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|  | ***SCHEME OF WORK FORM ONE MATHEMATICS TERM ONE YEAR 2019*** |  |
| ***WK******NO.*** | ***L/******NO*** | ***TOPIC/******SUBTOPIC*** | ***LESSON / SPECIFIC*** ***OBJECTIVES*** | ***TEACHING / LEARNING******ACTIVITIES*** | ***MATERIALS*** ***/******RESOURCES*** | ***REFERENCES*** | ***REMARKS*** |
| ***1-2*** |  | ***ADMSSION OF FORM ONE STUDENTS*** |  |
| 3 | 1 | **NATURAL NUMBERS**Numbers in figures and words. | By the end of the lesson, learners should be able to:Identify, read and write (large) natural numbers in figures and words. | Brain storming.Oral practice.Written exercise.  | Place value chart. | *KLB BOOK 1**Pg 1* |  |
| 2 | Place value and total value of numbers. | Determine the place value and total value of digits in numbers. | Oral practice.Written exercise. | Place value chart.Bank deposit slips. | *KLB BOOK 1**Pg 1* |  |
| 3 | Rounding off numbers.  | Round off numbers to the nearest ten, hundred, thousand, etc. | Oral exercise.Worked examples.Written exercise. |  | *KLB BOOK 1**Pg 2-3* |  |
| 4 | The four basic operations | Add and subtract numbers.Define a product, quotient, dividend and divisor.Solve numerical / word problems on arithmetic operations. | Solving numerical / word problems / examples.Oral and written exercises. |  | *KLB BOOK 1**Pg 6-9* |  |
| 5 | Odd, even and prime numbers. | Identify odd, even and prime numbers. | Q/A , oral exercise, written exercise. |  | *KLB BOOK 1**Pg 9* |  |
| 6 | FACTORSNumbers in factor form. | By the end of the lesson, learners should be able to:Express composite numbers in factor form and vice versa. | Q/A.Factor tree diagrams.Oral & written exercises. |  | *KLB BOOK 1**Pg 10-11* |  |
| 4 | 1 | Factors in power form. | Express factors in power form. | Drawing factor tree diagrams.Oral & written exercises. |  | *KLB BOOK 1**Pg10-11* |  |
| 2 | DIVISIBILITY TEST (D.T.)D.T. of a number by 2, 3, 4. | By the end of the lesson, learners should be able to:Test the divisibility of a number by 2, 3, 4. | Worked examples.Oral exercise.Written exercise. |  | *KLB BOOK 1**Pg 12-14* |  |
| 3 | D.T. by of a number 5, 6, and 8. | By the end of the lesson, learners should be able to:Test the divisibility of a number by 5, 10, and 6. | Guided discovery.Oral exercise.Written exercise. |  | *KLB BOOK 1**Pg 15-17* |  |
| 4 | D.T. of a number by 9 | By the end of the lesson, learners should be able to:Test the divisibility of a number by 9 | Through examples discover D.T. of a number by 9.Exercise. | Puzzles and games. | *KLB BOOK 1**Pg 18-19* |  |
| 5 | D.T. of a number by 11. | By the end of the lesson, learners should be able to:Test the divisibility of a number by 11. | Guided discovery.Exercise. | Puzzles and games. | *KLB BOOK 1**Pg 20-21* |  |
| 6  | G.C.D./ HCF.GCD of a set of numbers using divisors. | By the end of the lesson, learners should be able to:Find the GCD of a set of numbers by listing **divisors.** | List factors of numbers and choose common ones/ the GCD.Written exercise. | Containers of different capacities. | *KLB BOOK 1**Pg 22-23* |  |
| 5 | 1 | GCD of a set of numbers using factors. | By the end of the lesson, learners should be able to: Find the GCD of a set of numbers by listing **factors.** | Worked examples.Written exercise. |  | *KLB BOOK 1**Pg 22-23* |  |
| 2,3 | Applications of HCF/ GCD.   | By the end of the lesson, learners should be able to:Apply GCD to real life situations.Solve word problems | Worked examples.Supervised practice.Written exercise. | Containers of different capacities. | *KLB BOOK 1**Pg 22-23* |  |
| 4 | L.C.M.Multiples of numbers. | By the end of the lesson, learners should be able to:List multiples of numbers.Identify the LCM. of numbers. | Q/A: Multiples of given numbers.Exercise. |  | *KLB BOOK 1**Pg 24-25* |  |
| 5 | L.C.M.Factor method. | By the end of the lesson, learners should be able to:Find L.C.M. of numbers using factor method. | Oral practice.Worked examples.Exercise. Exercise review.  |  | *KLB BOOK 1**Pg 25-26* |  |
| 6 | L.C.M.Index method. | By the end of the lesson, learners should be able to:Find L.C.M. of numbers using power method. | Oral practice.Worked examples.Exercise.  |  | *KLB BOOK 1**Pg 25-26* |  |

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| 6 |  | MID TERM |  |  |  |  |  |
| 7 | 1 | L.C.M. – Applications. | By the end of the lesson, learners should be able to:Solve problems on practical applications of L.C.M. | Exercise involving ringing of bells, flashlights and containers of different capacities. | Containers of different capacities. | *KLB BOOK 1**Pg 26-27* |  |
| 2 | **INTEGERS**The number line. | By the end of the lesson, learners should be able to:Identify integers on a number line. | Explain meaning of + ve and - ve integer with zero as the reference point.Oral exercise:+ ve or – ve numbers: statements in word form. | Thermometers. Chart:Temperatures at different zones. | *KLB BOOK 1**Pg 28-29* |  |
| 3 | Addition of integers. | By the end of the lesson, learners should be able to:Add positive integers. Add positive and negative integers. | Give examples where we add + ve and – ve integers e.g.Addition of marks, debts, expenses, etc. Written exercise. |  | *KLB BOOK 1**Pg 30-31* |  |
| 4 | Subtraction of integers. | By the end of the lesson, learners should be able to:Subtract an integer from another. Add negative integers. | Give examples where we deal with sum of negative numbers, e.g. amount of debts, loans, etc.Work examples and written exercise. |  | *KLB BOOK 1**Pg 31-35* |  |
| 5 | Multiplication of integers. | By the end of the lesson, learners should be able to:Obtain products of + ve and – ve factors. | Worked examples.Supervised practice.Exercise. |  | *KLB BOOK 1**Pg 35-37* |  |
| 6 | Multiplication of integers. | By the end of the lesson, learners should be able to:Obtain product of two negative numbers. | Worked examples.Supervised practice.Exercise. |  | *KLB BOOK 1**Pg 35-37* |  |
| 89 | 1 | Division of integers. | By the end of the lesson, learners should be able to:Work out division of integers where one integer is negative. | Guided discovery.Worked examples.Exercises. |  | *KLB BOOK 1**Pg 37-40* |  |
| 2 | Division of integers. | By the end of the lesson, learners should be able to:Work out division of integers where both integers are negative. | Guided discovery.Worked examples.Exercises. |  | *KLB BOOK 1**Pg 37-40* |  |
| 3 | Order of operations.-Addition and subtraction. | By the end of the lesson, learners should be able to:Carry out combined operations on integers. | Worked examples.Supervised practice.Exercise. |  | *KLB BOOK 1**Pg 37-40* |  |
| 4 | -Multiplication and division. | By the end of the lesson, learners should be able to:Carry out combined operations on integers. | Worked examples.Written Exercise. |  | *KLB BOOK 1**Pg 37-40* |  |
| 5 | -Brackets and ‘of’ operation. | By the end of the lesson, learners should be able to:Carry out combined operations on integers. | Worked examples.Written Exercise. |  | *KLB BOOK 1**Pg 37-40* |  |
| 6 | SHORT TEST |  |  |  |  |
| 10 | 1 | FRACTIONSProper and improper fractions | By the end of the lesson, learners should be able to:Identify proper and improper fractions.Write an improper fraction as a mixed number and vice versa. | Oral practice.Oral exercise.Written exercise. |  | *KLB BOOK 1**Pg 41-42* |  |
| 2 | Equivalent fractions. | By the end of the lesson, learners should be able to:Identify equivalent fractions. | Exercises – both oral and written.Review of exercises. | Chart-pie chart. | *KLB BOOK 1**Pg 42-43* |  |
| 3 | Comparing fractions. | By the end of the lesson, learners should be able to:Arrange given fractions in ascending / descending order. | Review L.C.M. of numbers and equivalent fractions.Worked examples and written exercise. |  | *KLB BOOK 1**Pg 43-44* |  |
| 4 | Addition / subtraction of fractions. | By the end of the lesson, learners should be able to:Add / subtract fractions. | Review L.C.M. of numbers and equivalent fractions.Worked examples and written exercise. |  | *KLB BOOK 1**Pg 45-48* |  |
| 5 | Multiplication of fractions. | By the end of the lesson, learners should be able to:Multiply two or more fractions. | Q/A: Review improper fractions.ExamplesWritten exercise. |  | *KLB BOOK 1**Pg 48-52* |  |
| 6 | Division of fractions by fractions/ mixed numbers. | By the end of the lesson, learners should be able to:Work out division involving fractions. | Worked examples.Supervised practice.Exercise. |  | *KLB BOOK 1**Pg 52-54* |  |
| 11 | 1 | Both addition and subtraction operators. | By the end of the lesson, learners should be able to:Compute sums and differences involving positive and negative fractions. | Worked examples.Supervised practice.Exercise. |  | *KLB BOOK 1**Pg 54-57* |  |
| 2 | -Multiplication / division involving negative fractions. | By the end of the lesson, learners should be able to:Compute products and divisions involving positive and negative fractions. | Examples.Supervised practice.Written exercise. |  | *KLB BOOK 1**Pg 54-57* |  |
| 3 | Inner and outer brackets. | By the end of the lesson, learners should be able to:Work out fractions enclosed with both inner and outer brackets. | Explain order of operations involving two brackets.Examples and exercise. |  | *KLB BOOK 1**Pg 54-57* |  |
| 4 | The ‘of’ operation. | By the end of the lesson, learners should be able to:Perform the ‘of’ operation on positive and negative fractions. | Worked examples.Supervised practice.Exercise. |  | *KLB BOOK 1**Pg 54-57* |  |
| 5 | The ‘bar’ operator and other operators. | Perform the ‘bar’ operation on positive and negative fractions. | Explain order of operations involving the bar.Examples and exercise. |  | *KLB BOOK 1**Pg 54-57* |  |
| 6 | Several operators. | By the end of the lesson, learners should be able to:Solve a variety of problems involving fractions. | Problem solving on mixed exercise including word Problems. |  | *KLB BOOK 1**Pg 54-57* |  |
| 12&13 |  | *END OF TERM ONE EXAMS* |  |

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|  | *FORM ONE MATHEMATICS TERM TWO YEAR 2019* |  |
| 1 | 1 | DECIMALSDecimals and fractions. | By the end of the lesson, learners should be able to:Convert fractions to decimals and vice versa. | Examples.Oral exercise. |  | *KLB BOOK 1**Pg 58-61* |  |
| 2 | Mixed numbers in decimal form. | By the end of the lesson, learners should be able to:Write a mixed number in decimal form. | Q/A: Mixed numbers in decimal form.Examples and exercise. |  | *KLB BOOK 1**Pg 58-61* |  |
| 3 | Decimal places. | By the end of the lesson, learners should be able to:Arrange decimals in ascending / descending order. | Examples and exercise. | Place value Chart. | *KLB BOOK 1**Pg 63-64* |  |
| 4 | Rounding off decimals. | By the end of the lesson, learners should be able to:Round off a decimal to a given number of decimal places. | Q/A method.Oral exercise.Written Exercise. |  | *KLB BOOK 1**Pg 63* |  |
| 5 | Recurring decimals. | By the end of the lesson, learners should be able to:Identify a recurring decimal.Rewrite a recurring decimal notation in ordinary form. | Work out long division involving recurring decimals.Exposition of new notations. |  | *KLB BOOK 1**Pg 61-62* |  |
| 6 | Recurring decimals as ordinary fractions. | By the end of the lesson, learners should be able to:Write a recurring decimal as ordinary fractions. | Students work out long division leading to a recurring decimal with *one dot*. Expository approach: converting the decimal to a fraction.Examples & Exercise. |  | *KLB BOOK 1**Pg 62-63* |  |
| 2 | 1 | Recurring decimals as ordinary fractions. | By the end of the lesson, learners should be able to:Write a recurring decimal as ordinary fractions. | Working out a recurring decimal with *2 dots.*Several examples.Written exercise. |  | *KLB BOOK 1**Pg 62-63* |  |
| 2 | Standard form of numbers. | By the end of the lesson, learners should be able to:Express numbers in standard form. | Explain the standard form of large numbers.Oral exercise.Discussion on prefixes such as *kilo, mega, giga, etc*. | Chart-prefixes of metric units and their symbols. | *KLB BOOK 1**Pg 64* |  |
| 3 | Decimals in standard form | By the end of the lesson, learners should be able to:Express decimal numbers in standard form. | Explain the standard form of decimal numbers.Use of prefixes *milli, centi, deci, micro, pico, etc.* Written Exercise. | Chart-Prefixes and their symbols.-Prefixes in standard form, eg,*milli = 10 - 3* | *KLB BOOK 1**Pg 64* |  |
| 4, 5 | Operations on decimals. | By the end of the lesson, learners should be able to:Carry out combined operations on decimals in the correct order. | Examples on several operations including negative decimals.Mixed exercise including word problems. |  | *KLB BOOK 1**Pg 65-72* |  |
| 6 | TEST / MIXED EXERCISE |  |  |  |
| 3 | 1 | SQUARES & SQUARE ROOTSSquares of whole numbers and decimal fractions. | By the end of the lesson, learners should be able to:Square a whole number / decimal fraction. | Examples.Inspecting number of decimal places.Game:Squaring numbers ending in 5.Exercise.  |  | *KLB BOOK 1**Pg 73* |  |
| 2 | Squares of fractions. | By the end of the lesson, learners should be able to:Square a fraction / mixed fraction. | Review mixed fractions.Cancellation / simplest form of numbers.Exercise. |  | *KLB BOOK 1**Pg 73* |  |
| 3,4 | Squares using mathematical tables.(3 sig. fig.) | By the end of the lesson, learners should be able to:Obtain squares of numbers using mathematical tables. | Problem solving Assignment.Review standard form of numbers.Teacher guides students on how to use mathematical tables to obtain squares of numbers.Worked examples.Supervised practice.Exercise. | Mathematical tables.Mathematical tables. | *KLB BOOK 1**Pg 74-76* |  |
| 5 | Squares using mathematical tables.(4 sig. fig.) | *KLB BOOK 1**Pg 74-76* |  |
| 6 | Squares using mathematical tables.(5 sig. fig.) | *KLB BOOK 1**Pg 74-76* |  |
| 4 | 1 | Square rootsof perfect squares. | By the end of the lesson, learners should be able to:Work out square rootsof perfect squares using factor method. | Q/A: Identifying perfect squares.Review factorization of natural numbers / Divisibility test.Examples and Exercise. | Mathematical tables. | *KLB BOOK 1**Pg 76-78* |  |
| 2 | Square roots of 3-digit number from mathematical tables. | By the end of the lesson, learners should be able to:Obtain square root of 3-digit numbers from mathematical tables. | Review standard form of numbers.Teacher guides students on how to use mathematical tables to obtain squares of numbers.Several examples& Exercise. | Mathematical tables. | *KLB BOOK 1**Pg 78-79* |  |
| 3 | Square roots of 4-digit number from mathematical tables. | By the end of the lesson, learners should be able to:Obtain square root of 4-digit numbers from mathematical tables. | Mathematical tables. | *KLB BOOK 1**Pg 78-79* |  |
| 4,5 | Square roots of decimal numbers from mathematical tables. | By the end of the lesson, learners should be able to:Obtain square root of decimal numbers from mathematical tables. | Review standard form of numbers.Teacher guides students on how to use mathematical tables to obtain squares of numbers.Several examples& Exercise | Mathematical tables. | *KLB BOOK 1**Pg 78-79* |  |
| 6 | Mixed exercise. | By the end of the lesson, learners should be able to:Solve numerous problems on squares of numbers. | Problem solving – word problems.  | Mathematical tables. | *KLB BOOK 1**Pg 79* |  |
| 5 | 1 | ALGEBRAIC EXPRESSIONSSymbols & symbolic representation. | By the end of the lesson, learners should be able to:Write quantities in symbols and vice versa.Identify like and unlike terms. | Examples.Oral exercise. |  | *KLB BOOK 1**Pg 80-82* |  |
| 2,3 | Collecting like terms.*Symbols and fractions.* | By the end of the lesson, learners should be able to:Add / subtract like terms. | Examples.Supervised practice.Oral exercise.Written exercise. |  | *KLB BOOK 1**Pg 82-84* |  |
| 4 | Collecting like terms.*Symbols with powers.* | By the end of the lesson, learners should be able to:Add / subtract like terms. | Examples.Oral exercise.Written exercise. |  | *KLB BOOK 1**Pg 84-85* |  |
| 5 | Opening brackets. | By the end of the lesson, learners should be able to:Expand algebraic expressions. | Examples.Supervised practice.Written exercise. |  | *KLB BOOK 1**Pg 85* |  |
| 6 | Simplifying algebraic expressions. | By the end of the lesson, learners should be able to:Simplify algebraic expressions. | Examples.Supervised practice.Written exercise. |  | *KLB BOOK 1**Pg 83* |  |
| 6 | 1 | Factorization. | By the end of the lesson, learners should be able to:Factorize algebraic expressions. | Q/A: Identifying common factors.Examples.Supervised practice.Written exercise. |  | *KLB BOOK 1**Pg 86-88* |  |
| 2 | Further factorization. | By the end of the lesson, learners should be able to:Factorize longer algebraic expressions. | Q/A: Identifying common factor.Factoring out common factor(s). |  | *KLB BOOK 1**Pg 88-90* |  |
| 3 | Factorization by grouping. | By the end of the lesson, learners should be able to:Factorize algebraic expressions by grouping. | Q/A: Identifying common factor.Factoring out common factor(s) / groups of factors. |  | *KLB BOOK 1**Pg 88-90* |  |
| 4 | Simplifying algebraic fractions. | By the end of the lesson, learners should be able to:Simplifying algebraic fractions. | Review LCM.Give examples and an assignment. |  | *KLB BOOK 1**Pg 91-92* |  |
| 5 | Substituting numbers into algebraic expressions. | By the end of the lesson, learners should be able to:Substitute numbers into algebraic expressions. | Several examples.Recapitulation of major points. Exercise. |  | *KLB BOOK 1**Pg 92- 93* |  |
| 6 | C.A.T. |  |  |  |  |  |
| 7 | 1 | RATE, PROPORTION, RATIO, %.Rates. | By the end of the lesson, learners should be able to:Solve problems involving rates. | Examples / Problem solving. |  | *KLB BOOK 1**Pg 96-97* |  |
| 2 | Ratios:Comparing two / more ratios. | By the end of the lesson, learners should be able to:Solve problems involving ratios.Compare two ratios. | Worked examples.Supervised practice.Exercises. |  | *KLB BOOK 1**Pg 97-99* |  |
| 3 | Ratios: increasing / decreasing.  | By the end of the lesson, learners should be able to:Increase / decrease a quantity in a given ratio. | Worked examples.Supervised practice.Exercises. |  | *KLB BOOK 1**Pg 99-100* |  |
| 4 | Ratios:Distribute a quantity in a given ratio. | By the end of the lesson, learners should be able to:Divide a quantity in a given ratio. | Worked examples.Supervised practice.Exercises. |  | *KLB BOOK 1**Pg 101* |  |
| 5 & 6 | Direct proportion.  | By the end of the lesson, learners should be able to:Solve problems on direct proportion.  | Worked examples.Supervised practice.Written exercises.Exercise review. |  | *KLB BOOK 1**Pg 102-105* |  |
| 8 | 1 & 2 | Inverse proportion | By the end of the lesson, learners should be able to:Solve problems on inverse proportion. | Oral practice.Examples Written exercises. |  | *KLB BOOK 1**Pg 102-105* |  |
| 3 | Fractions and Percentages. | By the end of the lesson, learners should be able to:Write a fraction as a %. | Worked examples.Supervised practice.Exercises. |  | *KLB BOOK 1**Pg 105-106* |  |
| 4 | Decimals and percentages. | By the end of the lesson, learners should be able to:Write a decimal fraction as a %. | Worked examples.Supervised practice.Exercises – oral and written. |  | *KLB BOOK 1**Pg 105-6* |  |
| 5 | Percentage increase. | By the end of the lesson, learners should be able to:Compute % increases of quantities. | Worked examples.Supervised practice.Exercises. |  | *KLB BOOK 1**Pg 106-9* |  |
| 6 | Percentage decrease. | By the end of the lesson, learners should be able to:Compute % decreases of quantities. | Oral practice.Written exercise. |  | *KLB BOOK 1**Pg 106-9* |  |
| 9 | 1 | LENGTHMetric units of length | By the end of the lesson, learners should be able to:Identify the S.I. unit of length.Convert derived units of length to metre. | Q/A : Units of length.Conversion rates.Oral & written exercises.  | Metre rule.Chart- grid of units. | *KLB BOOK 1**Pg 110* |  |
| 2 | Significant figures of length.  | By the end of the lesson, learners should be able to:Express length in the correct number of sig. figures. | Explain (Non) significant zero.Oral & Written exercises | Instruments of measuring length that are more sensitive than the metre rule. | *KLB BOOK 1**Pg 111-3* |  |
| 3 | Measuring length. | By the end of the lesson, learners should be able to:Determine length accurately. | Practical session: measuring lengths of various bodies. | Metre rule, Ruler,Tape measure. | *KLB BOOK 1**Pg 113-6* |  |
| 4 | Perimeter of plane figures. | By the end of the lesson, learners should be able to:Calculate perimeter of drawn plane figures. | Oral pratice.Problem solving.  |  | *KLB BOOK 1**Pg 113-6* |  |
| 5 | Value of π.  | By the end of the lesson, learners should be able to:Determine practically the value of pi. | Students’ activity: Determine value of pi using various circular bodies. | Strings, rulers,Circular objects. | *KLB BOOK 1**Pg 116-7* |  |
| 6 | Circumference.  | By the end of the lesson, learners should be able to: | Problem solving.Assignment. | Strings, rulers,Circular objects. | *KLB BOOK 1**Pg 118* |  |
| 10 | 1 | Arc length. | Calculate circumferences of part of circles. | Exposition, examples, written exercise. |  | *KLB BOOK 1**Pg 118-121* |  |
| 2 | AREAUnits of area. | By the end of the lesson, learners should be able to:Convert units of area to given units. | Q/A to review units of length.Oral and written exercises. |  | *KLB BOOK 1**Pg 123* |  |
| 3 | Area of plane figures. | By the end of the lesson, learners should be able to:Find area of plane figures. | Oral and written exercises. | Plane figure models- kite, rhombus, parallelogram,etc. | *KLB BOOK 1**Pg 124-129* |  |
| 4 | Area of a circle. | Find area of a circle. | Oral and written exercises. |  | *KLB BOOK 1**Pg 129-131* |  |
| 5 | Area of a sector. | Find area of a sector. | Worked examples.Supervised practice.Miscellaneous exercise. |  | *KLB BOOK 1**Pg 131-134* |  |
| 6 | Surface area of solids. | Find surface area of solids. | Worked examples.Supervised practice.Miscellaneous exercise. |  | *KLB BOOK 1**Pg 135 - 140* |  |
| 11 | 1 | VOLUME & CAPACITYUnits of volume. | By the end of the lesson, learners should be able to:Convert metric units of volume to m3.  | Worked examples.Supervised practice.Miscellaneous exercise. |  | *KLB BOOK 1**Pg 143* |  |
| 2 | Cubes, cuboids & cylinders. | By the end of the lesson, learners should be able to:Calculate volumes of cubes and cuboids. | Worked examples.Supervised practice.Miscellaneous exercise. |  | *KLB BOOK 1**Pg 143-146* |  |
|  | 3 | Capacity: Units. | By the end of the lesson, learners should be able to:Convert one unit of capacity to another. | Oral practice.Worked examples.Supervised practice.Miscellaneous exercise. | Measuring cylinders. | *KLB BOOK 1**Pg 146-7* |  |
| 4 | Volume and Capacity: Units. | By the end of the lesson, learners should be able to:Convert units of volume to units of capacity. | Oral practice.Worked examples.Supervised practice.Miscellaneous exercise. | Measuring cylinders. | *KLB BOOK 1**Pg 146-7* |  |
| 5,6 | Volume and Capacity: Numericals. | By the end of the lesson, learners should be able to:Solve problems involving volume and capacity. | Worked examples.Supervised practice.Miscellaneous exercise. |  | *KLB BOOK 1**Pg 146-7* |  |
| 12,13 |  | *END OF TERM TWO EXAMS* |  |

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| ***MATHEMATICS FORM ONE TERM THREE YEAR 2019*** |
| ***WK******NO.*** | ***L/******NO*** | ***TOPIC/******SUBTOPIC*** | ***LESSON / SPECIFIC*** ***OBJECTIVES*** | ***TEACHING / LEARNING******ACTIVITIES*** | ***MATERIALS /******RESOURCES*** | ***REFERENCES*** | ***REMARKS*** |
| 1 | 1,2 | MASS, WEIGHT & DENSITYMass & Weight. | By the end of the lesson, learners should be able to:Solve problems relating to mass and weight. | Q/A: Definition of mass, weight.Discuss units of mass, weight.Oral exercise on relation between mass and weight. | Beam balance, spring balance calibrated in Newtons. | *KLB BOOK 1**Pg 148-9* |  |
| 3,4 | Density. | By the end of the lesson, learners should be able to:Calculate density in kg/m3 and g/cm3. | Worked examples.Supervised practice.Exercises. |  | *KLB BOOK 1**Pg 149-152* |  |
| 5 | TIME.Units of time. | By the end of the lesson, learners should be able to:Convert units of time into S.I. unit. | Oral practice.Written exercise. | Stop clocks/Watches. | *KLB BOOK 1**Pg 153-4* |  |
| 6 | 12 / 24 hr system of time. | By the end of the lesson, learners should be able to:Express 12-hr system in 24-hr system. | Oral practice.Written exercise. | Stop clocks/Watches | *KLB BOOK 1**Pg 154-6* |  |
| 2 | 1,2 | Travel timetables. | By the end of the lesson, learners should be able to:Interpret travel timetables.  | Oral practice.Written exercise.Review of exercise.  | Chart- Travel timetables. | *KLB BOOK 1**Pg 156-9* |  |
| 3 | LINEAR EQUATIONSSimple equations. | By the end of the lesson, learners should be able to:Solve simple equations with one unknown. | Worked examples.Exercise. | Graph papers, geo-board / grid. | *KLB BOOK 1**Pg 160-1* |  |
|  | 4 | Fractions with one unknown. | By the end of the lesson, learners should be able to:Solve simple equations with fractions. | Worked examples.Exercise. |  | *KLB BOOK 1**Pg 161-2* |  |
| 5,6 | Word problems. | By the end of the lesson, learners should be able to:Solve equations involving fractions and whole numbers. | Worked examples.Supervised practice.Exercises. |  | *KLB BOOK 1**Pg 162-5* |  |
| 3 | 1 | Linear Equations with two unknowns.*- elimination method.*(Whole numbers) | By the end of the lesson, learners should be able to:Solve equations with two unknowns using elimination method. | Worked examples.Exercise.Problem solving. |  | *KLB BOOK 1**Pg 165-7* |  |
| 2,3 | Linear Equations with two unknowns.- *elimination method.*(Fractions / mixed numbers) | By the end of the lesson, learners should be able to:Solve equations with two unknowns using elimination method. | Review L.C.M., equivalent fractions.Worked examples.Exercise.Problem solving. |  | *KLB BOOK 1**Pg 167-9* |  |
| 3 | 4,5 | Linear equations with two unknowns.-e*limination method.*(Word problems) | By the end of the lesson, learners should be able to:Solve equations with two unknowns using elimination method. | Worked examples.Supervised practice.Exercises. |  | *KLB BOOK 1**Pg 167* |  |
| 6 | Linear equations with two unknowns.- *substitution method.*(Whole numbers / word equations) | By the end of the lesson, learners should be able to:Solve equations with two unknowns using substitution method. | Worked examples.Supervised practice.Exercise. |  | *KLB BOOK 1**Pg 168-170* |  |
| 4 | 1 | Linear equations with two unknowns.- *substitution method.*(Fractions) | By the end of the lesson, learners should be able to:Solve equations with two unknowns using substitution method. | Problem solving.Written exercise. |  | *KLB BOOK 1**Pg 168-170* |  |
| 2 | Linear Equations with two unknowns.- *substitution method.**(Decimals)* | By the end of the lesson, learners should be able to:Solve decimal fractions with two unknowns using substitution method. | Worked examples.Supervised practiceExercise. |  | *KLB BOOK 1**Pg 168-170* |  |
|  | 3,4 | CO-ORDINATES ANDGRAPHSCo-ordinate plane. | By the end of the lesson, learners should be able to:Label co-ordinate axis, plane.Locate points in the C/plane given (x, y). | Review the number line.Discussion.Oral exercise. | Geo-board,Graph papers. | *KLB BOOK 1**Pg 182-4* |  |
| 5,6 | Plotting a graph of a line. | By the end of the lesson, learners should be able to:Identify points that a line passes through.Plot the corresponding graph. | Review solving of equations of lines.Discover several points that a line passes though.Supervised practice on plotting of graphs. | Geo-board,Graph papers. | *KLB BOOK 1**Pg 182-4* |  |
| 5 | 1 | Further equations of lines. | By the end of the lesson, learners should be able to:Plot graphs involving fractions and mixed fractions.Rewrite equations in the form y = m x + c. | Worked examplesSupervised practice.Review exercises. | Geo-board,Graph papers. | *KLB BOOK 1**Pg 185-8* |  |
| 2 | General graphs(Whole numbers) | By the end of the lesson, learners should be able to:Plot graphs of a given set of data, by first choosing an appropriate scale. | Worked examplesSupervised practice.Review exercises. | Geo-board,Graph papers. | *KLB BOOK 1**Pg 189-196* |  |
|  | 3 | General GraphsDecimalNumbers) | By the end of the lesson, learners should be able to:Plot graphs of a given set of data, by first choosing an appropriate scale. | Worked examplesSupervised practice.Review exercises. | Geo-board,Graph papers. | *KLB BOOK 1**Pg 189-196* |  |
| 4 | General GraphsPositive and NegativeNumbers) | By the end of the lesson, learners should be able to:Plot graphs of a given set of data, by first choosing an appropriate scale. | Worked examplesSupervised practice.Review exercises. | Graph papers. | *KLB BOOK 1**Pg 189-196* |  |
| 5,6 | General Graphs(Curves / Word problems) | By the end of the lesson, learners should be able to:Plot and sketch curves.Express word problems graphically. | Worked examplesSupervised practice.Review exercises. | Graph papers. | *KLB BOOK 1**Pg 189-196* |  |
| 6 | 1 | Simultaneous equations. | By the end of the lesson, learners should be able to:Solve simultaneous equations graphically. | Review graph of a line.Exercises.Further problem solving. | Graph papers. | *KLB BOOK 1**Pg 188-9* |  |
| 2 | COMMERCIALARITHMETICUnit price and total price. | By the end of the lesson, learners should be able to:Calculate cost of items given the unit price. | Worked examplesSupervised practice.Review exercises. |  | *KLB BOOK 1**Pg 171-2* |  |
| 6 | 3 | Currency Exchange. | By the end of the lesson, learners should be able to:Convert one currency to another given the exchange rates. | Informal discussion: Importance of Currency Exchange.Worked examples. | Newspapers: exchange rates. | *KLB BOOK 1**Pg 172-5* |  |
| 4 | Profit & loss. | By the end of the lesson, learners should be able to:Calculate (%) Profit & Loss. | Q/A : Definitions of marked price, cost price.Problem solvingExercise. |  | *KLB BOOK 1**Pg 175-7* |  |
| 5 | Commissions. | By the end of the lesson, learners should be able to:Solve problems related to sales & commissions. | Q/A: Definition of commission.Problem solving |  | *KLB BOOK 1**Pg 178-9* |  |
| 6 | Discounts. Word problems / miscellaneous exercise. | By the end of the lesson, learners should be able to:Solve problems related to sales & discounts. | Q/A : Definitions of marked price, cost price, % discount.Exercise.Problem solving. |  | *KLB BOOK 1**Pg 177-8* |  |
| 7 | 1 | ANGLES & PLANE FIGURESTypes of angles. | By the end of the lesson, learners should be able to:List types of angles.State angle complements / supplements. | Worked examplesSupervised practice.Review exercises. |  | *KLB BOOK 1**Pg 197-8* |  |
| 2 | Angles on a straight line, adjacent angles. | By the end of the lesson, learners should be able to:Identify values of the said angles. | Oral practice.Worked examplesSupervised practice.Review exercises. |  | *KLB BOOK 1**Pg 199-200* |  |
| 3 | Angles at a point. | By the end of the lesson, learners should be able to:Determine values of angles at a point. | Worked examplesSupervised practice.Review exercises. |  | *KLB BOOK 1**Pg 201-6* |  |
| 4 | Angles on a transversal. | By the end of the lesson, learners should be able to:Determine values of angles on a transversal. | Oral practice.Supervised practice.Review exercises. |  | *KLB BOOK 1**Pg 206-211* |  |
| 5 | Polygons. | By the end of the lesson, learners should be able to:Apply angle properties of *triangles* in problem solving. | Solve problems. Identify interior & exterior angles, deducing their sums. |  | *KLB BOOK 1**Pg 218-228* |  |
| 6 | C.A.T. |  |  |  |  |
| 8 | 1 | GEOMETRI-CAL CONST-RUCTIONPerpendicular lines. | By the end of the lesson, learners should be able to:Construct a line, perpendicular lines and a perpendicular bisector. | Geometrical construction. | CompleteGeometrical set. | *KLB BOOK 1**Pg 231-2* |  |
| 2 | Bisecting an angle. | By the end of the lesson, learners should be able to:Bisect an angle. | Guided geometrical construction. | CompleteGeometrical set. | *KLB BOOK 1**Pg 232-3* |  |
| 3 | Constructing special angles using a ruler and a pair of compasses only. | By the end of the lesson, learners should be able to:To construct various special angles using a ruler and a pair of compasses only. | Guided geometrical construction.Supervised practice. | CompleteGeometrical set. | *KLB BOOK 1**Pg 233-4* |  |
| 4 | Constructing special angles using a ruler and a pair of compasses only. (contd.) | By the end of the lesson, learners should be able to:Construct various special angles using a ruler and a pair of compasses only. | Guided geometrical construction.Supervised practice.Exercises. | CompleteGeometrical set & BB set | *KLB BOOK 1**Pg 233-4* |  |
| 5 | Parallel lines. | By the end of the lesson, learners should be able to:Construct two parallel lines. | Guided geometrical construction.Supervised practice. | CompleteGeometrical set. | *KLB BOOK 1**Pg 235-6* |  |
| 6 | Proportional division of a line. | By the end of the lesson, learners should be able to: Divide a line proportionally. | Guided geometrical construction.Supervised practice. | CompleteGeometrical set. | *KLB BOOK 1**Pg 236-7* |  |
| 9 | 1 | Regular polygons. | By the end of the lesson, learners should be able to:Construct regular polygons and determine sum of interior and exterior angles. | Guided geometrical construction.Supervised practice.Exercises. | CompleteGeometrical set. | *KLB BOOK 1**Pg 238-244* |  |
| 2 | Irregular polygons. | By the end of the lesson, learners should be able to:Construct irregular polygons and determine sum of interior and exterior angles. | Guided geometrical construction.Supervised practice.Exercises. | CompleteGeometrical set. | *KLB BOOK 1**Pg 238-244* |  |
| 3 | Further constructions. | By the end of the lesson, learners should be able to:Construct triangles given two sides and an angle; three sides. | Guided geometrical construction.Supervised practice.Exercises.Exercise review. | CompleteGeometrical set. | *KLB BOOK 1**Pg 238-244* |  |
| 4 | SCALE DRAWINGThe scale. | By the end of the lesson, learners should be able to:Interpret statement scales and representative fractions. | Simple exercise on scales. | Maps. | *KLB BOOK 1**Pg 248-9* |  |
| 5 | Scale diagrams. | By the end of the lesson, learners should be able to:Interpret scale diagrams. | Discuss actual and represented lengths.Exercise.  | Maps.Diagrams drawn to scale. | *KLB BOOK 1**Pg 249-250* |  |
| 6 | Bearings. | By the end of the lesson, learners should be able to:Determine the bearing of a point from a point. | Discussion & Exercise. | Maps.ProtractorRuler. | *KLB BOOK 1**Pg 251-2* |  |
| 10 | 1 | True bearings. | By the end of the lesson, learners should be able to:State the true bearing of point from another point. | Discussion & ExerciseProblem solving. | Maps, protractors, rulers. | *KLB BOOK 1**Pg 252-6* |  |
| 2 | True bearingsContd. | By the end of the lesson, learners should be able to:Solve problems on bearings. | Problem solving. | Maps, protractors, rulers. | *KLB BOOK 1**Pg 252-6* |  |
| 3 | Angle of elevation. | By the end of the lesson, learners should be able to:Define angle of elevation.Solve problems related to angle of elevation.  | Expository approach: leading to the definition of angle of elevation.Review SOH, CAH, TOA.Worked examples.Exercise. | Protractor, Clinometer. | *KLB BOOK 1**Pg 256-262* |  |
| 4 | Angle of depression. | By the end of the lesson, learners should be able to:Define angle of elevation.Solve problems related to angle of depression.  | Expository approach: leading to the definition of angle of elevation.Worked examples.Exercise. | Protractor, Clinometer. | *KLB BOOK 1**Pg 256-262* |  |
| 5 | Angles of elevation & depression. | By the end of the lesson, learners should be able to:Solve problems related to angles of elevation & depression. | Worked examples.Exercise. | Protractor, Clinometer. | *KLB BOOK 1**Pg 256-262* |  |
| 6 | Triangulation. | By the end of the lesson, learners should be able to:Define baseline, offsets.Draw baseline, offsets on plot. | Expository approach: leading to the definition of baseline, offset.Class experiments / Group work. | Model of parcel of land on a Cardboard. | *KLB BOOK 1**Pg 262-270* |  |
| 11 | 1 | Triangulation.Contd. | By the end of the lesson, learners should be able to:Calculate area using triangulation method. | Problem solving.Exercise. | Model of parcel of land on a Cardboard. | *KLB BOOK 1**Pg 262-270* |  |
| 2 | COMMON SOLIDSCommon regular solids. | By the end of the lesson, the learner should be able to:Identify and sketch common solids.Count faces, edges and vertices of various polyhydra. | Q/A: Definition of a solid, examples of solids.Present solids; students count no. of faces, edges and vertices. | Common solids. | *KLB BOOK 1**Pg 271-4* |  |
| 3 | Isometric projection | By the end of the lesson, the learner should be able to:Sketch a solid using isometric projection. | Teacher exposes meaning of isometric projection, and then leads students in geometric construction. | Geometric set & BB set. | *KLB BOOK 1**Pg 275* |  |
| 4,5 | Nets of solids. | By the end of the lesson, the learner should be able to:Sketch accurately nets of solids. | Teacher draws a net of a solid, then students draw nets of other solids; supervised practice. | Chart- nets of solids drawn. | *KLB BOOK 1**Pg 277-281* |  |
| 5,6 | Nets of solids. | By the end of the lesson, the learner should be able to:Make models of solids. | Teacher makes a net of one solid, and students make nets of other solids. | Manilla papers, geometrical ser. | *KLB BOOK 1**Pg 277-281* |  |
| 12,13 |  | *END OF YEAR EXAMS* |  |