**MATHEMATICS SCHEMEE OF WORK**

**STANDARD 7, 2019**

**MATHEMATICS SCHEMES OF WORK STANDARD 7, 2019**

TERM 1

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| **WEEK** | **LESSON** | **TOPIC/SUB TOPIC** | **OBJECTIVES** | **T/L ACTIVITIES** | **T/L AIDS** | **REFERENCE** | **REM** |
| **1** | **1 – 7** | **Opening and Revisions** |
| 2 &3 | 1 – 71 – 7 | NUMBERSWhole numbersPlace value and total value.Reading and writing.Square and square rootsDivisibility test for 11 | The learner should be able to:Identify place and total values.Read and write numbers in symbols and in words.Work out square of numbers and square root of square numbers.Determine numbers divisible by eleven. | Identifying and working out place value and total value of numbers.Read and write numbers in symbols and in words.Work out square and square roots of numbers.Determine and recite the divisibility test for 11 | Chalk board illustration.ChartPupils book | Improve your math pg 1 – 8Understanding math pg 1 – 8Teachers guide pg 43 - 45 |  |
| 4 | 1 - 7 | Revision and end month exams |
| 5 | 1 – 7 | FRACTIONSSquares of fractionsSquare roots of fractions involving perfect squares | The learner should be able to:Work out squares and square roots of fractions. | Work out squares of fractions.Work out square roots of fractions involving perfect squares. | ChartChalkboard illustration. | Improve your math pg 10 – 11Understanding math pg 10 – 14Teachers guide pg 46 - 47 |  |
| 6  | 1 – 7 | DECIMALSPlace value and total value.Conversations. | The learner should be able to:Identify place and total values of digits in decimalsConvert non recurring decimals to fractions.Convert fractions to decimals involving non recurring and recurring decimals.Work out square and square roots of decimals. | Work out place and total values of decimals.Convert non recurring decimals to fractions.Convert recurring and non recurring decimals to fractions.Work out square and square roots of decimals. | ChartPupils book | Improve your math pg 12 – 19Understanding math pg 15 – 22Teachers guide pg 48 - 51 |  |
| 7 | Mid Term 1 Exams |  |
| 8 | 1 – 7 | PERCENTAGEConversion of percentages into fractions and vice versaConversion of decimals. | The learner should be able to:Convert percentages to fractions and fractions to percentages.Convert decimals to percentage and vice versa. | Convert percentages to fractions and fractions to percentages.Convert decimals to percentages and percentages to decimals.DiscussionExplanation. | ChartChalkboardIllustration. | Improve your mathematics pg 20 – 22Understanding math pg 25 – 28Teachers guide pg 49 - 54 |  |
| 9 | 1 – 7 | OPERATIONSAddition, subtraction and multiplication involving whole numbers.Division involving whole numbers.Combined operation in whole numbersNumber sequence. | The learner should be able to:Add, subtract and multiply whole numbers.Divide whole numbers by up ti 3 digit numbers.Work out problems involving combined operations in whole numbers.Recognize and identify number sequence involving whole numbers. | Adding, subtracting and multiplying odd numbers.Dividing whole numbers.Work out problems on combined operations in whole numbers.Recognize and identify number sequence involving whole numbers. | Improve your math pg 23 – 31Understanding math pg 29 – 45Teachers guide book pg 55 – 59 | Chalk board illustration. |  |
| 9 | 1 – 7 | FRACTIONAddition and subtraction.Multiplication and divisionCombined operation.Number sequence. | Be able to:Work out addition, subtraction, division and multiplication involving fractions.Work out problems involving combined operations in fractions.Recognize and identify number sequence involving fractions. | Adding, subtracting, multiplying and dividing fractions.Work out problems on combined operations in fractions.Recognize and identify number sequence involving  | Cut outsChalk board illustration. | Improve your math pg 33 – 43Understanding math pg 46 – 50Teachers guide pg 60 - 64 |  |

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|  |  |  |  | fractions. |  |  |  |
| 11 | 1 – 7 | DECIMALSBasic operations involving decimals.Combined operations In decimals. | Be able to:Work out problems involving decimals using the four basic operations that is:Addition, subtraction, multiplication and division.Work out problems involving combined operations in decimals. | Adding, subtracting, dividing and multiplying decimals.Work out problems involving combined operations in decimals. | Chart | Improve your math pg 45 – 49Understanding math pg 51 – 58Teachers guide pg 65 - 67 |  |

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| 12 | 1 – 7 | DECIMALS | Place valueTotal valueConverting decimals to fractions and vice versa.Square roots and square of decimals. | The learner should be able to;Identify the place and total values of digits in decimals.Convert non recurring decimals to fractions.Convert fractions to decimals involving non recurring and recurring decimals.Work out square and square roots of decimals | Work out place and total values of decimalsConvert decimals to fractions.Convert fractions to decimals.Work out squares and square roots of decimals. | Improve your math pg 12 – 19Understanding math pg 15 – 22 | A chartCut outs |  |
| 13 | Revisions and Preparations for End Term 1 Exams |  |
| 14 | End Term 1 Exams and Closing |  |
| TERM 2 |
| **WK** | **LSN** | **TOPIC** | **SUB TOPIC** | **OBJECTIVES** | **T/L ACTIVITIES** | **REFERENCE** | **T/L AIDS** | REM |
| **1** | **Opening and Revisions** |  |
| 2 | 1 – 7 | PERCENTAGES | Conversion of percentages to fractions and vice versa.Conversion of decimals to percentages and vice versa. | The learner should be able to:Convert percentages to fractions and vice versa.Convert decimals to percentages and percentages to decimals. | Convert percentages to fractions and vice versa.Convert decimals to percentages and vice versa.  | Improve your math pg 20 – 21Understanding math pg 25 - 27 | A chart of conversions. |  |
| 3 | 1 – 7 | FRACTIONS | Addition and subtraction.Multiplication and division.Combined operation in fractions.Number sequence. | Be able to:Work out addition, subtraction, multiplication and division involving fractions.Work out problems involving combined operations in fractions.Recognize and identify number sequence involving fractions.Solve statement questions involving fractions. | Adding and subtracting fractions.Multiplying and dividing fractions.Work out combined operations in fractions using BODMAS.Work out number sequence.Solve statement questions related to fractions. | Improve your math pg 33 – 43Understanding math pg 46 – 50 | A chartCut outs |  |
| 4 | 1 – 7 | DECIMAL | Addition and subtractionMultiplication and division of decimals.Combined operations in decimals.Number sequenceStatement questions. | Work out problems involving decimals using addition, subtraction, multiplication and division.Work out problems involving combined operations in decimals.Work out questions on number sequence involving decimals.Work out statement questions in decimals | Adding and subtracting decimals.Multiplying and dividing decimals.Work out combined operations in decimals.Work out Number sequence.Solve statement questions on decimals | Improve your math pg 45 – 49Understanding math pg 56 – 58 | A chart |  |
| 5 | 1 – 7 | PERCENTAGES | Percentage increase and decrease. | Be able to:Work out problems involving percentage increase and decrease.Work out questions involving application of percentage increase and decrease. | Solve problems involving percentage increase and decrease.Work out questions involving application of percentage increase and decrease. | Understanding math pg 60 – 63Improve your mathematics pg 51 - 52 |  |  |
| 6  | 1 – 71 – 7 | MeasurementLength | Identify units of length.Convert units of lengthPerimeter of a circle, triangle and a quadrilateral.Problems involving units of length in real life | The learner should be able to:Recognize and identify decimeter(dm)decameter(Dm) and hectometer(Hm) as units of measurements.Convert units of length from one to another.Work out perimeter involving circles, triangles and quadrilaterals.Work out problems involving Units of length in real life.Work out problems on open and closed fences. | Identify dm, Dm and hm as units of measuring length.Converting units of length from one to another.Work out perimeter of Circles, triangles, quadrilaterals.Work out problems involving units of length in real life.Work out problems on open and closed fence. | Understanding math pg 72 – 83Improve your math pg 54 - 61 | Cut outs of shapescharts |  |
| 7 | Mid term exam and break |  |
| 8&9 | 1 – 7 | MeasurementLength | Identify units of length.Convert units of lengthPerimeter of a circle, triangle and a quadrilateral.Problems involving units of length in real life | The learner should be able to:Recognize and identify decimeter(dm)decameter(Dm) and hectometer(Hm) as units of measurements.Convert units of length from one to another.Work out perimeter involving circles, triangles and quadrilaterals.Work out problems involving Units of length in real life.Work out problems on open and closed fences. | Identify dm, Dm and hm as units of measuring length.Converting units of length from one to another.Work out perimeter of Circles, triangles, quadrilaterals.Work out problems involving units of length in real life.Work out problems on open and closed fence. | Understanding math pg 72 – 83Improve your math pg 54 - 61 | Cut outs of shapescharts |  |
| 10&11 | 1 – 71 – 7 | AREA | Areas of circle, trapezium, parallelogram, boarders, combined shapes.S.A of cuboids, cubes and cylinders. | The learner should be able to:Calculate the area of a circle.Work out problems involving areas of circles.Calculate the areas of trapeziums and parallelogram.Work out problems involving areas of boarders and combined shapes.Calculate the surface areas of cubes, cuboids and cylinders. | Work out areas of circles practically.Work out problems involving area of circles using formulae.Work out area of trapezium and parallelograms practically.Work out area of combined shapes and boarders. | Understanding math pg 85 – 97Improve your math pg 62 – 74 | Cut outs of shapescharts |  |
|  |  |  |  |  | Work out SA of cubes, cuboids and cylinders practically |  |  |  |
| 12 -13 | Revisions and Preparations for End Term Exams |
| 14 | End Term 11 Exams and Closing |

TERM 3

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| **WK** | **LSN** | **TOPIC** | **Sub topic** | **OBJECTIVE** | **T/L** **ACTIVITY** | **REFERENCE** | **T/L** **AIDS** | **REM** |
| **1** | **1 – 7** | **Opening and revision** |
| 2 | 1 – 7 | Tables and graphs. | Linear scaleTable involving real life situation.Drawing graphs.Reading and interpreting graphs,Arithmetic mean and mode. | The learner should be able to:Determine an appropriate scale for graph.Read and interpret tables in real life situations.Represent data on bar graphs, pie charts, travel graphs and line graphs.Work out problems involving mean and mode. | Determine appropriate scale for graphs.Interpreting tables.Represent data on bar graphs.Work out problems involving mean and mode. | Progressive math pg 146 – 160Understanding math pg 215 – 231Learning math pg 134 – 150 | A chart Chalk board illustration. |  |
| 3 | 1 – 7 | Scale drawing | Linear scale ratio form.Conversion of scale from one form to another.Making scale drawing. | Should be able to:Read and write linear scale in ratio form.Convert linear scale from statement to ration form and vice versa.Work out problems involving scale drawing. | Read ratio formChalk board illustration.Convert linear to statement scales.Convert statement to ratio form and vice versa | Understanding math pg 251 – 256Progressive math pg 142 – 143Learning math pg 151 – 156 | Meter ruleOrangesBananas.Objects of different colors. |  |
| 4 | 1 – 7 | Ratio and proportion | Ratio as a fractionIncreasing and decreasing ratios. | Should be able to:Identify ratio as a fraction.Interpret ratio in sharing.Work out problems involving ratio using unitary methods | Interpret ratioWork out problems involving ratio.Increasing quantities of ratio.Decreasing  | Progressive math pg 102 – 106Learning math pg 157 – 164Understanding | Chalk board illustrationchart |  |

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|  |  |  |  | Interpret and use ratio in increasing and decreasing quantities. | Quantities of ratio. | Math pg 237 – 246 |  |  |
| 5 | 1 – 7 | Revision measurement | Time, speed and temperature. | Should be able to:Work out problems involving time, speed, distance and average speed.Work out problems involving temperature in degrees Celsius. | Work out examples on time, speed and distance.Discuss and explain working out questions on temperature in degrees Celsius.Doing exercise | Understanding math pg 170 – 181Learning math pg 101 – 107Thorough homework pg 213. | Chalk board illustration.thermometer |  |
| 6 | 1 – 7 | Geometry | QuadrilateralsAnglesModelsPatterns | Should be able to:Recognize and identify angle properties of parallel lines and quadrilaterals.Work out problems involving angle properties of parallel lines.Construct right angle, isosceles and equilateral triangles using a ruler and a pair of compasses.Construct circles passing over vertices of a triangle. | Construct parallel lines.Perpendicular bisector of lines.Work out problems involving angle properties of parallel lines.Angle properties of square, rhombuses and parallelograms.Pythagorean theory.Nets of cubes,  | Geometrical setMeter ruleCuboidsCube.Chalk board illustration. | Understanding math pg 184 – 197Learning math pg 110 – 122Thorough homework pg 58 - 63 |  |
|  |  |  |  | Make cubes and cuboids. | Cuboids and cylinders. Making patterns |  |  |  |
| 7 | 1 – 7 | Postal charges | Postal chargesTelegramsMoney ordersPostal orders | Work out problems involving inland and international postal chargesIdentify money orders and postal orders.Work out problems involving telegrams. | Inland and international charges.Money and postal ordersWrite telegrams. | StampsChalk board illustrationsNotes/coins | Understanding math pg 132 – 139Thorough homework pg 150 - 171 |  |
| 8 | 1 – 7 | Money | DiscountCommissionSimple interestHire purchase bills | Should be able to:Work out problems involving discounts and percentage discounts.Work out problems involving commission and percentage commission.Work out problems involving simple interest and hire purchase.Work out problems involving bills in buying and selling. | Discount and percentage discount.Work out commission and percentage commission.Work out simple interest and hire purchasePrepare bills. | Understanding math pg 117Thorough homework pg 134 – 137Learning math pg 81 – 91 | Notes CoinsChalkboard illustration. |  |
| 1 – 7 | Algebra | ExpressionsEquationsInequality | Be able to:Form and simplify algebraic expressions | Explain the plot/ frame.Work out algebraic  |  |  |  |
|  |  |  |  | Work out the value of algebraic expression.Form and solve expressions in one unknown.Simplify inequalities in one unknown. | Expressions.Simplify inequalities in one unknown.Do an exercise. | Understanding math pg 207 – 216Learning math pg 164 - 182 | Chalk board illustrationchart |  |
| 9 | 1 - 7 | End term year exams and closing |