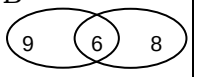
PRIMARY SEVEN MATHEMATICS SCHEME 2024

WK	PD	TOPIC	SUB TOPIC	CONTENT	Subject competence	Language competence	Life skills	Method	t/l aids	Activity	REF	R
1	1	**SETS**	Revision on types of sets	- Describing sets - Listing elements - Disjoint, empty, intersection and union set	- A learner - Describes types of sets - Forms sets - Draw venn diagrams	- A learner - Describes different types of sets - Describes information on the venn diagram	- Critical thinking - Creative thinking - Effective communication - Problem solving	- Question and answer - Discussion - Explanation	-Wall charts -Showing venn diagrams	-Answering questions -Doing exercise	-New MK MTC bk 7 pg 1-2 -Mk NCDC 1-3 - Fountain pri MTC Bk 7 pg 1-4	-
	1		Sub sets	- Listing subsets - Finding number of subsets (both proper and improper -	- A learner - Defines a subset - Lists the subsets - Counts - Solves for number of subsets	- The learn defines subsets - Forms sentences using the word	- Dp	Do	-	- Forming subsets from a set	-New Mk bk 7 pg 2-4 -Mk NCDC 4-7 -Fountain mtc pg 3-6 , 8-10	-
	1		Use of venn diagrams	Interpreting two venn diagram The venn diagram shows the number of pupils who eat both apples (a) and beans (B) A B  a) How many pupils eat beans?	- Learners - Identifies the different regions - Names the different regions - Adds - Displays information on a venn diagram - Finds probability of simple sets	- The learner - Names - regions Defines probability	- Demonstration - Explanation - Guided discovery	Do	- Wall charts showing diagram of two intersecting sets	-Drawing -Identifying -Naming	-	-

				b) How many pupils eat apples?								
	1	**SETS**	Solving problems involving venn diagram of 2 sets	- Drawing venn diagram to represent given information - Finding number of members	- Drawing venn diagram - Finds number of members in each set - Finds probability of simple sets	- The learner reads different regions on venn diagram	- Do	Do	- Wall chart showing venn diagram	- Drawing - Identifying - Naming	- New MK pg 10-11 - NCDC 11-12	-
2	1	**Whole numbers**	Place values and values	- Review of previous work on place values and values - Example - 2435087 - Place values and values of underlined digits Digit place value 5 thousand 5000 8 _____ _____	- The learner - Identifies place values - Finds values of digits	- The learner - Reads place values - Writes place values Spells place values of digits	- Guided discovery - Explanation - Discussion		Abacus - Place values charts	- Answering questions - Reading - Writing - Identifying place values	- New MK pg 28 - NCDC 13 - Understanding MTC bk 7 - Pg 18 - Fountain mtc bk 7 pg 25-28 , 20-22	-

2				-						
			Reading and writing numerals in words	Reading given figures in words Writing given figures in words	The learner reads the given figures in words - Writes given figures	- The learner read and writes given figures in words	- Do	Do	- Do	- Writing - Reading - Answering oral questions	- Understanding mtc pg 19 - Fountain mtc bk 7 pg 27
	1		Reading and writing words in figures	Writing from words to figures	- The learners - Write given words in figures	- The learner reads given words	- Do	Do	- Do	- Writing - Answering questions Mk -	- mtc pg 21 - Mk NCDC 15 - Understanding mtc bk 7 pg 18
	1		Expanded notation	Expanding numbers using; values, place values , powers of ten	- The learner - Expands numbers using; values, place values, powers of ten	- The learn spellings the word expand - Describes the relationship between numbers and their values	- Guided discovery - Explanation - Discussion	Do	- Wall chart showing examples of expanded numbers	- Expanding - Answering oral questions - Identifying place values	MK bk 7 pg 49 Mk NCDC 38 - Fountain pg 36
			Writing expanded numbers in short form	Finding expanded numbers	The learner Writes given expanded numbers in short form	- The learners - Describes relationships between numbers and their short forms	- Do	Do	-	- Finding expanded numbers - Adding	MK bk 7 pg 49 Mk NCDC 38 Fountain pg 28

			Standard form / scientific notation	Writing single numbers in scientific notation Finding the single numbers for the given numbers	The learner Writes single numbers in scientific notation Finds the	- The learner - Reads and writes numbers in scientific notation	- Explanation - Discussion	Wall charts showing numbers to standard form	- Do	- Writing numbers in scientific notation	- Fountain 45 - Mk NCDC 39 - MAcm 55-59
3	1		Rounding off whole numbers	Rounding off to the nearest Tens Hundreds Thousands Ten thousand Hundred thousand Million	- The learner rounds off to the nearest Tens Hundreds Thousands Ten thousand Hundred thousand Million	The learner spells and uses the words Tens Hundreds Thousands Ten thousand Hundred thousand - Million	- Explanation - Question and answer - Discussion	Wall chart showing examples of rounding off whole numbers	- Do	- Adding - Re-grouping	- New mk mtc bk 7 pg 30-51 - Understanding mtc pg 26-27 - Fountain 28-30
	1		Roman numerals	Reading and writing roman numerals Converting Hindu Arabic to roman numerals Converting roman	- The learner read and writes roman numerals - Converts Hindu	- The learner - Describes roman numerals	- Do	Wall chart showing roman numerals	- Do	- Converting - Adding	- New mk bk 7 pg 23-39 - Mk NCDC 17-19 - Fountain 19-22

				numerals to Hindu Arabic Application of roman numerals	Arabic to roman numerals - And vice versa - Adds roman numerals					
	1		Bases	Addition , subtraction , division and multiplication of bases Non decimal bases	- The leaner's adds, subtracts, divides, and multiples given bases - Finds missing bases	- The learner read and answers after adding	- Do	Abacus Real objects	- Do	- Converting from other bases to base ten and vise - Old mk bk 7 pg 38-43 - Mk NDCD 22-30

3				Finding missing bases		subtracting, dividing and multiplying bases			
4	1	Operation on whole numbers	Addition and subtraction of large numbers	- Adding and subtracting large numbers up to 100,000,000	- The learner - Arranges digits according to place values - Adds - Subtracts	- The learner reads the mathematical statement of addition and subtraction	- Discussion - Explanation - Question and answer	Cooperation Critical thinking Effective communication Problem solving Creative thinking	- Chalkboard illustration

1		Multiplication of large numbers	- Multiplying by two digits number - Multiplying by three digit numbers	- The learner ; - Multiples whole numbers whose product does not exceed 100,000,000 - Solves word problems involving multiplication	- The learner reads mathematical statement of multiplication	- Do	Do	- Chalkboard illustration
1		Division of large numbers	Dividing large numbers by the digit numbers Dividing large numbers by three digit numbers	- The learner; - Divides whole numbers - Solves words problem involving division (quotient)	- The learner: - Read mathematical statements of division	- Do	Do	- Do
1		Properties of numbers	Distributive property Associative property Commutative property Given that x*y Means ty+y	- The learner - Adds - Multiples - Factorises - Groups numbers - Subtracts	- The learner - Spells and uses the words distributive, associative and commutative	- Guided discovery - Question and answer	Do	- Read and counts
		Indices	Laws of indices in multiplication Application of indices with multiplication	- The leaner - Adds - Simplifies - Factorise - Solves	- The learner - Reads and uses the words - Powers - Indices - Exponents	- Do	Do	- Chalkboard illustration

5	1		Indices	Laws of indices in division Application of indices with division Squares and square roots	- The leaner; - Subtracts - Simplifies - Factorises - Solves	- Do	- Do	Do	- Do
	1	Patterns and sequences	Divisibility test	- Review of divisibility test for 2, 3, 4, 5 and 6 - Divisibility test for 7	- The learner - Describes types of numbers - Identifies numbers divisible by 2,3,4,5,6, and 7	- The learner reads the word - divisibility test Describes steps for divisibility test	- Explanation - Discussion - Question and answer	Critical thinking Creative thinking Effective communication Problem solving	- Chalkboard illustration - -
	1		Divisibility tests	Divisibility test of 8, 9, 10,and 11	- The learners - Describes types of numbers - Identifies numbers divisible by 8, 9, 10, and 11	- The learners - Describes steps for divisibility tests	- Do	Do	- Do

5	1		Sets of numbers	Write numbers Natural /carrying numbers Even and odd numbers Prime numbers Composite numbers Triangular numbers Cubic and cube numbers Integers Rational numbers Square number s Application of LCM and GCF	- The learner - Lists types of numbers - Counts numbers - Identifies numbers and their sequence	- The - learner Spells and uses the words - whole, natural , counting , even . odd and prime Triangular, cube, integers and rational and square numbers	- Guided discovery - Explanation - Question and answer	Do	- Wall chart showing the types of numbers	- Completing sequence - Listing
	1	Fraction	Improper and mixed fraction	Review changing improper fraction to mixed numbers and vise versa	- The learner - Converts improper fractions to mixed numbers - Converts mixed numbers to	- The learner - Changes improper fraction to - mixed numbers Changes mixed numbers to	- Discussion - Explanation - Discovery	Effective communication Critical thinking Problem solving	- Counters - Fruits	- Convertin improper fractions t mixed numbers and vis versa

					improper fractions	improper fractions				
6	1		Conversation of fractions	Changing common fractions to decimals Changing decimals to common fractions	- The learner - Converts common fraction to decimals - Converts decimals to common fractions	- The learner - Changes common fraction to - decimals Changes decimals to common fraction	- Do	Do	- Wall chart showing conversion of fraction to decimals and vise versa	- Answerin oral questions and writte questions
	1		Recurring decimals	Rational numbers to recurring decimals Recurring decimals to rational numbers	- The learner - Converts rational numbers to recurring decimals - Converts recurring decimals to rational numbers	- The learner - Spells and uses the words recurring and rational to make sentences	- Explanation - Discovery - Question and answer	Do	- Wall chart showing all working well laid out	- Convertin rational numbers t recurring decimals and vic versa
	1		Ordering fractions	Arranging fraction in ascending and descending using LCM	- The learner - Arranges fractions in ascending and	- The learner - Defines ascending and descending	- Discovery - Participatory learning	Do	-Paper cutouts -Fruits	- Answering oral and written questions

				and percentage Comparing fractions using >,< and =	descending order - Compares fractions using >,<, or =					
	1		Operation on fraction	Addition f fraction Proper fractions Mixed fractions	- The learner - Adds proper fractions and mixed fractions - Finds LCM of denominator	- The learner - Reads regular fractions - Reads word problems involving addition of	- Explanation - Guided discovery - Demonstration	Do	Cut outs Fruits Chalkboard illustration	Cutting fru Shading adding

						fraction				
7	1	Fractions		Subtraction of fraction Proper Mixed fractions Word problem	- The learner - Subtracts proper fraction - Subtracts mixed fractions	- The learner - Reads vulgar fraction - Interpret word problem	- Do	Do	- Do	-
			Multiplication	Fractions and whole numbers Fraction by fraction Word problem	- The learner multiplies fractions and whole numbers - Multiplies fraction by fractions	- The learner - Reads and interprets fraction involving multiplication	- Guided discovery - Explanation - Discussion	Do	- Do	-

				- Reduces fractions					
		Division	Use of LCM and reciprocal Fraction by fraction Fraction by whole numbers Mixed by fractions Word problem	- The learners - Uses LCM and reciprocal to divide fractions - Interpret word problem	- The learner read and interprets fractions involving division	- Do	Do	- Wall charts	-
		Mixed operations	Use of BODMAS Addition and subtraction Multiplication and division 3operations 4operations Use of brackets	- The learner - Applies BODMAS in working out problems	- The learner - Gives the meaning of BODMAS	- Discussion - Explanation - Guided discovery	- Do	- Wall chart showing necessary calculations	-
		Application of fraction	Direct fraction Application of remainders Taps	- The learner - Applies fraction in the daily life situation - Interprets fraction	- The learners - Uses the word remainder correctly	- Discussion - Demonstration	- Logical thinking - Effective communication	-Containers -Papers	-S p i a c -I n

					involving remainders					
			Decimals	Place values of decimals Values of decimals	- The learner - Identifies the place values of decimals - Finds the values of digits	- The learners - Spells the place values of decimals - Pronounces the place value correctly	- Guided discovery - Discussion - Explanation	- Problem solving - Effective communication - Creative thinking	- Place value - Chart showing decimals	-
8	1		Do	Reading and writing decimals in words Reading and writing decimals from words to figures	- The learner - Reads and writes decimals in words and figures	- The learner reads and spells the words correctly	- Do	Do	- Chalkboard illustration	-
9	1		Do	Expanding decimal Finding the expanded decimals	The learner Expanding decimals using values and powers Fins the expanded	- The learner - Uses the words expanded and simplify	- Do	- Do	- Do	-

	1			Scientific form (standard form) Rounding off decimals to	Writes decimal numbers in standard from Rounds off decimals up to	- Explains what scientific notation is	- Explanation - Guided discovery	- Effective communication - Problem solving	- Number line - Chalkboard illustration	-
				hundred thousandths	hundred thousandths	- Explains what rounding off is - Reads rounded off numbers				- Reading rounded off numbers
	1		Operation on decimal upto tens thousandths	addition of decimals subtraction of decimals word problem	- Adds decimals - Subtracts decimals - Reads and interprets word problems - Arranges decimals according to place values	- Reads and adds, subtracts decimals	- Discussion - Guided discovery	-Creative -thinking Problem solving	- Chart showing addition and subtraction of decimals	- Adding and subtracting decimals
	2		Multiplication of decimals by ;	Multiplies decimals by whole numbers and decimals	- Reads decimal multiplication	Do	- Do	-Multiplication table chart	-Multiplying -Adding -Counting	-

			Whole numbers Decimals	Puts the correct number of decimals places					
				Division of decimals by Whole number s Decimals	- Divides decimals by whole numbers and decimals - Maintain the correct number of decimal places	Uses the reciprocal Uses brackets properly	- Guided discovery - Explanation - Discussion	-Creative -thinking -Problem solving	- Chart showing division of decimals	- Dividing decimals by whole numbers and by decimals
				Combined operation on decimals Addition and subtraction Multiplication and division Addition , subtraction, multiplication and division	- Uses BODMAS to work on decimals	Reads and uses BODMAS correctly	- Explanation - Guided discovery - Group discussion	-Critical -thinking Effective -communication Problem solving	- Chalkboard illustration	- Answering oral and written exercises
10	1		Ratios	Review on ; Forming ratios Expressing rations as Fractions Decimals Percentage	- Expresses numbers in ratio from	- Describes ratios	- Discussion - Group work	-Problem -solving Effective communication	- Do	- Forming and expressing numbers in ration from
	1			Ratio increase and decrease	- Increase and decreases	- Uses the words increase	- Guided discovery	-Creative -thinking -	- Real objects	-Reading -Adding -Subtracting

				Finding the ratio of increase and decrease	number in given ratios - Finds the ratio of increase or decrease	and decreases	- Problem solving	Critical thinking Effective communication	-And dividing
	2			Sharing quantities in ratios Finding the ratio in which quantities are shared Finding the number shared in a given ratio	- Shares quantities in given ratios - Finds the number shared in a given ratio	- Applies ratios in solving given numbers correctly	- Guided discovery - Explanation - Discussion	-Critical -thinking -Creative thinking Problem solving	- Real objects	- Answering oral and written activities
			Proportion	Review direct proportion Inverse proportion	Describes direct and indirect proportion Uses proportions to solve problems	- Reads and uses the word proportion	- Do	-Do	- Chalkboard illustration	- Solving problem involving application of

									proportio
			Percentages	Percentage to decimals Percentage to fraction Percentage to ratios Decimals to percentage	Change percentage to decimal , fraction , and ratios and vice versa	-Defines -Percentage	- Discussion \group work	-Effective communication -Critical thinking	- Do	- Changin from percenta to decim fractions and ratio

		Fraction to percentage Ratios to percentage						
		Expressing quantities as percentage Finding percentage parts of quantities Application of percentage parts	Expresses as percentage Applies percentages to find parts	- Uses the percentage symbol - correctly Reds and interprets questions involving	- Explanation - Guided discovery - Discussion	- Creative - thinking Problem solving	- Wall clock and real objects	- Changing quantitie o the san units - Oral and written question
		Percentage profit Percentage loss Discount and percentage discount More about application on percentage profit and loss	Finds profit and %age cost profit Finds loss and %age loss	- Reads and uses the words profit and loss correctly	- Guided discovery - Discussio n -	- Do	- Shopping bills	- Using profit an loss to ge %age pro and % ag loss
		Find the original cost when the %age loss or profit is given	Find original cost using %age loss or profit	- Uses profit or loss to get the original cost	- Do	- Problem - solving - Critical thinking Effective communication	- Chalkboard illustration	- Answerin oral an written work
		Finding simple interest Finding principal and amount Finding rate Finding time	Reads and finds simple interest , amount , rate and time	- Defines the words simple interest, principal , amount,	- Do	- Do	- Do	- Dod

				rate, time				
	Order of integers	Opposites/inverse of integers Order of integers	Find the inverse of integers Orders integers Describes integers	- Defines integers - Inverse - Uses the word inverse to make sentences	- Discovery - Cooperation - Thinking pair share	- Problem - solving - Critical thinking Effective communication	- Mathematical rule - Number line - Ladders - Floor	- Finding t opposites integers - Ordering integers
	Addition and subtraction	Addition of integers Using a number line Without using a number line Subtraction of integers Without using number line	Carries out addition and subtraction Uses the number lien correctly	- Describes the forward and backward movement	- Demonstration - Discussion	- Do	- Do	- Solving problems - Involving addition and subtracti
	Division and multiplication	Multiplication of integers Using a number line Without using a number line Division of integers Using a number line Without using a number line	Draw number line Carries out division and multiplication	- Describes real life situation where integers are applied	- Demonstration - Explanation	- Do	- Do	- Drawing number l - Oral and written work

			Application of integers	Word problems involving integers	Applies integers in our daily life situation Interprets word problem	- Reads and interprets word problems	- Discussion - Explanation	- Do	- Do	- S prob invo word prob
			Finite system	Addition and subtraction of in finite system Using a dial Without using a dial	Adds and subtracts numbers in finite system	- Gives the meaning of words like finite, dial and amnthmetic	- Guided discovery - Demonstration - Discussion	- Creative - thinking Discovery	- Clock faces - Ladders - Charts	- Add subt usin draw dials
				Multiplication in finite system Division in finite system	Describes division and multiplication in finite system	- Reads and interprets in finite system	- Do	- Do	- Do	- Ora writt work
				Algebra in finite system Application of finite system	Solves word problem involving clock arithmetic Applies finite system in daily life situation	- Describes the backward and forward movements during clock arithmetic (finite system)	- Explanation - Discussion - Group work	- Effective communication - Critical thinking Problem solving	- Chalkboard illustration	- S equa invo finit syst
			Data handling	Review of graph	Bar graphs Pictor graphs Line graph Scale Using given data to draw bar and time graph	Interpret e the given graphs Differentiate between vertical and horizontal scales	- Gives the meaning of bar, picto - graph, line graph etc Identifies vertical and	- Discussion - Demonstration - Explanation	- Problem - solving - Critical thinking Effective communication	- Mathematical sets - Manila cards - Learners	- Draw grap - Shad grap

				Temperature graph		horizontal scales			
				Travel graphs Interpreting travel graphs Drawing travel graphs	Draw travel graph Interprets travel graph	- Uses the given information to interpret and	- Do	- Do	- Do	- Do
			Coordinate graph	Stating coordinates of a point on a grid Plotting given points on a grid Joining points to form geometrical figure Naming and calculating area f the figure formed	Presents and interprets information on coordinate grid Form ordered pairs Name and calculates area of the formed figure Write correct units	- Reads information on - coordinates grid Describes the figure formed	- Demonstration - Discussion - Explanation - Observation	- Effective communication - Critical thinking Problem solving	Mtcal set Wall chart	- Draw - Nam poin - Plott - Inter infor
				Lines formed by ordered pairs Completing tables	Completes tables by filling the missing integers	- Uses the given equation to complete tables	- Do	- Do		Draw - Com table
			Pie charts	Drawing circle graphs using fractions/degrees / %ages	Draws pie chart Interprets circle graph and find unknown	- Explains steps filling when - drawing pie chart	- Do	- Effective communication - Creative thinking	Mtcal set Ruler Ropes	- Draw and show posi - Find unk

				Finding unknown and amount shared	Present information on pie chart	Reads information on pie chart				

			Statistics	Median , mode, range, mean, average, modal frequency (measure of central tendency_	Describes what median , mode, mode, range means	- Gives and uses the given words correctly	- Do	- Do wall charts	Calculating the given exercises	-
			Probability	Tossing a coin Rolling a dice Tossing two coins Dice and a coin	Defines probability Calculates probability of numbers	- Discusses the ways of finding probability of numbers	- Guided discovery - Discussion - Explanation	- Effective communication - Critical thinking	Tossing Rolling	-
		Geometry / construction	Lines and angles	Measuring and constructing lines Types of angles Parallel and perpendicular lines Skew lines	Draw lines Measures lines Describes the type of angles Constructs parallel lines	- Explains parallel - Bisecting , skew, and perpendicular lines	- Demonstration - Discovery - Discussion - Explanation	- Creative - thinking - Problem solving Logical reasoning	Mtcal set Boxes Classroom tables Books	-
			Angle properties	Complementary angles Supplementary angles Vertically opposite angles Exterior angles Interior angles	Identifies eh angle properties Solves the unknown angles	- Explains supplementary - angels Complementary - angles - Vertical angles Alternate , - corresponding angles	- Do	- Do	Do	-

			Corresponding angles More about angles and parallel lines		Interior and exterior angles				
		Construction	Bisecting lines and angles Constructing angles e.g 60, 90, 45, 75, 22.5 etc Constructing triangles Constructing polygons, hexagon, pentagon, rhombus, squares, rectangles, parallel	Construct and bisects angles Construct simple polygon States property of regular polygons	- States properties of regular polygon	- Do	- Do	Do	-
		Bearing and scale drawing	Rotation /revolution Direction faced after turning through a certain angle Angels formed on compass direction Angles formed by the minutes	Draws the compass direction Describes clockwise and anticlockwise Finds the angles formed in the compasses direction	- Uses clock wise and - anticlock wise Spells north , south, east etxc	- Demonstration - Guide discovery - Discussion	- Creative - thinking - Problem salving Effective communication	Compasses direction Clocks	- -

				and hour hand of the clock						
				Ordinary bearing Finding the direction of one point from another Opposite direction of ordinary bearing	Describes ordinary bearing Finds the direction of one point from another Finds the opposite direction of ordinary bearing Finds the angle that	- Uses ordinary bearing to find _ the direction Describes angles	- Do	- Do	Do	-

				Finding the true bearing of one point from another Opposite bearing Linear scale drawing Scale drawing Sketching drawing	Draws bearing Scale Describes direction	- Describes bearing and direction	- Demonstration - Guided discovery - Discussion	- Creative - thinking - Problem solving Effective communication	Chalkboard illustration Geometrical sets	- Drawing - Measuring	- Ma 235 - Mk 146

			Time	Expressing time Changing hours to minutes Changing minutes to hours and seconds Changing hours to minutes and seconds	Reads time Interprets time correctly Converts units of time	- Reads - time - Names units Writes o'clock units of time am, pm in full	- Guided discovery - Questions and - answer Demonstration	- Critical - thinking Problem solving	Cutouts Wall charts	- Reading - Writing - Reciting	- Fo 166
				Clock system Changing 12 hour clock system to 24 hour clock system Converting 2 4 hour clock to 12 hour clock system	Reads time, writes units , interprets clock system Add time Subtracts time	- Reads - time Write am - and pm in full Describes unit of time	- Guided discovery - Question and answer	- Problem - solving Effective communication	Wall faces Wall charts	- Reading - Writing - Adding - Subtracting	- Fou 16 - Mk 15 - Ma 165
				Finding duration Finding duration of same unit time Finding duration of	Reads time Adds time Subtract time Convert time	- Reads units - time Defines units of am and pm	- Discussion - Guided discovery	- Critical thing - Problem solving	Wall clock Wall charts	- Reading - Reciting	- Ma 269 Fou 169

				different units time i.e. Am and pm Finding duration involving two days						
				Time tables School timetable Taxi and bus timetable Travel timetable Marine timetable Air timetable	Reads timetables Makes timetables Converts time Calculates duration	- Reads timetables - Describes word - departure and arrival Interprets timetable	- Guided discovery demonstration	- Problem - solving Effective communication	Uses timetable Wall face Wall charts	- Reading - Drawing - Making timetables	- Fou 169 - Ma 270
				Programs Radio program Television program	Listens to a radio Watches the TV Draw makes tv/radios	- Spells words - radio, and television Interprets program	- Demonstration - Discussion	- Critical - thinking Effective communication	Radio Tv Flash cards	- Reading - Drawing	-
				Review Speed Changing km/hr to m/s Changing m/s to km/hr	Changes km/hr ot m/s Changes m/s to km/hr	- Writes km/hr to m/s in full - Describes units km/hr and m/s	Guide discovery Discussion	- Critical - thinking Problem solving	Wall chart Chalkboard illustration	- Reading - Converting	- Mk - Mk bk 11

					in full						
							-		-	-	
		Measurement	Length Mass And capacity	Length Comparing metric units Changing meters millimeters and vice versa	Reads the metric table Recites the metric table Converts to required units	- Uses with words - Kilogram - Metres	Demonstration Discussion Guided discovery	- Decision - making - Problem solving Critical thinking	Meters rule Tape measure Weighing scale	- Measuring - Reading - Reciting	- Fou 17 - Ma 260

			Changing km to m and vice versa		- Millimeters - In sentences				
			Adding metric units Subtracting metric units	Adds figures Regrouping figures Subtracts figures	- Reads the given metric unit s - Describes the given metric units	Question and answer Demonstration	- Problem solving Critical thinking	Wall face Metre rule	- Adding - Measuring - Subtracting
			Multiplication of metric units Division of metric units	Multiplies metric units Divides metric units Regroups metric units	- Reads the metric units - Describes the given units	Guided discovery Discussion	- Decision - making Critical thinking	Chalkboard illustration Metre rule	- Multiplying - Dividing

			Money	Review Shopping bill and bill tables Currency notes Exchange rates	Multiples figures Adds Divides Simplifies	- Reads word problems - Interprets the given words - Writes and uses words - Exchange - Currency - Forex Foreign exchange	Demonstration Explanation	- Effective communication - Decision making - Problem solving	Money Items Like books, pens etc	- Role playing - Reading
			Perimeter	Find perimeter quadrilaterals Perimeter of combined shapes Perimeter of regular polygons Number of poles in line and perimeter	Draws figures Names figures Add sides of figure	- Describes perimeter - Interprets different shapes - Writes names of the shapes	Demonstration Guided discovery	- Do	Cutouts Chalkboard illustration	- Cutting - Naming - Tracing - Drawing
			Circumference of a circle	Find circumference of a circle given the radius Finding the circumference of a circle given diameter	Draws circles Finds the circumference Simplifies expressions	- Describes the word circumference - Interprets the parts of a circle	Guided discovery Demonstration	- Problem solving - Critical thinking	Cutouts Chalkboard illustration Basins Tins Wires String	- Drawing - Naming - Measuring

			Finding radius /diameter of the circle given circumference	Finding radius given circumference Find the diameter given circumference	Draws shapes Identifies missing parts	- Reads word statement - Interprets word statements	Discussion Question and answer	- Effective communication - Problem solving	Chalkboard illustration Cutout	- Reading - Drawing - Tracing - Shading
			Application of circumference	Finding number of revolutions Finding length of a piece of wire Finding diameter of given length of the wire	Measures object s Cut out strings Interprets word statements Solves problems	- Reads word problem - Interprets word - statements - Spells words Revolution Circumference	Guided discovery Discussion	- Problem - solving Critical thinking	Tins String Razorblade Cutouts Wires Tins	- Cutting - Drawing - Measuring

			Areas	Finding area of triangles Finding missing parts given area of a triangle Word statement involving a triangle	Draws figures Interpret word statements Finds area	- Describes the term area - Interprets word problem	Effective communication Problem solving	- Cutouts - Chalkboard illustration	Drawing Tracing	-	Mk ncd 160
				Comparing area of a triangle Finding missing part of triangle by	Draws interprets triangles Forms equations Solves word problem	- Interprets statements - Read given statements	Guided discovery Discussion	- Problem - solving Critical thinking	Cut out Chalkboard illustration	- Drawing - Reading	

		comparing its area							
		Area of quadrilateral Rectangle Square Rhombus s Parallelogram Kite Trapezium Areas and lectures	Draws figures List properties of figures Finds area	- Reads the names of - quadrilaterals Spells the names of quadrilateral	Guided discovery Discussion	- Problem solving Critical thinking	Cut outs Wall charts	- Drawing - Cutting - Tracing - Scriting	Mk ncd 161 Macm 262 Founta 186
		Area of a circle Finding area of a circle Word problem involving area of a circle	Draws circles Measures objects Finds area of a circle	- Interprets statements - Reads word problems	Guided discovery Explanation	- Problem - solving Critical thinking	Wall charts	- Drawing - Cutting - Shading - Tracing	Founta 190 M ncdc 134
		Find are of a circle given circumference Finding parts of a circle given tis area	Forms equation for unknown Finds missing parts	- Reads word statements - Interprets word problems	Discussion Questions and answer	- Do	Do	- Do	Founta 190
	Area of parts of a circle	Area of a semi circle Area of a quadrant Area of a sector using R 360	Names parts of a circle Shades parts of the circle Draws parts of the circle Finds area of the sector	- Reads and uses words semi circle, - quadrant - Sector Describes names of	Guide discovery Explanation Question and answer	- Critical - thinking Problem solving	Cutout Wall charts	- Naming - Drawing - Shading	Founta 195 M ncdc

					parts of a circle					
		Area of combined shapes of circle	Finding are of circles combined with Rectangles Squares Triangles Other regular polygons	Draws figures Interprets combined Shapes	- Names parts of combined - shapes Interprets the given shapes	Explanation Questions and answer	- Critical - thinking Problem solving	Cuts outs Chalkboard illustration	- Drawing - Cuttings - Reading	Founta 193
		Shaded regions involving circle	Area of shaded regions of circles combined with Rectangles Squares Triangles Other regular polygons	Draws shades shapes Finds shaded shapes	- Describes shaded part - Names the - given shapes Interprets figures given	Guided discovery Question and answer	- Effective communication - Problem - solving Critical thinking	Cutouts Wall charts	- Drawing - Shading - Painting - Cutting	
		Application of area of circle	Finding number of pieces of cards, circular sheets, etc that can be cut from a manila card ,. Iron sheet ,	Draws from interpretation Interprets word problems Cuts objects given	- Reads word problem - Interprets word statements	Demonstration Discussion	- Do	Manila cards Paper Razorblade Wall charts	- Cutting - Drawing - Shading	Mk 38

			metric sheet etc						

			Finding radius or diameter of a circle given area	Finding radius of a circle given area Finding diameter of a circle given area	Interprets word statements Forms unknown Solves for unknown parts	- Interprets word problems - Interprets given statements	Guided discovery Question and answer	- Do	Do
			Finding circumference given area of a circle	Calculating the circumference of circle given area	Finds the radius Interprets word problem Calculates the circumference	- Reads the word problem - Interprets word problem	Guided discovery Explanation Discussion	- Critical - thinking Problem solving	Wall char Chalkboa illustratio
			Total surface area	Finding total surface are of a cuboid Finding total surface area of a cube Finding missing side given total surface area of a cube	Draws accurate figures States the properties of each figure Finds total surface areas	- Describes cuboid - Cubes Reads and uses words cuboid and cubes	Demonstration Guided discovery Explanation	- Problem - solving Effective communication	Boxes Papers Manila car Metres ruler
			Total surface area of a triangular prism	Total surface area of a triangular prism Total	Draws figures Makes prisms Measures sides of prisms	- Describes the names of prisms - Interprets the	Discussion Guided discovery Explanation	- Critical - thinking Problem solving	Wall char Cutouts Boxes Manila Tins

			surface area of a cylinder Total surface are of a trapezium		written word problems			
		Volume	Volume Cuboids Cubes Triangular prism Trapezium prism Cylinder Spheres (4/3 r^3)	Makes cut outs Draws figures Interprets figure Interpret figures	- Describes figures - Names figures	Question And answer Discussion	- Problem - solving Critical thinking	Cutouts Boxes Tins Charts
		Packing	Packing cubes into cuboid Packing cylinders into cuboid	Draws figures States properties of figures	- Demonstration - Guided discovery - Discussion	Effective communication Critical thinking	- Boxes - Tins	
	Weight/mass and capacity		Mass Mass is the quantity of matter in an objects Units on grams and kilograms 1kg – 10 Newton (weight) Converting kg to tonnes Converting grams to kg Addition and	Defines mass States the difference btn mass and weight Converts kg to quintals Kg to tonne	- Spells - Quintals - Tonne	Demonstration Discovery Discussion	- Effective communication - Problem solving Critical thinking	Bears balances Weight balances Scale Spring Balancing

				subtraction of mass					
			Collecting like terms	Collecting likes terms of different variables Collecting like term in figures Rectangles Square Pentagon Trapezium	Reads word statements Draws figures Collects like terms Simplifies like terms	- Reads word statements - Interprets the given variables	Discussion Explanation	- Problem - solving Critical thinking	Chalkboa illustratio

		Algebra	Forming algebraic expressions	Forming algebraic expressions using words like Twice Trice Half Square Double etc	Forms variables Adds terms Subtracts terms	- Reads word statements - Interprets word statement	Discussion Guided discovery	- Problem - solving Critical thinking	Chalkboard illustration	- Reading - Forming expressions	Fou 2 Ml pg 42
			Expression involving brackets	Removing brackets in expression involving brackets	Reads expression correctly Multiplies variables Simplifies terms	-	Guided discovery Discussion	- Problem - solving Critical thinking	Wall chart	- Reading - Opening brackets - Adding - Subtracting	Ml 43 Fo 21

			Expression with brackets and fraction	Removing brackets with fraction variables	Do	- Do	Do	- Do	Do	- Do	Do
			Subtraction	Substitution in algebra	Expands terms Substitution terms Adds terms Multiplies terms Simplifies	- Spells the words - substitution Interprets terms	Guided discovery Discussion Discussion	- Problem - solving Critical thinking	Chalkboard illustration	- Reading - Expanding - Substitution	Ml pp 42 Fou 2 Ml 17
			Expression with powers	Adding and subtracting with powers Multiplying expressions with powers Dividing expression with powers	Adds expression Subtracts expressions Multiplies Divides Simplifies	- Reads expression - Describes - words - Powers - Indices Exponents	Guided discovery Discussion	- Problem - solving Critical thinking	Wall chart Chalkboard illustration	- Reading - Solving	Fou 2 Mk 1 Ml 75 45
			Equations	Revision of simple equation Examples X+5+=13 y-3=5 3x+6=18 X^2+1 = 10 3(2x+1) - 2(x+4)=35	Reads equation Solves equations Simplifies equations	- Describes the term - equation Simplifies equation	Describes equation Defines term Variables Coefficients Unknown	- Guided - discovery Discussion	Problem solving Critical thinking	- Wall chart - Chalkboard illustration	Ml Fou 2 Mk 1

				Equations involving fraction Examples ½ p = 6 4 1/3 q + 2 = 15 $\frac{13}{3}$ p $\frac{m+1}{3}$ + $\frac{m}{4}$ = 2	Reads equation Solves Simplifies	- Reads - equation Describes given equation	Discussion Questions and answer	- Do	Do	- Do	Fou 2 22 Mk 1
				Equations involving powers Examples Q + 4 = 20 ½ p^2 = 8 1/3 p^2 = 12	Reads equation Solves equation Simplifies	- Describes terms - Powers - Indices - Exponents - Reads equation	Guided discovery Discussion	- Critical - thinking Problem solving	Wall chart Chalk board illustration	- Reading - Writing	Ml Fo 2 22 Mk 1
			Word problems in	Forming and solving equation from word	Reads word problems Forms equations	- Reads word problems	Discussion Demonstration	- Problem - solving Effective	Pens Books	- Reading - Counting	Fo 22
			algebra	problems	Solves equation	- Describes written - statements Interprets - terms like - Twice - Thrice - Less than More than etc		communication	Oranges Mangoes Money Wall charts	- Sorting	M 3 M 1

			Inequalities	Inequalities with infinite solution sets Examples Find the solution set for x<5 Soln- X ={4,3,2,1,0,-1,...}	Reads inequalities Draws a number line Finds the solution set Writes symbols of inequalities	- Defines terms - inequality - Solution - set Describes words Less than greater than	Guided discovery Discussion	- Critical - thinking Problem solving	Reading Drawing Counting	-Wall chart -Books -Pens	M Fo 2
				Inequalities with finite solution sets Example -2<x<2 Solution X={-1,0,1}	Do	- Do	Guided discovery Explanation	- Problem - solving Critical thinking	Do	- Do	M 4 M 1 1 F 2 2
				Solving simple inequalities Example Solve and list the solution 3x>9 $\frac{3x>9}{3 \quad 3}$ x>3	Reads inequalities Solves Lists solution set	- Reads inequalities - Uses words - Less than - Greater than Less - or equal to Greater or equal to in sentence	Discussion Demonstration	- Problem - solving Effective communication	Do	- Do	M 4 F 2

				Solving inequalities involving fraction Example Solve and list the solution set $2x \leq 2$ 3 Solution $3 \times \frac{2x}{3} \leq 2 \times 3$ $2x \leq 6$ $\frac{2x}{2} \leq \frac{6}{2}$ $X \leq 3$ X = {3,2,1,0,-1,----}	Reds inequalities Solves Simplifies Lists the solution set	- Reads inequalities - Uses words Less than Greater than Less or equal to - Greater or equal to in sentences	Discussion Demonstration	- Problem - solving Effective communication	Do	- Do	M 4 Fo 2
				Solving finite inequalities Example Solve and list the solution	Solves inequalities Simplifies Lists the solution set	- Reading the inequalities - Interprets	Guided discovery Discussion	- Critical - thinking Problem solving	Wall chart Chalkboard	- Reading - Drawing - Counting	M 4 Fo M
				set $8 > 2x > 2$ $\frac{8}{2} > \frac{2x}{2} > \frac{2}{2}$ $4>x>1$ X={3, 2}		- symbols Describes symbols				

				Solving inequalities involving brackets Example Solve the inequality 2(x+1)>4 Solution 2x+2>4 2x>4+2 2x>6 X>3	Do	- Do	Do	- Problem solving - Effective communication	Do	- Do	M 4
				Word problems involving inequalities Example The Headteacher's car can accommodate maximumly 5 people. Show this inequality Solution x≤ 5	Reads word problem Forms inequalities Forms inequalities Solves inequality Simplifies	- Reads word statements - Describes word statements Interprets symbols	- Guided discovery Discussion	Problem solving - Critical thinking	- Pens - Bottle tops - Straws - Pencils Wall chart	Reading Drawing Counting - Solving	M 4