SCHEME OF WORK MATHEMATICS FORM 1 2022

TERM I ENDARASHA BOYS

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **T/L ACTIVITIES** | **T/L AIDS** | **REFERENCE** | **REMARKS** |
| **3** | 1 | 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 |  |
| 2 | 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 |  |
| 3 | 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 |  |
| 4 | 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 numbers 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 |  |
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|  | 5 | Factors | Factors of composite numbers Prime Factors | By the end of the lesson, the learner should be able to:  Find factors of various composite numbers Express composite numbers in factor form Define the term prime factor  Express numbers as products of prime factors | Solving problems involving factors of composite numbers Discussions Illustrations Demonstrations  Listing the prime factors of numbers  Solving problems involving prime factors Guiding | Charts to show the factorization of numbers  Factor ? tree diagram Multiplication tables | 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 |  |
| 6 | 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 |  |
| **4** | 1 | 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 |  |
| 2 | 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 |  |
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|  | 3 | 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 |  |
| 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 |  |
| **5** | MID TERM EXAMS AND BREAK | | | | | | | |

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| **6** | 1 | 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 |  |
| 2 | 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 |  |
| 3 | 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 |  |
| 4 | 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 |  |
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|  | 5 | 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 |  |
| 6 | 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 |  |
| **7** | 1 | 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 |  |
| 2 | 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 |  |

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|  | 3 | 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 |  |
| 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 | 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 |  |
| 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 |  |
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| **8** | 1 | 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 |  |
| 2 | 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 |  |
| 3 | 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 |  |
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|  | 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 | 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 |  |
| 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 |  |
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| **9** | 1 | Decimals | Rounding off decimals Standard form | By the end of the lesson, the learner should be able to:  Round off a decimal number to the required number of decimal places Write numbers in standard form and apply in real life situations | Discussions Estimation Rounding off Demonstrations Doing exercises  Writing whole numbers and decimal numbers in standard form Illustrations explanations | Place value charts Ruler  Tape measure Objects  measuring instruments | 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 | 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 |  |
| 3 | 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 |  |
| 4 | 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 |  |
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|  | 5 | 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 |  |
| 6 | 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 |  |
| **10** | END OF TERM EXAMS | | | | | | | |