VICTORIOUS PRIMARY SCHOOLS
P.7 MATHEMATICS SCHEME OF WORK 2023

WK	PD	THEME	TOPIC	SUBTOPIC	COMPETENCES		CONTENT	METHODS	ACTIVITIES	LIFE SKILLS	T/L AIDS	REF	REM
					SUBJECT	LANGUAGE							
1	1	NUMERACY	WHOLE NUMBERS	The concept of numbers	The learner -identifies different forms of writing number values. -Forms numbers from digits.	The learner:-- reads numbers in different forms	-Hindu Arabic form -Roman form -English form/word form.--guide learners through forming numbers from different digits.	-Guided discussion - Guided discovery	- reading numbers -forming numbers.	-Effective communication -Logical reasoning.	Chalkboard illustrations	Teachers own collection	
	2			Rounding off whole/ decimal numbers	The learner -makes a review of place values and values. -rounds off whole number. -rounds off decimal	The learner -describes the idea of rounding off numbers -reads numbers in different forms.	-Round off 35768 to the nearest hundreds. -Round off 3.759 the nearest tenths		- rounding off whole numbers - Rounding off decimal numbers		Charts showing rounding of numbers	Mk bk7 pg 30 – 34 Understanding math bk7 pg 28-32	
	3			- Writing numbers in Hindu/ Roman numeral	The learner -writes numbers in Roman numerals -Writes numbers in Hindu Arabic	The learner reads and pronounces New words -numerals -Roman numerals -Hindu	-Write 469in Roman Numeral -Write CCLXXIV in Hindu Arabic Numeral		-Writing numbers in Roman numeral and vice versa		Charts showing Roman numerals	Mk math bk7 pg9-21	

					numerals	Arabic numerals							
	4			Application of Roman numerals	The learner -solves word problems involving Roman numerals in our daily life	The learner reads and interprets questions involving application of roman numerals.	Uganda became politically independent from British in1962.Write this year in Roman Numerals	- Discussion - Explanation - Illustration - Demonstration	Solving problems involving Roman Numerals - Counting in bases -Finding place value and values of digits in different bases	-Critical thinking -problem solving - responding accurately	Chalk board	Mk math bk7 pg 18-19	
	5		BASES	Counting in different bases	The learner - makes a review of different base systems -counts in different bases -names bases	The learner reads and pronounces words related to bases i.e. -bases -binary -ternary -quaternary -quinary -senary -septenary -octal -nonary -decimal	-Express 5 in base two by grouping -Find the value of each digit in the number $1101_{two.}$ Refer to the lesson notes for details.				Charts showing counting in bases	Mk math bk7 pg 20-21	
	6			Expanding bases	The learner -expands bases using powers and values.	The learner reads numbers in expanded forms	-Expand 3212_{four} using index	- Discussion - Explanation	Expanding numbers in different bases	-problem solving -critical thinking	Chalk board	Functional math bk 7 pg 39	

	7			Changing from other bases to base ten	-changes from other bases to base ten		-Change 101_{two} to base ten	- Illustration	-changing from other bases to base ten.		Relating to real experience	Functional math bk7 pg 39-41	
2	1			Changing from base ten to other bases	The learner -changes from base ten to other bases -changes from one base to another base		-change 35ten to binary base -Change 23four to base five	-Discovery -Discussion -Explanation	-Changing from base ten to other bases. -changing from one base to another		Chart to show modulo	Functional Math bk7 pg251 - 258 -Mk math bk7 page 80	
	2			Finding the missing bases	The learner finds the missing bases		Given that 32p = 17ten. Find the value of p.		-Finding the value of the unknown base		Charts showing addition of finite using dial.	Mk math bk7 pg24-226	
	3			Addition of bases	The learner -adds bases -arranges numbers vertically		-Add 1001two + 101two		-Arranging numbers vertically. -Adding bases		Charts showing subtraction of finite using dial.		
	4			Subtraction of bases	The learner -subtracts bases		-Subtract: 101two – 11two		-subtracting bases		Chart showing multiplying of finite		
	5			Multiplication	The learner multiplies	The learner: -pronounces	-Work out: 42five X 2five		-Multiplyi	-Problem solving	Chart showing		

				of bases	bases	the key words used. -Spells the new words -reads the given sentences correctly			ng bases	-Effective communication -Decision making -critical thinking -Creative reasoning	division of finite.		
	6	NUMERACY	INTEGER	REVISION OF INTEGERS	-The learner: -shows integers on Number line. -compares integers using <, > or =	The learner: -pronounces the new word -spells the new words -reads the new words. **New words** -number line -integer -negative -positive	Draw number lines and show the integers -Compare the following using <, > or -100 _____-10 +8 _____-3 +13 _____ +8 +3 -2 ____ +3 - +2	-Discovery -Question and answer -Explanation	-Mental work -Answering question	-Critical thinking -Problem solving -Effective communication	-Chalk board illustration -Exercise books	Understanding math bk7 pg 90-91	
	7			ADDITION OF INTEGERS ON NUMBER LINES	The Learner: -Adds integers using number line. -Reads addition sentences	The learner: -pronounces the new words. -spells the new words.	**Examples** 1 Work out: ˉ2 + ˉ3 2. Mathematical statements shown on the number lines for example What mathematical sentence is shown on the number line below?	-Discovery -Discussion -illustration -Explanation	-Drawing number line. -Reading integers from the number line. - writing addition sentences from	-critical thinking -Effective communication -problem solving	Chart showing addition of integers. -Charts showing subtraction of integers	-Mk Math BK7 page 310-312 -Oxford primary math book 7 page123 and 126	

									the given number 3line. -Reading subtraction on sentences				
3	1			Subtraction of integers On number lines	The learner: -subtracts integers -read integers on the number lines - reads subtraction sentences from the number line		**Examples** 1 Show $^{-}2 - 3$ on a number line 2 Read subtraction sentences from number lines	-Discovery -Question and answer -Explanation	-Mental work -Answering question	-Critical thinking -Problem solving -Effective communication+	-Chalk board illustration -Exercise books	Understanding math bk7 pg 90-91	
	2			Addition and Subtraction of integers without number lines	The learner: -adds integers without number line. -subtract integers without number lines. -apply the law of integers when adding and subtracting integers	The learner: -pronounces key words used in the lesson correctly. -reads sentences correctly.	Work out the following without the use of number lines. 1. $^{-}5 + {}^{+}6$ 2. $+4 - {}^{-}3$	-Discovery -Discussion -illustration -Explanation	-Drawing number line -Reading integers from the number line. - writing addition sentences from the given number	-critical thinking -Effective communication -problem solving	Chart showing addition of integers. -Charts showing subtraction of integers	-Mk Math BK7 page 310-312 -Oxford primary math book 7 page123 and 126	

	4			Multiplication of integers on number lines	The learner: -multiplies integers using number lines -writes multiplication sentences	The learner: -pronounces key words used in the lesson correctly. -reads sentences correctly.	• Multiply integers using number lines • Read the integers shown. Write the multiplication sentences		line. -Reading subtraction sentences				
	5			Multiplication and division of integers without number line	The learner: -Multiplies integers without using number lines. The learner -Divides integers without using number lines	The learner: -pronounces the key words used. -Spells the new words -reads the given sentences correctly	1. Work out -3 X 2 2. Simplify -24 ÷ -3	- Discussion - Explanation	- Multiplying integers -Dividing integers	-Problem solving -Effective communication -Decision making	Charts showing multiplication and division of integers without number lines	--Oxford primary mathematics Bk 7 page126 - 127	
	6			Application of integers	The learner -Solves problems involving integers	The learner - reads and interprets word problems involving integers	Example -Charles had a debt of shs.1000. He paid shs.7000. What was he remaining with?	Guided discussion	Working out word problems of integers	Logical reasoning.	Relating to real experience	Mk primary mtc bk7 pg 232-324	
				COORDINATE GRAPHS	COORDINATES Identifying lines Plotting points.	Presents and interprets information on a coordinate graph.	Reads information on graphs Explains what steps are followed when presenting data on graphs.	Discussions Group work Discovery Questions and	Critical thinking Problem solving Effective communication.	-Reading -Drawing - Answering oral questions - Computi	A graph board A well drawn chart	MK MTC bk 7 page 175 to 177	

								answer		ng numbers			
		4			COORDINATES Naming points	Presents and interpretes information on a coordinate graph.	Reads information on graphs Explains what steps are followed when presenting data on graphs.	Discussions Group work Discovery Questions and answer	Critical thinking Problem solving Effective communication.	-Reading -Drawing - Answering oral questions - Computing numbers	A graph board A well drawn chart	MK MTC bk 7 page 178 to 179	
		5	INTERPRETATION OF GRAPH AND DATA		COORDINATES Plotting points Forming figures Finding areas	Presents and interpretes information on a coordinate graph.	Reads information on graphs Explains what steps are followed when presenting data on graphs.	Discussions Group work Discovery Questions and answer	Critical thinking Problem solving Effective communication.	-Reading -Drawing - Answering oral questions - Computing numbers	A graph board A well drawn chart	MK MTC bk 7 page 180 to 183	
	8	1	INTERPRETATION OF GRAPH AND DATA		COORDINATES -Using equation of the line to complete tables -Plotting lines.	Presents and interpretes information on a coordinate graph.	Reads information on travel graphs Explains what steps are followed when presenting data on graphs.	Discussions Group work Discovery Questions and answer	Critical thinking Problem solving Effective communication.	-Reading -Drawing - Answering oral questions - Computing numbers	A graph board A well drawn chart	MK MTC bk 7 page 184 to 186	
	7		FINITE SYSTEM	Counting in finite system	The learner -counts in finite system -Uses clock face to express	The learner; -states digits under different finite system .- reads	Complete tables in in finite 5 -Draw a clock face in modulo 4	- Discovery - Discussion	- Counting in finite -Drawing clock face to	-problem solving. appreciation	Chart to show modulo Mathematical rulers.	Functional Math bk7 pg251 - 258	

					numbers	numbers on the clock face.		- Explanation	show different modulo			-Mk math bk7 page 80	
	1			Addition of finite	The learner adds finite using dial method. -add finite without the dial method		-Use clock face to find 4 +3 in mod 5 -Work out 2 + 5 =____(finite 7) without using a dial.		-Adding finite using dial. -Adding finite without the dial	-Problem solving -Effective communication -Decision making -critical thinking -Creative reasoning	Charts showing addition of finite using dial. Charts showing subtraction of finite using dial. Chart showing multiplying of finite Chart showing division of finite.		
	2			Subtraction of finite	The learner – subtracts numbers in finite using dial -Subtracts finite without using dial	The learner Reads and writes mathematical statements from dials -indices	-Use clock face to work 3 – 4 mod 5 -Work out 2 – 4 = ___(Finite 5)		-Subtracting finite using dial. -Subtracting finite without the dial				
	3			Multiplication of finite	-Multiplies finite using dial -multiplies finite without the use of dial	-reads mathematical statements.	-Use dial to show 2X 3 = __(mod 5) -Work out 3 X2^{2} = -------(mod 5)		-Multiplying finite using dial. -Multiplying finite without the dial				
	4			Division of finite	-Divides finite using dial -Divides finite	The learner: -pronounces the key	-Use dial : 5 ÷ 3 = __ (Finite 7)		-Dividing finite using				

					without using dial	words used. -Spells the new words -reads the given sentences correctly	-Work out: 6 ÷ 3 = ----(Finite 7)		dial. -Dividing finite without the use of dial				
	5			Finding the unknown value in finite Application of finite system	The learner -Finds the unknown in the given finite	<u>The learner</u> Reads and interprets new words New words -Equation -solve -coefficient	Work out: 3p – 3 = 4(finite 7)		- Discovery - Discussion - Explanation		Chalk board illustration	Functional math bk 7 pg 301-302 -mk math bk7 pg 170 old edition	
	6				-applies finite using days of the week	-brackets -open -opining brackets	-If today is Sunday, what day of the week will be 39 days from today? -Today is Wednesday, what day of the week was it 114days ago? 1. -Today is Tuesday 14th June. What day of the will it be on 20th August of the same year?					Chart showing days of the week in finite	Mk math old edition bk7 pg 173-174	

	7				The learner -solves problems involving months of the year using finite system	The learner -reads ,interprets and forms equations involving months of the year	-It is July now, which month will it be after 2132 months from now?		-Using finite to find months to become. -Using finite to find months which have passed		Chart showing months of the year in finite		
5	1				The learner -solves problems involving hours of the day using finite system		-It is 3:30am. What time will it be after 13 hours from now?		-Using finite to find time		Chalk board illustrati on		
	2				-applies more than one finite in solving problems	Reads and comprehend s questions involving more than one finite	Find the smallest number of pencils that is divisible among a group of 2,3 or 4 without remaining.		Applicatio n of finite in daily life				

	3		ALGEBRA	Algebraic expression	The learner: -writes down some algebraic expressions in words -writes down some algebraic expression in figures	The learner: -pronounces the new words. -reads the new words -spell the new words **New words** -algebra, expression, algebraic -reads algebraic expressions.	Algebraic expressions are mathematical statements involving unknown. Example, 3x, 4p +4 **Examples** -Write 3k +6q in words. 3k +6q is the sum of three k and six q -Write in figures: Six times y minus five time k 6y – 5k	Explanation -Guided discussion -guided discovery	-Writing algebraic expression in words. -Writing algebraic expression in figures.	-Critical thinking -Analyzing statement -logical reasoning	-Chalk board illustration. -charts showing algebraic statement.	-Mk math bk7 pnew edition pg 427-480 -Mk math bk7 old edition pg165-166	
	4			Simplifying algebraic expression	The learner -Simplifies algebraic expression involving whole numbers without brackets	The learner ; -identifies and describes co efficient of expressions	-Simplify: K + K + K + K + 5K = 9K -Simplify: 4q +2 – 2q + 6y 4q – 2q + 6y – 2 2q +6y - 2		-Simplifying algebraic expression -Simplifying expression involving brackets			Mk math bk7 page 167 old edition Mk math new edition pg 427-429	
	5			Algebraic expression involving brackets	The learner -simplifies expression involving whole numbers with brackets	The learner -reads common word s involved like brackets, co efficient.	Simplify: 2(a +3) – (a +5) 2a + 6 –a – 5 2a – a +6 – 5 a- 1						
	6			Algebraic express	-simplifies expression involving		$\frac{1}{3}(3a + 9b)$		-Simplifying			Mk math old	

				ion involving fractions	fractions		$= \frac{1}{3} \times 3a + \frac{1}{3} \times 9a$ $=a + 3a$		expressions involving fractions			edition bk7 pg169	
	7			Factorizing Algebraic expression	The learner - factorizes algebraic expression	The learner -Describes the concept of factorization.	Factorise: $(3ab + 6a^2b) = 3ab(1 + 2a)$		Factorizing the given expression			Oxford primary math bk7 Pg 153	
	1			Application of algebraic expression	The learner - applies the idea of algebra in our daily life	-the reads the given statements	The sides of a triangles are 2p, 6p and 10p. Find the perimeter of the triangle. Perimeter = S + S + S = 2p + 6p + 10p =18p -Subtract 2(p -1) from 3(p +1)		-Applying algebraic expression in our daily life.				
	2		SUBSTITUTION	Substituting whole numbers and fractional numbers	The learner: -carries substitution without fraction. -carries substitution involving fraction -carries out substitution involving integers	The learner: -pronounces the new words -spells the new words -reads the new words **New words** -substitute -substitution -replace -replacement	Substitution is the act of replacing the unknown with a known in an algebraic expression to make a statement true **Examples** If a =2, b =3 c = 0 d = 5. -Find the value of 2bc -Find $\frac{b(c + d)}{3}$ -Given that h = ½ ,y = ¼, r = 2/3. Find the value of hy – yr - Find the value of 12h + 8y – 6r	- Discovery - Discussion - Explanation - Illustration	- Substituting numbers without fractions - Substituting with fraction.	-Problem solving -critical thinking	-Chalk board illustration	-Mk math bk7 pg444-445 - Understanding math bk7 pg333-334	
	3		INDICES	Review of P.6 work.	The learner -expresses numbers in power form -finds values	The learner -reads numbers in power form.	- Guide learners to review factorizing whole numbers -guide learners through writing numbers using the given base -guide learners finding values of	Guided discussion explanation	Factorizing using a given base Expandin	Logical reasoning. Creative thinking	Chalkboard illustration	Teachers collection	

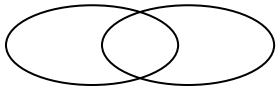
					of numbers in power form.		the given numbers in power form.		g numbers				
	4			Addition and subtraction of indices	The learner -adds of indices -subtracts indices	The learner -reads numbers in power form.	-Work out $3^2 + 2^3$ -Find the value of $5^2 - 2^3$		-Adding indices -Subtracting indices				
	5			Multiplication and division of indices	The learner -Multiplies and divides power of different bases -multiplies and divides powers of the same base -develops the laws of multiplication and division of powers of the same base.	The learner -states the laws of indices on multiplication and division of powers of the same base	-Simplify $x^2 \times 3x^3$ -Find the value of $2^3 \times 2^{-2}$ -Work out $3^2 \div 3^1$		-Multiplying indices -Subtracting indices				
	6			Concept development	The learner -develops the concept index zero, one, double index and negative	The learners -makes conclusion about index zero, one , negative and double index	-guide learners to get to the conclusion about the value of index zero, one, negative and double index. - giving learners various examples involving the above index.	-Guided discovery -Guided discussion -explanation	Reading the conclusions	-Logical reasoning -creative thinking -problem solving. -appreciation	Chalkboard illustrations.		
	7			Substitution of indices	The learner -Substitutes the given numbers	Compares unknowns and their corresponding quantities	-Given that a#b means $a^b + b^a$. Find the value of 3 # 2 Refer to the lesson notes for detailed content		Substituting the given numbers				

	1		EQUATION	Equation involving indices	The learner - solves equation involving indices	The learner reads and interprets equations involving	**Examples** Work out: $2^{2a+1} = 8$		Solving equation involving indices		Chalk board Illustration		
	2			Solving equations.	The learner - solves equation of addition -solves equation of subtraction -solves equation of multiplication -solves equations of division	The learner reads and interprets equations	Work out the following 1. X + 3 = 5 2. K – 9 = 8 3. 7p = 21 4. $\frac{X}{2} = 10$		-solving equation by adding, subtracting, multiplying and dividing		Chart showing equation	Functional math bk 7 pg 301-302 -mk math bk7 pg 170 old edition	
	3				The learner solves equations involving brackets	The learner -describes the concept of opening brackets.	Work out the following. 2. 3(y +4) = 21 3. 5(y + 1) -3(y -1) = 14 4. 4x -3 = x +6		Solving equation involving brackets Solving equation involving fraction		Chalk board illustration	Mk math old edition bk7 pg 173-174	
	4				The learner solves equations involving fractions	The learner the LCM of the fractions given fractions	Work out the following. 1. a/5 + 19 =4a. 2. 0.4p + 0.5 = 2.1 3. $\frac{n-1}{6} + \frac{3n+7}{24} = 1$						

	5			Application of equation	The learner: -solves equation using figures	The learner: pronounces new words spells the new words -reads the given sentences. -reads and interprets word problems.	Find the value of p in the figure below. (4p -4)cm (2p +1)cm (2p +4) cm	- Discussion - Explanation - Illustration	Solving equation involving figures -Forming equations. -Solving the equations formed	-Problem solving -critical thinking	Chart showing diagram with algebraic expression Chalk board	Mk math old edition bk7 pg 175-176	
	6				The learner - solves word problems involving algebra.		**Examples** -John is 10 years older than Peter. Their total age is 35. How old is John? The sum of three consecutive counting numbers is 33. Find the numbers						
	7						Juma is 20 years older than his son. In 10 years to come, he will be twice older than the son. How old will the son be?				Chart showing application of equation.		
	1		INEQUALITIES	Showing inequality on number line	The learner: -show inequality on number line -name symbol for in equality -give examples of inequality	The learner reads solutions sets of inequalities New words -inequality -greater	Inequality is a mathematical statement with the symbols of <, >, ≤ or ≥ Solution set is a set of possible values of a given unknown. **Types of solution sets** -Open solution Closed solution **Examples**	- Discovery - Discussion - Illustration	-Listing solution set -Drawing number line for solution set. -Writing		Chart showing solution set on number lines.	Mk math bk 7 new edition pg 192 - 194	

					-finds solution set -Finds solution of inequality with more than one symbol.	-less -greater or equal to -less or equal to -solution set	-Find the solution set for: x <5 -Find the solution set for: -2<X < 2 -Find the solution set for: 8> 2x > 2	Observation - Explanation	symbols for solution set Finding solution set				
	2			Solving inequalities	The learner -- solves the inequalities -finds the solution sets for the inequalities -solves inequalities involving negative co efficient.	The learner states the solution sets for the inequalities.	**Examples** -Solve and find the solution set: p + 5< 7 -Solve the inequality and list the solution set: 3x +2> 4 + 5X -solve inequalities involving negatives.		-Solving the inequality. -Listing the solution set		Chalk board illustration	Mk math new edition bk7 pg 194	
	3	SET CONCEPT		Types of sets	The learner: -reviews different types of set -solves problems involving types of set	The learner -pronounces the new words -spells the new words -reads the given sentences	Revision work on: -intersection set -union set Equal and equivalent sets -difference of set -complement of sets	- Question and answer - Discussion - Explanation Discovery	- Answering oral question on sets - Answering written questions on sets.	-Critical thinking -Problem solving - Responding to question appropriately	-Chalk board - Exercise books -pens and pencils	-Mk math new edition bk7 pg1	
	4			Finite and infinite sets	The learner -states examples of finite sets	The learner -describes the concept of finite and	-Finite sets are sets whose members can be listed with an end. Example: Set of vowel = (a, e, I, o, u).	- Discovery -	-Defining finite and infinite sets	-Logical reasoning -creative thinking	Chart showing finite and	Mk math new edition	

					-gives examples of infinite sets	infinite sets	Infinite sets are set whose members don't end when listed. Example: Counting numbers = (1, 2, 3, 4, …)	Illustration - Demonstration - discussion	-Listing finite sets. Listing infinite sets		infinite sets	bk7 pg2-3 Understanding math bk7 pg15-16	
	5			Sub sets and proper subsets	The learner - defines sub and proper sub sets -lists subsets List proper subsets	The learner reads new words related to subsets and proper subsets.	-Sub sets are small sets found in a big set. -Proper sub sets are subsets excluding the set itself(super set) **Example** P = (2,3,4). -List all the sub sets -List all the proper sub sets	- Explanation -guided discussion.	-Defining subsets and proper sub sets -Listing sub set -Listing proper subsets	- problem solving -effective communication. -critical thinking.	Chart showing sub sets and proper sub sets	Mk math new edition bk7 pg4-7 Understanding math bk7 pg3-6	
	6			Using formula of sub and proper sub sets	The learner - derives the formula for finding the number subset and proper -uses the formula to find sub and proper sub sets	The learner reads and interprets questions involving finding the number of subsets and proper subsets	-Formula for sub set is 2^n -Formula for proper subset is 2^{n-1} **Examples** -Set C = (4, 5, 6, 7). -How many sub set are in set C? -How many proper sub sets are in C?	- discussion - explanation - discovery	-Deriving formula for sub sets -Using the formula to find sub and proper sub sets	- problem solving -effective communication. -critical thinking	Chart showing formula for sub and proper sub sets		

	7			number of elements when sub and proper subsets are given	The learner-determines the number of sub and proper sub sets	The learner reads and interprets word problems involving the number of subsets.	-A set has 8 sub sets. How many elements are in the set? -Set P has 31 proper subsets. How many members are in set P?	discussion - explanation - discovery	-Getting number of elements when given sub and proper sub sets	- problem solving -effective communication. -critical thinking	Chalk board		
	1			Shading Venn diagrams	The learner: -shades region on the Venn diagram -describes the shaded part	The learner: -pronounces the new words -spells the new words **New words** -Venn diagram -shade -describe	- Guide learners to draw and shade regions on the venn diagram -guide the learners to describe the regions on already drawn venn diagram	- Discussion - Explanation - Illustration	- Describing the shaded parts. -Shading the given part	-Critical thinking -Problem solving - Responding to question appropriately	Charts showing Venn diagrams with shaded parts	Understanding math bk7 pg2-3 Mk math bk7 old edition page 8	
	2			Representing information on Venn diagram	-The learner represents information on Venn diagrams -reads information from the Venn diagrams	The learner reads information -represent -read -interpret	The Venn diagram below shows the number of boys in a P.7 class who prefer rice(R) and Posho(P).  -How many boys prefer rice?	discussion - explanation - discovery	- Answering question about the Venn diagram	- problem solving -effective communication. -critical thinking	Chalkboard illustrations.		

					-solves problems on sets involving venn diagrams		-How many boys prefer only one kind of food						
	3			Representing information on Venn diagram	The learner: -represents information on the Venn diagram -solves problems involving Venn diagram	The learner: pronounces the new words -spells the new words	In a school of 70 pupils, 30 like English(E), 40 like Mathematics, Some like both while 5 do not like any of the two subject. -Draw a venn diagram and show the information. -How many pupils like both subjects?	-Discussion -Explanation -Question and answer	-Showing information on Venn diagram -solving problems involving Venn diagram	-Critical thinking -Problem solving -Responding to questions appropriately	-Chart showing Venn diagrams	Mk math bk7 pg 8-11	
	4			Applying probability on Venn diagram	The learner - applies probability on Venn diagram	The learner reads and pronounces New words -probability -chance -outcome -expected -possible -possible outcome -expected outcome	In a class of 50 candidates, 25 candidates like Sodas(S),30 candidates like juice(J). y candidates like both. -Show the information on the Venn diagram. -How many candidates both? -Find the probability of picking a candidate who likes only two types of drinks	Discussion -Explanation -Question and answer		- problem solving -effective communication. -critical thinking	Chalkboard illustrations Reference text books.	Mk primary maths pupils book 7	

	5	NUMERACY		Review of fractions.	The learner -shades and writes fractions shaded on diagrams. -finds equivalent fractions. -orders fractions and decimals.	The learner -describes shaded fractions on the diagram. -reads equivalent fractions.	-shading fractions on the diagrams -naming shaded fractions -equivalent fractions -improper fractions and mixed numbers	-Guided discussion. - cooperative groups.	-shading fractions on the diagrams -naming shaded fractions - converting mixed numbers to improper fractions.	Effective communication. Critical thinking Problem solving.	Chalkboard illustrations	Teachers own collection	
	6			Addition and subtraction of fractions	The learner - Adds and subtracts fractions with the same denominator. -Adds and subtracts fractions with different denominators using LCM	The learner -reads and pronounces new words - reads and comprehends phrases involving addition and sub traction of fractions	Addition of fraction with the same denominators Subtraction of fractions with the some denominator Addition and subtraction of fraction with different denominators.	-guide Discovery -Guided Discussion	- Counting -adding -reading	-Critical thinking -effective communication	Chalk board illustration	Mk book 7 page 55	
	7		FRACTIONS	Word problems involving addition and subtract	The learner Solves word problems that involve addition and subtraction of fractions.	The learner reads and comprehends word problems involving subtraction and addition	Word problems Jane spent ½ of her money on books and 1/3 on pens. What fraction of her money did she spend on books and pens?	-Guided discovery - Problem solving.	Reading questions Writing counting	-Critical thinking Responding to questions -Problem solving	Reference text books Chalkboard illustration		

				ion fraction s		of fraction.							
	1			Multipli cation of fraction s.	The learner -Multiplies common fraction, mixed numbers, and whole numbers.	The learner -reads and pronounces different fractions	-multiplication of fraction by whole numbers -multiplication of common fractions -multiplication of mixed numbers -simplifying fractions.	-Guided discussi on -Guided discover y	Reading questions Analyzing questions	Assertive ness Effective communi cation Problem solving	Referen ce text books Chalkbo ard illustrati on		
	2			Word problem s involvin g multipli cation of fraction	The learner; Solves word problems involving multiplication of fraction.	The learner ; -reads and comprehends word problems involving multiplication of fractions	Word problems Juma ate 1/3 of his loaf of bread that weighs 100g. how many grams did he eat?						
	3			Division of fraction s	The learner; -divides common fractions, mixed numbers and whole numbers by fractions.	The learner ; Reads and pronounces words and different fractions.	1.Divide 1 ½ by 3 /4 2.divide 4/5 by 3/10 Reciprocal of fractions.	-Guided discover y - Problem solving. -group discussi on	Reading Writing Forming groups	-Sharing -Effective communi cation	-Chalk board illustrati on - referenc e text book.	Fountai n primary mathem atics book 7	
	4			Word problem s	The learner; Solves word	The learner; -reads and	Example. How many half litre bottles of						

				involving division of fractions.	problem involving division of fractions.	comprehends word problem involving division of fractions.	water can be got from a 20 litrejerycan of water?						
	5			Mixed operation on fractions	The learner; Simplifies mathematical expressions involving more than one operation.	The learner; Recognizes all the four mathematical operations	The use of the BODMAS rule should be emphasized. 1.Simplify: 5/6 – 1/3 + ½ 1/3 of (1/2 – ¼) + 7/12	-Guided discovery -Group discussion	Identifying different operation Reading	Analytical thinking. -Problem solving. -sharing	Chalk board illustration Reference text book.	MK MTC bk 7 page 74 -76	
	6			**Applications of fractions**	Works out questions involving simple application of fractions	Reads and interprets involving application of fractions. questions	**Simple application** Qn. 2/3 of a class are girls, if there are 20 girls in that class, find the; 1. Total number of pupils 2. Number of boys**.** Qn. After covering 2/3 of the journey, a motorist still had 40 km to cover. How long was the journey?	Discussions Group work Discovery Questions and answer	Reading questions Answering oral questions	Problem solving Critical thinking Cooperation	Chalk board illustrations	MK MTC bk 7 page	
	7				Works out questions involving application of fractions	Read questions	**Taps, digging etc.** Tap A can fill a tank in 6 minutes and tap b can fill the same tank in 3 minutes. How long will both tapstake to fill the tank if opened at the same time?	Discussions Group work Discovery Questions and answer	Reading Drawing Answering oral questions	Problem solving Critical thinking Co operation	Variety of containers of different sizes -Chalk board illustrati	MK MTC bk 7 page 79	

											ons		
10	1				Works out questions involving application of fractions	Read questions	**Finding remainders given one fraction** 4/5 of the class are boys and the rest are girls. Find the fraction of gir**ls**	Discussions Group work Discovery Questions and answer	Reading Drawing Answering oral questions	Problem solving Critical thinking Co operation	-Chalk board illustrations	MK MTC bk 7 page	
	2				Works out questions involving application of fractions	Reads and interprets questions	**Finding remainders given two fraction** ¼ of the animals are cows, 1/3 are bulls and the rest are goats. Find the fraction of goats?	Discussions Group work Discovery Questions and answer	Reading Drawing Answering oral questions	Problem solving Critical thinking Co operation	Chalk board illustrations	Trs own collection	
	3				Applies fractions involving remainders.	Reads and interprets questions involving application of fractions	**APPLICATIONS OF FRACTIONS** **Finding fraction of the remainder**. On a farm, 2/3 of the animals are black, ¼ of the remaining are brown. Find: 1. A third of the remaining fraction. 2. 1/5 of the remaining fraction **APPLICATION OFFRACTIONS INVOLVING REMAINDERS** John spent 1/3 of his money on books and 1/6 on the remainder on transport. What fraction of his money was	Discussions Group work Discovery	Reading Drawing Answering oral questions	Problem solving Critical thinking Cooperation	Chalk board illustrations	Trs own collection	

							left? 2. If he was left with 15,000/= how much did he have at first?						
	4								Reading Drawing Answering oral questions	Problem solving Critical thinking Cooperation	Chalk board illustrations	MK MTC bk 7 page 8	
	5			**Combined Operations on decimals.**	The learner -works out problems involving mixed operation on decimals.	The learner; - reads and interprets questions involving mixed operations on decimals. -Describes the BODMAS rule.	**Example;** Work out: 1. (3 + 0.2) ÷ (0.1 + 2.8) 2. (12.9 – 3)÷ (0.2 + 2.8) Refer to the lesson notes for detailed practice activities.	Discussions Group work Discovery Questions and answer	Reading Drawing Answering oral questions	Problem solving Critical thinking Logical thinking	A well drawn chart	Trs own collection	
	6			Recurring decimals	The learner -converts non-terminating fractions into decimals -converts recurring decimals to	The learner - reads and pronounces words related to recurring decimals.	1. Express 1/3 as a decimal. 2. Change 0.333.. to a common fraction 3. Change 0.1222.. to common fraction	Discussions Group work Discovery Questions and	Reading fractions and decimals Answering oral questions	Problem solving Critical thinking Logical thinking	Chalk board illustrations	MK MTC bk 7 page 74 - 76	

					fractions.			answer					
	7	NUMERACY	FRACTIONS	**Sharing in ratios**	The learner - finds the total ratio -finds the actual shares. -Calculates the total ratio	-describes ratios -reads sentences related to ratios -reads and interprets questions involving ratios -reads the given word problems	**Sharing in ratios** Given total share. Example Share 18 mangoes in the ratio of 4:5 **Sharing in ratios** Given The share of one person. **Paul and James Shared some money in the ratio of 3:5 respectively.If James got shs. 3000,** **Find** **i.Paul's share.** **ii.their total share.**	Discussions Group work Discovery	Reading questions Drawing tables -finding actual shares. Answering oral questions	-Critical thinking Effective communication -Problem solving -Critical thinking Effective communication -Problem solving	A variety of objects Chalkboard illustrations.	MK MTC bk 7 page 98 to 99 MK MTC bk 7 page 98 to 99	
	1				The learner - Works out questions related to the given to sharing in ratios when the difference in shares is given.	Reads and interprets questions involving sharing in ratios.	**Given difference in shares. Example.** Aand B Shared some money in the ratio of 3:5 respectively. If B **got shs.**4000 more than A, find **I** .the share of A II. their total share.	Discussions Group work Discovery Questions and answer	Reading questions Answering oral questions	-Critical thinking - Effective communication -Problem solving	A variety of objects	MK MTC bk 7 page 98 to 99	
	2			Direct proportions	The learners – Solves problems involving direct proportions.	The learner -reads and interprets questions involving direct proportions	- give learner variety of questions involving direct proportions.	Discussions Group work Discovery Questions and answer	Reading and interpreting questions	Critical thinking - Effective communication -Problem solving	Chalk board illustrations		

	3			Inverse / indirect proportion	The learner solves problems involving inverse proportions	Reads and interprets questions involving inverse proportions	-Guide learners to solve problems involving inverse proportions.	Guided discussions Guided discovery.	Reading questions involving .	Critical thinking - Effective communication -Problem solving			
	4					-Reads given word, questions involving percentages -Describes the meaning of percent.	**APPLICATION OF PERCENTAGE** 1. Opio has 400 herds of cattle. 80% of them are cowsand the rest are bulls. Find the number of: a) Cows b) Bulls 2. If 30%of my salary is spent on food, I save shs. 21,000/=. What is my salary?	Discussions Group work Discovery Questions and answer	Reading Drawing Answering oral questions	Problem solving Effective communication Critical thinking Logical thinking	Chalk board illustrations	MK MTC bk 7 page 113 & 114	
	5			Percentage increase and decrease.	Works out problems on percentages in daily life.	Reads given word, questions involving percentages Describes the meaning of percent.	**PERCENTAGE INCREASE ANDDECREASE** 1. Increase shs. 800 by 20% 2. Decrease 1500 kg by 10%	Discussions Group work Discovery Questions and answer	Reading Drawing Answering oral questions	Critical thinking Logical thinking	Chalk board illustrations	MK MTC bk 7 page 115 & 117	
	6				Works out problems on percentages in daily life	Reads given word, questions involving percentages Describes the meaning of	**FINDING ORIGINAL NUMBER AFTER %AGE INCREASE/DECREASE** 1. What amount when increased by 20 % becomes 1440? 2. If a man's salary is decreased by 35% it becomes shs. 15600/=.	Discussions Group work Discovery Questio	Reading Drawing Answering oral questions	Critical thinking Logical thinking	Chalk board illustrations	MK MTC bk 7 page 118 & 120	

						percent.	What is his salary	ns and answer					
	7				Works out problems on percentages in daily life	Reads given word, questions involving percentages Describes the meaning of percent.	**FINDING %AGE OF INCREASE/DECREASE** 1. When 400kg are increased by p%, they become 440kg. Find the value of p 2. 800 pupils. Find the value of k	Discussions Group work Discovery Questions and answer	Reading Drawing Answering oral questions	Critical thinking Logical thinking	Chalk board illustrations	MK MTC bk 7 page 121 to 122	
	1		**Buying and selling**	Profit and loss	Works out problems involving percentage loss or profit.	Reads and interprets questions involving percentage loss and profit.	**PERCENTAGE PROFIT AND LOSS** 1. Joy bought a T.V set at sh. 200,000 and sold it to Amooti at sh. 250,000/=. Find her percentage gain. 2. Otim bought a shirt at sh. 4000 and sold it at 3000/=. Find his percentage loss.	Discussions Group work Discovery Questions and answer	Reading Drawing Answering oral questions	Critical thinking Logical thinking	Chalk board illustrations	MK MTC bk 7 page 123 & 124	
	2					Reads given word, questions involving percentages Describes the meaning of percent.	FINDING SELLING PRICE GIVEN %AGE PROFIT/LOSS 1.Bugirwa bought a DVD Player at shs.300,000 and sold it at 10%profit.Find his selling price. 2.A fridge bought for shs.600,000 was sold at a loss of 25%.Calculate the selling price	Discussions Group work Discovery Questions and answer	Reading Drawing Answering oral questions	Critical thinking Logical thinking	A variety of items in class like bags, textbooks. Chalk board illustrations	MK MTC bk 7 page 128	
	3					Reads given word, questions involving percentages Describes the	FINDING COST PRICE GIVEN %AGE PROFIT/LOSS	Discussions Group work Discovery	Reading Drawing Answering oral questions	Critical thinking Logical thinking	A variety of items in class like bags,	MK MTC bk 7 page 125 to 126	

						meaning of percent.		Questions and answer			textbooks. Chalk board illustrations		
	4			Discount	Solves problems involving discounts.	-Describes the concept of discount. -Reads and interprets questions involving discounts. -states the formula for finding discount.	**DISCOUNT** The market price of a book is sh.4000.If a customer is offered a 10%discount, how much does he pay?	Discussions Group work Discovery Questions and answer	Reading Drawing Answering oral questions	Critical thinking Logical thinking	A variety of items in class like bags, textbooks. Chalk board illustrations	MK MTC bk 7 page 129 to 131	
	5			Commission	Solves problems involving commission.	-Describes the concept of commission. -states the formula for finding discount. -reads and interprets questions involving commission.	**COMMISSION** A salesman was given a salary of sh.20,000 plus a commission of 3% of his sales. If he sold 80 toys at shillings 15,000 each, find his commission and how much he earned together.	Discussions Group work Discovery Questions and answer	Reading Drawing Answering oral questions	Critical thinking Logical thinking	A variety of items in class like bags, textbooks. Chalk board illustrations	MK MTC bk 7 page 132 to 133	
	6			Simple interest	The learner; -Finds simple interest -works out problems	Reads and interprets questions involving simple	SIMPLE NTEREST Finding simple interest Finding amount Finding principal Finding time	Discussions Group work Discove	- Answering oral questions	Critical thinking Logical thinking Critical	A variety of bank notes. Chalk	MK MTC bk 7 page 134 to 135	

					involving principal, time, rate and total amount.	interest. -states the formula for finding simple interest.	Finding rate	ry Questions and answer	-Computing numbers	thinking.	board illustrations	MK MTC bk 7 page 138 to 143	
	7			Foreign exchange	The learner -identifies different exchange rates -converts different currencies.	The learner -describes the concept of exchange rates -reads different exchange rates -reads and interprets questions involving	-Guide learners through Interpretation of the exchange rates. -guide learners to work examples involving exchange on tables.	Guided discovery Guided discussion	Reading exchange rates. Reading and interpreting questions.	Logical reasoning Critical thinking.	Chalkboard illustrations.	Teachers own collection	
	1		INTERPRETATION OF GRAPH AND DATA		TRAVEL GRAPHS -Reading horizontal scales. Reading vertical scales.	Presents and interprets information on a travel graph.	Reads information on travel graphs Explains what steps are followed when presenting data on graphs.	Discussions Group work Discovery Questions and answer	Critical thinking Problem solving Effective communication.	-Reading -Drawing -Answering oral questions -Computing numbers	A graph board A well drawn chart	MK MTC bk 7 page 166 to 172	
	2				PIE CHARTS Showing degrees Showing percentages. Showing expressions.	Presents and interpretes information on a pie chart. Works out problems using pie	Reads information on pie charts. Explains what steps are followed when presenting data on pie charts.	Discussions Group work Discovery Questions and	Critical thinking Problem solving Effective communication.	-Reading -Drawing -Answering oral questions -Computi	A graph board A well drawn chart	MK MTC bk 7 page 157 to 161	

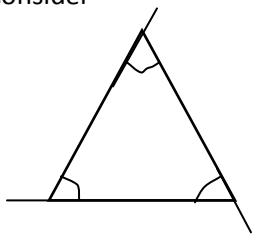
						charts.		answer		ng numbers			
	3				PIE CHARTS Drawing pie charts given; i.fractions ii.percentages	Presents and interpretes information on a pie chart. Works out problems using pie charts	Reads information on pie charts. Explains what steps are followed when presenting data on pie charts.	Discussions Group work Discovery Questions and answer	Critical thinking Problem solving Effective communication.	-Reading -Drawing - Answering oral questions - Computing numbers	A graph board A well drawn chart	MK MTC bk 7 page 162 to 163	
	4				PIE CHARTS Drawing pie charts given; i.quantities (money, animals, people)	Presents and interpretes information on a pie chart. Works out problems using pie charts	Reads information on pie charts. Explains what steps are followed when presenting data on pie charts.	Discussions Group work Discovery Questions and answer	Critical thinking Problem solving Effective communication.	-Reading -Drawing - Answering oral questions - Computing numbers	A graph board A well drawn chart	MK MTC bk 7 page 162 to 163	
	5				TEMPERATURE GRAPHS Scale reading. Inerpreting drawn temperature.graphs.	-Presents and interpretes information on temperature graphs	Reads information on temperature graphs. Explains what steps are followed when presenting data on temperature graphs.	Discussions Group work Discovery Questions and answer	Critical thinking Problem solving Effective communication.	-Reading -Drawing - Answering oral questions - Computing numbers	A graph board A well drawn chart	MK MTC bk 7 page 164 to 165	
	6				TEMPERATURE GRAPHS Drawing temperature graphs.	-Presents and interpretes information on temperature graphs	Reads information on temperature graphs. Explains what steps are followed when presenting data on temperature graphs.	Discussions Group work Discovery	Critical thinking Problem solving Effective communi	-Reading -Drawing - Answering oral questions	A graph board A well drawn chart	MK MTC bk 7 page 164 to 165	

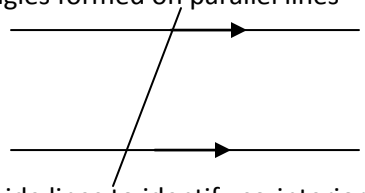
								Questions and answer	cation.	- Computing numbers			
	7				APPLICATION OF MEAN. The mean of y+1, 5 and y is 6.Find the value of y	Solves problems involving application of mean, median, mode and range.	Discusses ways of finding mean, median, mode and range.	Discussions Group work Discovery Questions and answer	Critical thinking Problem solving Effective communication.	-Reading -Drawing - Answering oral questions - Computing numbers	A graph board A well drawn chart	Trs own collection	
	1				PROBABILITY Probability of success/failure Probability when two teams play.	Calculates probabilities of numbers.	Discusses ways of finding probabilities of numbers.	Discussions Group work Discovery Questions and answer	Critical thinking Problem solving Effective communication.	-Reading -Drawing - Answering oral questions - Computing numbers	A graph board A well drawn chart	Trs own collection	
	2				PROBABILITY Tossing one coin/two coins Tossing one dice/two dice.	Calculates probabilities of numbers..	Discusses ways of finding probabilities of numbers.	Discussions Group work Discovery Questions and answer	Critical thinking Problem solving Effective communication.	-Reading -Drawing - Answering oral questions - Computing numbers	A graph board A well drawn chart	MK MTC bk 7 page 188 to 191	
	3	GEOMETR	GEOMETRIC CON	CONSTRUCTION LINES	Learner; Identifies different types	Learner; Describes different sets	Types of lines Straight lines	Guided discussion	Reading Drawing	Mathematiocal sets Chalkboar	Effective communication		

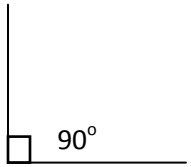
		Y	STRUCTIONS		of lines Identifies different sets of lines Constructs or draws different sets of lines	of lines Reads and pronounces types and sets of lines	Zigzag lines Dotted lines etc Sets of lines Perpendicular lines Parallel lines etc Skew lines Drawing line segments Bisecting lines Dropping perpendicular lines	Guided discovery	Writing measuring	d illustrations	Accuracy Problem solving		
	4			Construction of angles	Learner States the different types of angles Constructs different angles Bisecting angles	Learner; Describes different types of angles Reads and pronounces words used to describe different types of angles	**<u>Types of angles</u>** Acute angles - Angles less than 90^oie 22.5^o, 30^o. 15^o , 45^o, 75^o. etc Obtuse angles – Angles more than 90^o but less than 180^oie. 105^o , 150^o, 120^o , etc Reflex angles – Angles more than 180^o but less than 360^oie 300^o, 270^o, 215^o, 315^o Straight line angle Centre angles	Guided discovery Guided discussion	Reading Forming groups Drawing lines	Mathematical sets Geometry chalkboard instruments Chalkboard illustration	Creative thinking Flexibility Effective communication		
	5			Drawing angles	Learner; Measures and reads angles using a	Learner; Reads and pronounces angles	Measuring angles that are already drawn Drawing and writing acute, obtuse	Demonstration Discussio	Drawing Measuring Reading	Creative thinking Logical	Creative thinking Logical reasonin		

					protractor Draws angles using a protractor	correctly Writes angles in their correct positions and in their correct form	and reflex angles using a protractor	n	Writing	reasoning Self reliance Logical reasoning	g Self reliance Logical reasoning		
	7	Geometry	Geometric construction	Construction of triangles	Learner; States the different types of triangles Constructs equilateral triangles Constructs scalene triangles using angles and sides	Learner; Reads and pronounces different types of triangles Describes different types of triangles	**<u>Types of triangles</u>** Equilateral triangles Scalene triangles Isosceles triangle **<u>Construction</u>** Construction of an equilateral triangle of sides 6cm, 5cm, 4.5cm and 5.5cm Construction of scalene triangles a) sides 6cm by 4cm by 5cm b) Sides 6.5cm by 4.5cm, 5.5cm, etc	Demonstration Guided discovery Explanation	Reading Drawing Writing	Mathematical instrument Papers books	Problem solving Logical reasoning Cooperation Self reliance		
	1				Learner; Constructs triangles when one angle and two sides are given Constructs triangle that	Learner; Reads and interprets questions involving construction of triangles	-Refer to the examples given in the lesson notes Guide learners to make sketches from the given questions Use the sketches to calculate the remaining angles if needed Use sketch to make accurate						

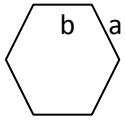
					involve calculating the remaining angle		diagrams						
	2			Construction of quadrilaterals	Learner; Identifies different types of quadrilaterals States the properties of quadrilaterals	Learner; Reads and describes different types Reads properties of quadrilaterals	Examples Square Rectangles Rhombus Parallelogram Kite Trapezium Properties						
	3	Geometry	Geometric construction		Learner; Constructs rectangles Constructs squares	Learner; Reads and interprets questions involving construction of squares and rectangles	Refer to the lesson notes and reference text books for various examples and trial questions Guide learners to make / draw sketches from the questions Make accurate constructions from sketches	Demonstration Guided discovery Guided discussion	Reading Drawing Measuring	Creative thinking Problem solving Self reliance			
	4				Learner; Constructs a rhombus Constructs a parallelogram	Learner; Reads and interprets questions involving construction of a rhombus	Refer to the lesson notes and reference texts for detailed practice questions Drawing sketches Make accurate construction from						

						and a parallelogram	sketches						
	5				Learner; Makes a review of polygons Constructs other regular polygons	Learner; Pronounces words that describes polygons Describes other regular polygons	Regular polygons and their properties Constructs regular pentagon, Hexagon, Octagon						
	6			Angles on a clock face	Learner; Finds the size of the angle covered in 1 minute Finds angles and minutes on a clock face	Leaner; Reads time on the clock face Reads and interprets questions on the clock face	Guided learners to discover the angle in a complete revolution on a clock face Find circle covered by a minute hand in one minute. Refer to the lesson notes for examples and practice activities	Guided discovery Guided discussion Explanation	Reading Counting Writing Converting time	Chalkboard illustration Reference text books Clock face	Logical reasoning Problem solving Appreciation		
	7	Geometry	Geometric construction	Angles formed a triangle	Learner; Identifies sets of angles formed on a triangle State different angle properties formed on parallel lines	Learner; Describes angles formed on parallel lines Reads and writes equations formed from parallel lines	Angles on a triangle Consider 	Guided discovery Guided discussion Explanation	Drawing triangles Forming equations Solving equation Reading Writing	Chalkboard illustration Reference Textbooks Mathematical instruments	Creative thinking Discussion Explanation		

					Forms and solves equations from triangles.		i) a + b + c = 1800^{o} (Interior <s) ii) e + f + d = 180^{o} (Exteriors) iii) b + c = e two interior angles a + b = d equals to one a + c = f opposite exterior Refer to the lesson notes for practice questions and other activities.						
	7			Angles formed on parallel lines	Learner; Identifies angles formed on parallel lines States angle properties formed on parallel lines	Learner; Describes angles formed on parallel lines Reads and pronounces words used top describe those angles	Angles formed on parallel lines  Guide lines to identify co-interior and exterior angles corresponding angles, vertically opposite angles alternate angles Guide learners to form correct statements about those angles and their relations.		Reading Observation Writing	Charts showing different angle properties formed on parallel lines Chalkboard illustrations			
	1			Recognizing angles formed on parallel lines	Learner; Recognizes angles formed on different sets of parallel lines	Learner; Reads and describes relationship on different sets of angles	Give learners examples involving different angle properties formed on parallel lines separately Guide learners to recognize angles when many properties are combined		Reading questions Comparing position of angles		Explanation Guided discovery Guided discussio		

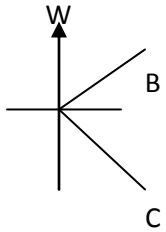
					Recognizes angles formed on simple polygons having parallel lines.	Reads maths statements Reads and pronounce new words	Guide learners to recognize angles formed on parallel lines involving polygons Refer to the lesson notes for detailed practice activities.				n		
	2	Geometry	Geometric construction	Complementary and supplementary angles	Learner; Identifies examples of supplementary angles Identifies examples of complimentary angles Forms and solves equations involving supplementary	Learners; Reads and pronounces new words Reads and interprets questions involving complementary and supplementary angles	Examples of supplementary angles Co-interior <s (180o) Co-exterior <s Angles on a straight line Interior <s of a triangle Complementary <s  Gives detailed practice questions about complementary and supplementary <s.	Discovery Guided discussion Explanation	Reading questions Forming equations Drawing figures	Chalkboard illustration Reference text books	Creative thinking Logical reasoning		
	4	Geometry	Geometric construction	Properties of polygons	Learner; Makes a review of the examples of polygons Makes a review of the general and specific	Learner; Reads and pronounces names of polygons	Regular and irregular polygons Guide learners through examples of common polygons. Guide learners through general properties of polygons Guide through specific properties Refer the reference textbook and	Guided discovery Discussion Explanation	Answering questions Reading Drawing Polygons	Chalkboard illustration Mathematical instruments	Logical reasoning Creative thinking Effective communi		

					properties of polygons		lesson notes for detailed notes.				cation		
	5			Number of sides of a polygon	Learner; Derives the formula for finding the number of sides of a regular polygon Uses the formula for finding the number of sides of a rectangular polygon	Learner; States the formula for finding number of sides Reads and interprets questions involving number of sides of a regular polygon	Number of sides = $\frac{360^o}{\text{Ext <s}}$ No. of sides = $\frac{360o}{\text{Centre <s}}$ Example; The exterior angle of a regular polygon is 60^o. Find the number of sides of the polygon Refer to the lesson notes for practice activities.	Discovery Guided discussion Explanation	Reading equations Comparing equations Writing	Chalkboard illustrations	Creative thinking Problem solving Self reliance		
	6			Number of triangles and right angles in a polygon	Learner; Derives the formula for finding number of triangles and right angles Uses the formula to find the number of triangles and right angles	Learner; States the formula Reads and interprets questions involving number of triangles and right angles	Consider Sides = 6 Triangles = 4 Number of = 6 – 2 Triangles = 4 No. of triangles = no. of sides – 2 = n – 2 No. of right <s Each triangles = int< sin of 180^o						

							Which is 2 right ($180^o/2$) = 90^o Each right angle = 90^o No. of ∟ = NO. of△s x 2 = (n – 2) x 2 NB: = 2n - 4 Guide learners through						
	7	Geometry	Geometric construction	Interior and exterior angles of a polygon	Learner; Identifies the interior and exterior angles on a polygon Forms the formula for finding ext or int<s. Forms and solves equations involving ext<s.	Learner; States the formula for finding ext or int<s Reads and interprets questions involving exterior and interior angles.	<a = Exterior <  <b = interior < Ext< + int< = 180o Give learners various examples and guide them to find the interior or exterior angle of polygons.	Problem solving Guided discussion Explanation	Drawing Reading questions Writing questions Answering questions	Chalkboard illustration Reference text books	Creative thinking Logical reasoning Self reliance		
	1			Exterior angle segment polygons	Learner; Finds the size of each exterior angle Forms equations involving ext<s and solves	Learner; Reads and interprets equations involving exterior <s	Ext add up to 360^o. Find the sides of each exterior angle given the number of sides of a regular polygon. Form and solve equations from figures (polygon)						

					them								
	2			Interior angle sum of regular polygons	Learner; Derives the formula for finding the interior <sum Uses the formula to find the interior <sum of the polygon	Learner; States the formula for finding the interior <sum of polygons Reads and pronounces new words Reads and interprets questions involving interior <sum of polygons	Guide learners through deriving the formula Formula Int<sum = 180^o (n – 2) or int<sum = 90^o (2n – 4) Guide learners through different examples Give learners variety of practice questions.						
	3	Geometry	Geometric instruction	Prisms and their properties	Learner; Identifies different groups of solids Identifies general properties of prisms Identifies different prisms and their specific	Learner; Reads new words related to prisms. Reads and pronounces properties of prisms.	Solids – 3 dimensional Examples of solids Prisms Pryamids Examples of solids Prism Pryamids Examples of prisms	Guided discovery Guided discussions Explanation	Reading new words Drawing prisms Answering questions	A chart showing different examples of prisms Chalkboard illustrations	Effective communication Logical reasoning Cooperation		

					properties		Square base prisms (cubes) Rectangular base prisms (cuboid) Cylinder Triangular prisms Guide learners through all the properties of each of the above prisms.						
	4			Pyramids and their properties	Learner; Identifies general properties of pyramids Identifies different pyramids Identifies different example of pyramids	Learner; Reads and pronounces different words used to describe pyramids States properties of pyramids	Discuss with the learners about the general properties of pyramids Examples of pyramids Square base pyramids Rectangular base pyramids Triangular base pyramids (Tetrahedron) Hexagonal base pyramids Guide learners through specific properties of each pyramid above.		Reading words Drawing pyramids Stating properties of pyramids	Mathematical instruments Chalkboard illustrations			
	5			Sets of solids	Learner; Makes a review of different solids Draws and names nets of	Learner; Describes the concept of nets Reads names of solids with	Guide learners through drawing nets of common prisms and pyramids Guides learners to identify nets of already drawn nets of pyramids and prisms.						

					solids	given nets							
	6	Geometry	Geometric construction	Relations and turns	Learner; Makes a review of the compass direction Makes clock wise and anti – clock wise turns Finds angles and direction from turns	Learner; Describes the concept clockwise and anti-clockwise turns Reads cardinal points on a compass direction Describes the concept of a complete revolution	Guide learners through the compass direction Guide learners to understand anti-clockwise and clockwise direction Complete revolution is a turn through an angle of 180^o	Guided discovery Guided discussion Explanation	Describing anti – clockwise and clockwise turns. Describing revolution Reading cardinal points	Mathematical instruments Books A chart showing a compass direction	Logical reasoning Creative thinking		
	7			Ordinary bearing (direction)	Learner; Finds ordinary bearing (direction) Finds opposite direction	Learners; Describe the concept of ordinary bearing or direction States opposite direction of ordinary bearing.	Consider  B is North 60^o East ($N60^oE$) C is South 40^o west ($S40^oW$) Note: Guide learners through the rules of ordinary bearing						

							Guide learners to find opposite bearing						
	1			True bearing	Learner; Finds true bearing Finds opposite bearing	True bearing is written in three digits Its measured from the north through clockwise turns							
	2	Geometry	Geometric Construction	Scale interpretation and construction	The learner; Identifies different types of scales Converts different measurements using the given scale	The learner; Reads and pronounces different types of scale Interprets different types of scale	Types of scale Linear scale Ratio scale Representative scale Guide learners through scale like interpretation Guide learners through conversion of metric units of length using the given scale	Guided discovery Guided discussion Explanation	Reading scales Interpreting scales Converting measurement	Mathematical instruments Chalkboard illustration Reference textbooks	Problem solving Effective communication Logical reasoning Appreciation		
	3			Scale drawing	Learner; Draws bearings and scale	The learner; Reads and interprets questions involving bearing and scale	Guide learners through scale interpretation Guide learners to draw sketches diagrams Guide learners to make accurate drawings on scale	Demonstration Guided discovery Guided discussion	Reading questions Drawing sketch diagrams Drawing lines Measuring				

								angles					
	4	Measurement	Time	Review of time	The learner; Makes a review of metric units of time Converts metric units of time	The learner; Reads metric units of time Interprets metric scale of time	Scale of time 1 minute = 60 seconds 1 hour = 60 minutes 1 hour = 3600 seconds Examples Guide learners through conversion of metric units	Guided discussion Guided discovery	Reading units of time Converting units of time	Chalkboard illustration Clock face	Problem solving Critical thinking		
	5			24 and 12 hour clock system	The learner; Identifies units of time in 12 and 24 hour clock system Reads and tells time on 12 and 24 hour clocks	The learner; Reads Units of time Reads time on 12 and 24 hour clock Describes sessions of the day	Time in 12 hour clock system is measured in a.m or p.m 24 hour clock time is measured in hours and written with 4 digits Draw clock faces and ask learners to read time Guide learners to draw and show time on the clock face Guide learners to write time		Reading time on the clock face Drawing clocks Writing time in words	Clocks Chalk board illustration			
	6				The learner; Converts 12 hour clock time to 24 hour Converts 24 hour clock time to 12 hour clock time	The learner; Reads time in 12 hour clock time Reads time in 24 hour clock time	Converts a.m time to 24 hour clock system Convert p.m time in 24 hour clock system Convert 12 hour time to 24 hour clock system. Convert hour clock to a.m.	Discussion Discovery Explanation	Reading time in 24 and 12 hour system Converting time		Effective communication probem solving Creative thinking		

							Convert 24 hour clock to p.m. Convert the 12th hour to 12 hour clock time						
	7	Measurements	Time	Time schedules and time directions	The learner; Finds ending time or starting time of an activity Finds time duration	The learner; Reads and interprets questions involving time schedule and duration	Guide learners to find starting when each time and duration are given Guide learners to find end time when start time is given Guide learners to find duration Note: Handle cases where the duration crosses to the following;	Guided discovery Explanation	Subtracting time Adding time Writing time	Clocks Chalkboard illustration Cardboards	Effective communication Problem solving Logical resolving Self reliance		
	1			Reading and interpreting time tables	The learner; Reads class time tables and finds time duration Reads and finds duration on travel time tables Reading and interpreting T.V and Radio programs	The learner; Reads time in 12 to 24 hour clock system used on time tables	Guide learners to make their class time tables as well as personal time tables Guide learners to read and interpret class time table Guide learners to read and interpret travel time both in 12 and 24 hour clock system Guide learner to find time duration from time tables		Reading time tables Drafting time table Find time duration				
	2			Speed distance and	The learner; Solves	The learner; Reads	Guide learners to calculate in situation that involves looking for		Reading question		Problem solving		

				time	problems involving speed distance and time Solve problem involving average speed Find average speed in m/s or km/hr	questions involving speed, distance and time Read and interpret questions involving average speed Reading units of speed	time duration Guide learner to calculate average speed that involves stop overs, return journey Guide learners to solve involving average speed from time tables Guide learners to find average speed in different units		Finding time duration		Critical thinking Logical reasoning		
	3	Measurement	Time	Units of speed	The learner; Makes overview of the units of speed Converts m/s to km/hr Converts km/hr to m/s	The learner; Reads units of speed Reads speed in m/s or km/hr Describes the metric units of length	Units of speed M/S Km/hr Guide learners through converting speed from km/hr to m/s Guide learners to convert time from m/s to km/hr Guide learner to review the metric unit of length	Demonstration Explanation Guided discussion Guided discovery	Reading unit of speed Converting unit of speed Converting distance	Chalkboard illustration A cahrtshowing metric unit of length	Problem solving Discussion making Critical thinking Effective communication		
	4			Travel graphs	The learner; Reads and interprets travel graphs Solves problems	The learner; Reads distance and time on travel graphs Reads and	Guide learners to draw travel graphs on their own Guide learners to interpret already drawn time table Guide learners to solve problems		Reading travel graphs Drawing travel graphs	Graph boards Graph papers Mathematical			

					related to travel graphs Draws travel graphs	interprets questions related to travel graphs	related to average speed using travel graphs		Finding average speed	instruments Pencils			
	5	Measurements	Length mass and capacity	Review of area and perimeter of plane figures	The learner; Identifies different plane figures States the formulas of finding area and perimeter Find area and perimeter of various figures	The learner; Pronounces the terms area, perimeter, etc	Finds area and perimeter of; Rectangle Square Triangle Rhombus Parallelogram Trapezium Kite	Guided discovery Discussion Explanation	Reads Writes Calculates numbers	Shapes of different figures	Analysis statements Accuracy Logical thinking		
	6			Finding missing sides when given area and perimeter of triangles and quadrilaterals	The learner; Identifies the missing side States the formula Finds the missing side	Reads Writes new words Unknown side Polygon	Finds unknown sides of quadrilateral triangles when given area and perimeter	Problem solving Guided discovery Discussion	Reads Writes Finds missing sides	Shapes of various figures	Creative thinking Critical thinking		
	7	Measu	Length,	Comparing area	The learner;	The learner;	Finding unknown sides where	Problem	Reading	Shapes of real	Critical		

		re me nts	Mass and Capa city	to find the unknow n sides of given polygon s	Identifies figures Determines the base and height Finding unknown sides	Reads, writes, pronounces, new words like side, area and base, height	triangles or trapeziums	solving Guided discussio n Explanati on	Writing Finding missing sides	objects	thinking Logical thinking		
	1			Applicat ion of all plane figures (Word problem)	The learner; Identifies the figures Reads and analyses questions Finds the required answer	The learner; Pronounces, reads and writes words area, perimeter. etc	Finding area, perimeter, unknown sides of various figures given, and questions in word problems. Summary of plane figures	Guided discovery Guided discussio n Problem solving	Reading Writing Identify formula Sketching mentione d shapes	Chalkboar d illustratio ns	Respondi ng to question s Articulati on Problem solving Critical thinking		
	2	Me asu re me nts	Lengt h mass and capa city	Circle	The learner; Identifies parts of a circle State the pi Find circumference of a circle Calculate perimeter of sectors	The learner; Reads, pronounces, writes words, sector, part, circumference , etc	Review parts of a circle Develops the concept of pi Find circumference of a circle Calculate perimeter of sectors Find length of arcs on sectors	Problem solving Guided discussio n Guided discovery	Reads Writes Making circles from real objects	Circles from real objects	Logical thinking Critical thinking		

					Find length of arcs								
	3			Area of circles	The learner; Identifies parts of a circle State the pi Finds are of of a circle. Calculates area of sectors. States the formula of finding area	The learners write new words, circle, sector	Finds area of a circle. Calculate area of sectors	Explanation Guided discussion	Reads, writes, finds area of circle	Circles from real objects	Problem solving Critical thinking		
	4	Measurements	Length, Mass and Capacity	Perimeter of combined figures	The learner; Identifies shapes Finds perimeter of shapes	The learner; Pronounces, reads and writes new words like shapes, arc etc	Reviews perimeter of combined figures of p.5 and p.6 Finds perimeter of combined figures of circular objects or sectors.	Problem solving Guided discovery Explanation	Combining real objects to make shapes	Real objects (shapes)	Logical thinking Problem solving		
	5			Area of combined figures	The learner; Identifies shapes States the formula required Finds area of	The learner; Pronounces, reads, writes new words: combine, sector, etc	Review of area of combined figures of P.5 and P.6 Area of combined circular figures	Guided discussion Explanation Problem solving	Combining real objects to make shapes	Real objects (shapes)	Creative thinking Analysis statements Critical thinking		

					combined figures								
	6		Length, Mass, and Capacity	Area of shaded regions	The learner; Identifies the figures States the formula Finds area of shaded part	The learner; Reads, writes new words shape, surface regions	Review of shaded regions of P.5 and P.6 Find area of shaded regions	Guided discussion Explanation Problem solving	Calculating area of shaded regions	Real objects Chalk board illustration	Analyzing statements Critical thinking		
	7			Total surface area of a cube	The learner; Identifies the surface area Finds total surface area	The learner; Pronounces, reads, writes surface cube etc	Review total surface of P.6 Application of total surface area of a cube	Guided discovery Explanation Problem solving	Making cubes	Real cubes	Logical thinking Critical thinking		
	1			Total surface area of a cylinder	The learner; Identifies the cylinder Derive the formula of finding area Find area of a cylinder	The learner; Reads, writes and pronounces cylinder diameter, radius	Derive the formula of finding area of a cylinder Calculate area of a cylinder	Discussion Explanation Guided discovery	Finding area of cylinders Deriving the formula	Real cylinder objects	Logical thinking Critical thinking		
	2			Total surface area of	The learner; Identifies the triangular	The learner; Pronounces, reads, write	State the formula of finding total surface area of a triangular prism	Problem solving Guided	Stating the formula of	Real objects	Logical thinking Creative		

				a triangular prism	prism Finds the total surface area of a triangular prism	new words surface, total, area	Finding total surface area	discovery Explanation	total surface area Finding TSA		thinking		
	3	Measurements	Length, Mass and Capacity	Total surface area of a trapezoidal prism	The learner; Identifies the shape Finds total surface area of trapezoidals Applies the concept	The learner; Reads, pronounces, writes new words, total, surface, trapezoidals, etc	Finds T.S.A of trapezoidals Applies the learnt concept	Guided discovery Explanation Brian storming	Finding T.S.A	Chalk board illustration	Logical thinking Critical thinking		
	4			Packing	The learner; Identifies the shapes Describes the tiles and solids Packing is made	The learner; Pronounces, reads and writes new words tiles, solids packing, etc	Packing involving; Square tiles Rectangular tiles Circular tiles Cubes Cuboids	Guided discovery Guided discussion Explanation	Making tiles from real objects	Real objects	Creative thinking Critical thinking		
	5			Finding volume of solids	The learner; States the formula of finding volume Find volume of solids like	The learner; Pronounces, reads, writes new words, cubes, cuboids,	Finding volume of solid figures;- cubes, cuboids, cylinder and triangular prisms.	Guided discussion Explanation Guided	Finding volume of solids	Real prisms	Logical thinking Critical thinking		

					cubes, cuboids, cylinders, etc	cylinders. etc		discovery					
	6			Compassion of volume to find missing sides	The learner; Identifies the figures Finds volume to get missing sides Finds the thickness of the material used to form a solid	The learners; Pronounces, reads, writes new words, side, thickness, Material, etc.	Compare volumes to get the missing side Find the thickness of the material used to form a solid (pipes)	Explanation Guided discovery Problem solving Group work	Compares volume Finds missing sides	Real objects	Critical thinking Logical thinking		
	7			Finding capacity of different solids	The learner; States the formula for finding capacity Finds capacity of various solids Finds capacity when volume is given	The learner; Pronounces, reads writes new words. Capacity, solids, volume.	Review conversion of metric units Find capacity of different solids Find capacity when volume is given	Guided discussion Explanation Problem solving	Calculate volume, capacity of solids	Chalkboard illustration	Logical thinking		
	1			Finding unknown sides of solids	The learner; State the formula for finding	The learner; Pronounces, reads, writes new words,	Find the unknown sides when given capacity	Guided discussion Problem	Calculate lengths of solids	Chalkboard illustration	Decision making Effective communi		

				when given their capacities	capacity Find the missing sides	unknown, capacity		solving Explanation			cation Critical thinking		
	2	NUMERACY	NUMBER PATTERN AND SEQUENCES	Prime factorization	The learner: -prime factorizes the given number -finds the number that have been prime factorized	The learner: -pronounces the new words. -spells the new words. New words -factorize -prime factors	-Prime factors are factors of any number which are prime numbers. Examples -Prime factorize 36. Give the result in: Notation form Multiplication form Power form	-solving words problem of squares and square roots		Critical thinking -problem solving -Responding to question appropriately	Chart showing prime factorization	Mk math bk 7 pg 40	
	3			Squares and square roots of numbers	-finds the squares of numbers -find the square roots of numbers	-squares -square roots	-Find the square of 8 -Find the square root of 64 -Find the square root of 0.16		-Finding squares of numbers. -Finding square roots of numbers		Chart showing square and square root	Mk math bk7 pg 41	
	4			Words problem of squares and square roots	-solves problems involving squares -solves problems involving square roots		-A square house is 45m long. Find its area. -A square garden is 144m^2. Find its length of the sides.						
	5			Test for divisibility of	-tests for the divisibility of numbers from	-test -divisible Divisibility	-Show that 12 is divisible by 2 -Prove that 12 is divisible by 3 -prove that 24 is divisible by 4	-Discovery	-Testing for divisibilit		Chalk	Mk math bk 6 pg 65	

				2,3,4,5	2 -5		-prove that 55 is divisible by 5	- Discussion - Explanation	y of numbers from 2 – 3		boar	Mk math bk 7 pg 43 Functional pg 77-85	
	6			Divisibility test of 6,7,8,9	-tests for the divisibility of numbers from 6- 9		-test is 443 is divisible by 6 -Show that 49 is divisible by 7 -Prove that 24 is divisible by 8 -show that 81 is divisible by 9		Testing for divisibility of numbers from 6-9			Mk math bk 7 pg 44-45	
	7			Divisibility test of 10,11,12	-tests for the divisibility of 10,11,12		-Prove that 100 is divisible by 10 -Show that 33 is divisible by 11 -How can 144 be divisible by 12?		Testing for divisibility of numbers from 10 - 12			Mk math bk 7 pg46	
	1			Prime and composite numbers	-list prime numbers -list composite numbers	-prime number -Composite number	-Prime numbers are numbers with only two factors. Eg 2, 3, 5, 7, 11,13… -Composite numbers are numbers with more than two factors 4, 6, 8, 9, 10, 12, 14,15……		-Defining prime and composite numbers -Listing prime numbers. -Listing composite numbers		Chalk board	Mk math bk7 pg 50	
	2			Even, odd, square and	-defines even, odd, square and cubic numbers	-even- -odd -square -cubic	Even numbers= 0,2,4,6,8,10… Odd numbers = 1, 3, 5, 7, 9, 11… Square numbers = 1, 4, 9,16 … Cubic numbers = 1, 8, 27, 64, …	-solving words problem of		Critical thinking -problem solving	Chart showing prime factoriza	Mk math bk 7 pg 40	

				cubic numbers	-lists even, odd ,square and cubic numbers			squares and square roots		- Responding to question appropriately	tion		
	3			Rectangular and triangular numbers	-defines rectangular and rectangular numbers -forms pattern of rectangular and triangular numbers and list them	-rectangular -triangular	Rectangular numbers= 6, 8, 10, 12… Triangular numbers = 1,3, 6, 10…		-Finding squares of numbers. -Finding square roots of numbers		Chart showing square and square root	Mk math bk7 pg 41	
	4			Forming pattern	-discovers the patterns formed -forms patterns from numbers	-pattern	Find the next numbers in the patterns below: 1, 4, 9, 16, --------- 1, 3, 6, 10, 15,----------						
	5			Consecutive numbers	-solves problems involving consecutive numbers	-consecutive -consecutive numbers	-For consecutive counting numbers we add 1. -For consecutive even and odd numbers we add 2. Example The sum of 4 consecutive odd numbers is 32. Find the numbers.	-Discovery -Discussion -Explanation	-Forming equations of consecutive numbers. -Solving the equations formed.	-Critical thinking -problem solving	Chalk board	Mk math bk7 pg 53	
	6	NUMERA	OPERATION	Addition of whole	-add numbers -interpret words	**Words to mean addition**	- Add 49636 + 692042 There are 24,926,290 adults and 15,219,633children in Uganda.		-Adding whole numbers			Mk math bk7	

		CY	ON WHOLE NUMBERS	numbers	problems of addition	-sum, total, gain, increase, ascend, profit etc.	Find the population of the country.		Interpreting mathematical statement			pg31 – 33	
	7			Subtraction of whole numbers	-subtracts whole numbers. -interprets words problems of subtraction	**Words to mean subtract** -difference, take, away, minus, negative, loss, etc.	-Subtract: 493243 -6924 In a district of 32,362,934 people, 21325,004 are female. Find the number of male.		-Subtracting whole numbers -Interpreting subtraction sentences				
23	1			Multiplication of whole numbers	-multiplies whole numbers Solves words problem of multiplication	**Words to mean multiplication** -product, times, twice, thrice, etc.	-Work out: 396 X 24 -Find the product of 296 and 463		-Multiplying whole numbers -Interpreting multiplication sentences				
	2			Division of whole numbers	-divides whole numbers -solves problems involving division	**Words to means division** Divide, share, quotient, out of etc.	-Divide: 3294 by 12 -An organization gave out shs.4, 298,400 to 120 youth as capital. How much did each youth get?		-Dividing whole numbers -interpreting mathema				

									tical sentences of division				
	3			Property of numbers	-works out numbers using commutative property -works out numbers using associative property -works out numbers using distributive property	**New words** -commutative -associative distributive	**<u>Commutative property</u>** 8 + 4 = 4+ 8 8 X 4 = 4 X 8 **<u>Associative property</u>** (6 + 4) + 5 = 6 + (4 + 5) (3 X 4) X 5 = 3 X (4 X 5) **<u>Distributive property</u>** -Work out: 8(13 -3) -Work out (5 X 9) + (5 x 4)		Solving problems involving commutative, associative and distributive properties		Charts showing properties of numbers	Mk math new edition pg 34 – 36	
	4				-Writes numbers in expanded form		-Expand 68793 using value forms. -Expand 897465 using exponents		-Expanding numbers using values -expanding numbers using powers	-Critical thinking -Problem solving	-Charts showing expanded notation	Mk math bk7 Pp. 37-38	
	5			Standard and scientific form	-writes numbers in scientific form. -finds numbers	**New words** -scientific form -standard form	Examples -Express 4695 in scientific form. -Express 0.123 in standard form. -Write 3.4567 X10^3 as a single number.						

					that have been expanded								