  *© Education Plus Agencies*  State the currencies of different countries and convert currency from one form to another | Discussions  Solving problems involving currency exchange rates  Giving change and balance | Actual currency exchange rate table  Actual currency  Newspaper/magazine | Discovering secondary mathematics Book 1 Pages 158-162  Secondary mathematics KLB book 1 pages 171-173  Secondary mathematics KIE book 1 page 208-213  Advancing in mathematics book 1 pages 149-152 |  |
|  | 3-4 | Commercial Arthimetric | Profit and loss, Discount and commission | By the end of the lesson, the learner should be able to: | Discussions  Doing exercises  Illustrations  Demonstrations | Resource person  Real life  Retail shops | Discovering secondary mathematics Book 1 Pages 162-165  Secondary mathematics KLB book 1 pages 175-178  Secondary mathematics KIE book 1 page 216-218  Advancing in mathematics book 1 pages 153-155 |  |
|  | 5-6 | Scale Drawing And Angles Of Elevation And Depression | Indicating scale | By the end of the lesson, the learner should be able to:  Read, interpret and indicate scale in linear statement ratio | Discussions  Solving problems  Drawing to scale  Writing scale  Interpreting scale  Determining scale | Ruler  Tape measure  Figure drawn to scale  photographs | Discovering secondary mathematics Book 1 Pages 116-168  Secondary mathematics KLB book 1 pages 248-250  Secondary mathematics KIE book 1 page 185  Advancing in mathematics book 1 pages 209-210 |  |
| 10 | 1-2 | Scale Drawing And Angles Of Elevation And Depression | Angles of elevation & depression | By the end of the lesson, the learner should be able to:  Determine the angles of elevation and depression | Discussions  Drawing to scale  Doing exercises  Solving problems  Measuring angles/lengths | Ruler  Tape measure  Figure drawn to scale  photographs | Discovering secondary mathematics Book 1 Pages 168-172  Secondary mathematics KLB book 1 pages 256-260  Secondary mathematics KIE book 1 page 187-192  Advancing in mathematics book 1 pages 211 |  |
|  | 3-4 | Scale Drawing And Angles Of Elevation And Depression | Bearing | By the end of the lesson, the learner should be able to:  State the bearing of a point from another point | Discussions  Drawing to scale  Measuring angles/lengths  Solving problems involving bearings | Ruler  Tape measure  Protractor  Set square  Plumb line | Discovering secondary mathematics Book 1 Pages 173-175  Secondary mathematics KLB book 1 pages 251-252  Secondary mathematics KIE book 1 page 193-195  Advancing in mathematics book 1 pages 211-213 |  |
|  | 5-6 | Bearing And Surveying | Methods of surveying | By the end of the lesson, the learner should be able to:  Apply scale drawing in methods of surveying | Discussions  Drawing to scale  Measuring angles/lengths  Estimating area | Geometrical sets  Clinometers  Surveying equipment  Protractor  Ruler  Playfield  School compound | Discovering secondary mathematics Book 1 Pages 176-178  Secondary mathematics KLB book 1 pages 262-265  Secondary mathematics KIE book 1 page 199-202  Advancing in mathematics book 1 pages 213-216 |  |
| 11 | 1-2 | Bearing And Surveying | Area of irregular shapes | By the end of the lesson, the learner should be able to:  Determine the area of irregular shapes using surveying techniques | Discussions  Measuring lengths/objects  Drawing scale  Estimating are | Geometrical sets  Clinometers  Surveying equipment  Protractor  Ruler  Playfield  School compound | Discovering secondary mathematics Book 1 Pages 178-181  Secondary mathematics KLB book 1 pages 267-268  Secondary mathematics KIE book 1 page 205-206  Advancing in mathematics book 1 pages 216-220 |  |
|  | 3-4 | Common Solids | Regular solids | By the end of the lesson, the learner should be able to:  Identify and sketch common solids | Discussions  Counting sides faces and vertices  Sketching solids | Models of common solids  Actual solids | Discovering secondary mathematics Book 1 Pages 182-185  Secondary mathematics KLB book 1 pages 271-276  Secondary mathematics KIE book 1 page 248-254  Advancing in mathematics book 1 pages 222-227 |  |
|  | 5-6 | Common Solids | Nets of solids | By the end of the lesson, the learner should be able to:  Sketch, draw nets of solids and make models of solids from the nets | Discussions  Sketching  Drawing to scale  Drawing accurately  Making models | Models of common solids  Examples of the common solids | Discovering secondary mathematics Book 1 Pages 186-188  Secondary mathematics KLB book 1 pages 277-283  Secondary mathematics KIE book 1 page 255-260  Advancing in mathematics book 1 pages 228-229 |  |
| 12 | 1-2 | Common Solids | Surface area of solids | By the end of the lesson, the learner should be able to:  Calculate the surface area of solid from nets | Discussions  Sketching  Making models  Drawing to scale | Models of common solids  Actual solids | Discovering secondary mathematics Book 1 Pages 188-189  Secondary mathematics KLB book 1 pages 284-285  Secondary mathematics KIE book 1 page 264-265  Advancing in mathematics book 1 pages 230-231 |  |
|  | 3-4 | Common Solids | Distance between two points on the surface area of solid | By the end of the lesson, the learner should be able to:  Determine the distance between two points on the surface of a solid | Discussions  Sketching  Making models  Drawing to scale  Measuring lengths/angles | Sketches of cubes and cuboids  charts | Discovering secondary mathematics Book 1 Pages 189-191  Secondary mathematics KLB book 1 pages 286-288  Advancing in mathematics book 1 pages 231-233 |  |
|  | 5-6 | **END YEAR EXAMINATIONS** | | | | | | |