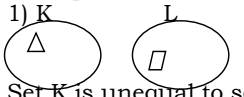
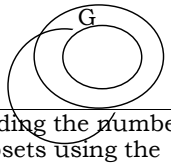
MATHEMATICS SCHEME OF WORK FOR PRIMARY SIX TERM ONE

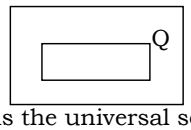
E.L.O: The learner demonstrates the knowledge of sets to solve problems in real life situations.

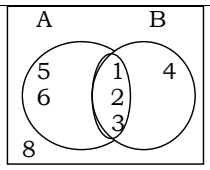
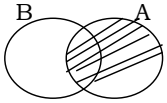
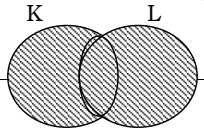
WK	PD	THEME	TOPIC	SUBTOPIC	CONTENT	COMPETENCES		INDICATORS OF LIFE SKILLS AND VALUES	METHODS	ACTIVITY	INSTRUCTIONAL INSTURMENTS	REF	REM
						LANG COMP	SUB COMP						
1	1	SET	SET CONCEPT	-definition of a set -Types of sets. a)equal sets b)equivalent sets c)Unequal sets	-A set is a collection of well defined elements. Equal sets. Have the same type of members and number of elements. Example. A={a,b,c} B={c,a,b} Set A is equal to set B. A = B -Equivalent sets. Have the same number of elements but may be of different members. Example	The learner -describes equal sets, equivalent and un equal sets	The learner -defines a set -identifies the set symbols for each type -forms given sets	Creative thinking Effective communication Problem solving	Explanation Discussion Question and answer	Collecting items Sorting items according to colour, size, shape e.t.c	Real objects like stones, pens, pencils, books e.t.c -chalkboard	Mk Maths book 6 pg P.6 Curr page 150	

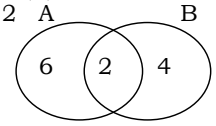
					X={1,2,3,4} Y={4,5,6,7} set X is equivalent to set Y. X ↔ Y -Unequal sets. May have different members but the same type or have the same number but different type. Examples 1) K L  Set K is unequal to set L. K = L 2. M={x, x, x, x} N ={x, x, x, x, x} Set M is unequal to set N. M = N					Describing sets	illustrations		
	2	SETS		Types of sets -Union sets -Intersection of sets -Empty	(U) -Union sets: A set of all elements that are contained in two or more sets without repeating a member. Example A ={1, 2,3} B={3,4,5} A U B = {1,2,3,4,5} -Intersection of sets (∩) A set of common members from in two or more sets.	-reads statements correctly. -describes union sets, intersection sets and empty sets	-forms sets -names examples of empty sets -solves problems involving empty, intersection and	Critical thinking Problem solving Effective communication	Discussion Explanation Question and answer	Forming sets Working out numbers involving union sets, intersection of	Chalkboard illustrations	Mk Maths book 6 pages 2 – 5 Understanding Math	

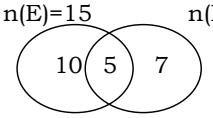
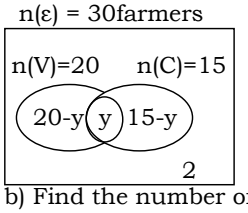
					Example D={a, b, c} F = {a, b,c, d,e} D ∩ F= {a, b, c} ({}, Ø) -Empty set:: An empty set is a set without members. Another name for empty set is null set. Examples 1) M= {A set of boys with breasts} 2) Given that P={Grace, Sam, Peter} Q={box, boy. Bag} Find P ∩ Q P ∩ Q= { } or Ø		union sets		Think and pair	sets and empty sets.		emati cs bk.6 pgs 2-5 P.6 Curr page 150	
	3 & 4			Types of sets -complement of sets -difference of sets	Complement of sets Is a set of members outside the given set. Example: Set S={1,2,4} Set T={2, 4, 5,6, 7} Find the complement of set B (members not in B) B □ = {1} Difference of sets: A set of elements in a set which are not in the other set. Example P={1, 2, 3,4} Q = {3, 5, 6} Find: i) P – Q (ii) Q – P	-reads given statements -describes the term complement of sets and difference of sets	-defines complemen t of sets -defines complemen t of sets and differences of sets -find the complemen t of sets and differences of sets	Effective commun ication Creative thinking Problem solving	Explanati on Discussio n Question and answer	Finding: comple ment of sets Differen ce of sets	Chalkb oard illustrat ions	Mk book 6 pages 8-17 Unde rstan ding Math emati cs book 6 pg 7.	

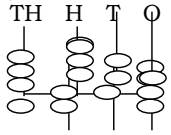
					{1,2,4} {5,6}							
	5			Types of sets Subsets using listing	C Subset :Is a set formed from any given set Example Given set P ={4,5,6} List the sub sets from set P. {4} {5} {6} {4,5} {4,6} {5,6} {4,5,6}, { } -Drawing venn diagrams to show subsets Example Draw a venn diagram to show that all grils are females. F  	-reads statement s -describes subsets	-defines a subset -lists subsets from given sets -draws venn diagrams to show subsets -finds the number of subsets	Creative thinking Effective communication Problem solving	Guided discussion Explanation Demonstration Question and answer	Listing subsets -drawing of venn diagrams	Chalkboard illustrations	Mk maths bk.6 pg 16-18 P.6 Curr page 150	
	6			Subsets using the formula -finding number of proper subsets	Finding the number of subsets using the formula. Number of subsets = 2^n where n represents number of elements in a set. Example. If K={4, 5,6} find the number of subsets in K. Set K has 3 members $2^n = 2^3$ = 2 x 2 x 2	-reads statements correctly	- calculates the number of elements when given the number of subsets	Creative thinking Effective communication Problem solving	Guided discussion Explanation Demonstration	Finding number of subsets Finding number of proper subsets	Chalkboard illustrations	Mk Maths bk.6 page 18	

				= 4 x 2 = 8 subsets				Question and answer				
	6			Subsets	Finding number of elements when given the number of subsets Example Find the number of elements in a set that has 32 subsets $2^n = 32$ 2 | 32 2 | 16 =2x2x2x2 2 | 8 $= 2^5$ 2 | 4 $2^n = 2^5$ 2 | 2 n= 5 | 1 = 5 members.	The learner: -reads statements -calculates the number of elements when given the number of subsets		Critical thinking Creative thinking Effective communication Problem solving	Explanation Guided discovery	Finding number of elements when subsets are given	Chalkboard illustration	Mk Bk 6 Old edition P.6 Curr page 150	
	7			Universal sets	Universal set: Is the biggest set from which other smaller sets can be got Examples. P 1)  P is the universal set Q is the smaller set got from P. 2) C	-reads and spells the word " universal" -describes the term universal.	-studies the given sets -differentiates between union sets from universal set -forms given sets	Critical thinking Problem solving Effective communication	Explanation Guided discovery	Forming /naming given sets	Chalkboard illustrations A drawn chart in relation to sets	MK Maths book 6 pg 20 Understanding Math	

					 Find the members in: a)A ={ 1,2,3,5,6} b) A only, (A – B), B {5, 6} c) B = {1,2,3,4} d) B only, (B – A), A {4} e) A U B= {1, 2, 3, 5, 4, 6} f) C={1, 2,3,4,5, 6, 7, 8} Set C is the universal set		-identifies universal sets from union sets	Creative thinking	Question and answer			ematics bk.6 pg 12 P.6 Curr page 150	
2	1			Shading given regions on venn diagrams -Describing shaded regions	Shading regions Example Shade A – B in the venn diagram  Describing shaded regions Example Name the shaded part 	-reads and interprets the given statements	-draws venn diagrams -shades the required regions -describes the shaded region	Effective communication Problem solving Creative thinking	Explanation Illustration Discussion	Draining venn diagrams Shading regions on venn diagrams Describing	Chalkboard regions	Mk Maths 2000 bk 7 pge 7 P.6 Curr page 150	

							Critical thinking	Question and answer	shaded regions			
	2			Finding number of member in a set	Number of members in a set Example 1)Set Y ={1, 2, 3}, find n(Y) n(Y) = 3 2 A B  n(A) 6 + 2 = 8 n(B) 2 + 4 = 6	-reads statements -interprets information on the venn diagram	-finds the number of members in the given set	Creative thinking Effective communication Problem solving Interpersonal relationship	Guided discussion Explanation Question and answer	Finding number of members in given sets	Chalkboard illustrations	Primary Mathematics bk. 6 pg 8 MK Maths bk.6 pg 29 P.6 Curr page 150	
	3		```	Word problems in a set	Word problems in a set Example In a class, 12 pupils like Maths, 15 like English and 5 like both subjects. a)Show the above information on a venn diagram ε=	-reads and interprets the given information	-represents the given information on the venn diagram -solves problems	Creative thinking Effective communication Problem solving	Guided discussion Explanation Question and answer	Representing information on venn diagrams	Chalkboard illustrations	MK Maths bk.6 page 29 P.6 Curr page 150	

					n(E)=15 n(M) = 12  15-5=10 12-5 = 7		involving venn diagrams	Interpersonal relationship					
	4			Application of sets in word problem	Example In a village of 30 farmers, 20 farmers plant vanilla(V), 15 grow coffee(c), Y grow both crops and 2 grow neither of the two crops. a) Show the above data on the venn diagram. n(ε) = 30farmers  b) Find the number of farmers that grow both crops 2+20-y+y+15-y=30 22+15+y-y-y = 30 37 - y = 30 37 - y + y =30 + y 37 = 30 + y 37-30 =30-30+y	-reads and interprets the given information	-writes the statements - represents the given information on Venn diagrams -solves problems involving venn diagrams	Critical thinking Problem solving Effective communication Creative thinking	Guided discovery Explanation Question and answer	Solving for the unknown on venn diagrams	Chalkboard illustrations A drawn chart in relation to sets.	Maths Revision Handbook 6 pg 12 MkMaths book 6 pg 20 Understanding Mathematics book 6 pg 12	

					7 = y Y = 7 7 farmers c) How many farmers grow vanilla only? 20-y 20-7 = 13 farmers							P.6 Curr page 150	
E.L.O: The learner appreciates the need of counting in everyday life and works with whole numbers up to 9.999,999													
	5	NUMERACY	NUMERATION SYSTEM AND PLACE VALUES	Review of place values using an abacus	Writing place values and showing numbers on the abacus. Example 1)Given TH H T O  What number is shown on the abacus?	-reads the given numbers correctly	-writes the place values of given numbers on the abacus -shows numbers on the abacus	Critical thinking Effective communication Creative thinking	Discussion Explanation Question and answer	-Writing place values using the abacus -showing numbers on the abacus	Chalkboard illustrations Abacus	A New MK Primary Mathematics book 6 pg 21 P.6 Curr page 153	
				Forming numeral from digits	<u>Number</u>: A number is an idea of quantity <u>Formation of numbers</u> <u>Examples</u> Using 6,2,5, and 3, form the: a)smallest number. 6,2,5,3=2,356	-reads and writes statements	-defines a number -uses given digits to solve given problems	Critical thinking Effective communication	Discussion Explanation	Forms numbers from given digits	Chalkboard illustrations	Mk Maths book 6 page 34-35	

					b)Largest/biggest number. 6,2,5,3 =6,532 c) Find the sum of the two numbers formed. 6 5 3 2 + 2 3 5 6 8 8 8 8 d)Work out the difference between the biggest and the smallest numbers.			Creative thinking	Question and answer			P.6 Curr page 153	
	6		NUMERATION SYSTEM AND PLACE VALUES	Place values of whole number	Place value: Place value tells the position of a digit in a particular number. Example 1.Give the place value of each digit in 4378 4 3 7 8 Ones Tens Hundreds Thousands	-describes the term place values and values -reads statements correctly	-identifies place values of digits in given numbers -finds the values of digits in given numbers	Critical thinking Effective communication Creative thinking	Explanation Discussion Question and answer	Finding place values	Chalkboard illustrations	Mk Maths book 6 pg 35 P.6 Curr page 153	
				Values	Value: Value is how big a number value is the product of a number and its place value. Example.	-reads statements correctly	-identifies place values -reads and writes	Critical thinking	Explanation	Finding values of given digits	Chalkboard illustrations	MK Maths book 6 pg	

					1.Find the value of 8 in 4 8 2 1. 4 8 2 1 └Hundreds(100) = 8 x 100 = 800		numbers in words	Effective communication Creative thinking	Discussion Question and answer			24-25 P.6 Curr page 153	
	7		NUMERATION SYSTEM AND PLACE VALUES	Reading and writing number in words up to a million	<u>Writing numbers in words</u> <u>Examples</u> <u>Write in words</u> 1)34, 782 M | Thousands | units | 34 | 782 Thirty four thousand seven hundred eighty two. 2) 4,004,004 M | Thousands | units 4 | 004 | 004 Four million, four thousand , four	-reads statements correctly	-identifies place values -reads and writes numbers in words	Critical thinking Effective communication Creative thinking	Explanation Discussion Question and answer	Writing numbers in words	Chalkboard illustrations	Mk Maths book 6 pg 47 P.6 Curr page 153	
3	1		NUMERATION	Reading and writing number	<u>Writing numbers in figures:</u> <u>Example</u>	-reads statements correctly	-writes statements correctly	Critical thinking	Explanation	Writing words in figures	Chalkboard illustrations	Mk Maths book	

			SYSTEM AND PLACE VALUES	words in figures	Write in figures: Thirty thousand eight hundred forty five. Solution: Thirty thousand= Eight hundred= Forty five 30,000 800 + 45 30,845		-writes numbers in figures	Effective communication Creative thinking	Discussion Question and answer			6 pg 46. Understanding Mathematics book 6 P.6 Curr page 153	
	2			Writing number in expanded form	Expanding using: -place values -values Examples 1)Expand 2145 using place values =2145 Ones (1) Tens (10 Hundreds (100) Thousands (1000) (2x1000)+(1x100)+(4x10)+(5x1) 2) Expand 2145 using values	-read the statement correctly	-identifies the place values for given digits in numbers -writes numbers in expanded form using place values and values	Creative thinking Effective communication Critical thinking	Explanation Discussion Question and answer	Writing numbers in expanded form using place values and values	Chalkboard illustrations	MK Maths book t pg 37 P.6 Curr page 153	

					2145 └5x1=5 └ 4x10=40 └──1x100= 100 └──2x1000=2000 2000+100+40+5		-expands numbers using exponents.						
			NUMERATION SYSTEM AND PLACE VALUES		Expanding using powers of ten or exponents. Example Expand 6854 using powers of ten. $6854 = 6^{10^3}8^{10^2}5^{10^1}4^{10^0}$ $(6x10^3)+(8x10^2)+(5x10^1)+(4x10^0)$	The learner writes numbers in expanded form using powers of ten or exponents		Creative thinking Effective communication Critical thinking	Explanation Discussion Question and answer	Expanding numbers using powers of ten	Chalkboard illustrations	Mk Maths book 6 pg 37 P.6 Curr page 153	
	3			Writing number from expanded notation	Writing expanded numbers in short form (single numbers) <u>Example</u> Write 8000+660 + 700+ 4 as a single number 8000+60+700+4 = 8 0 0 0 7 0 0 6 0 + 4 8 7 6 4	-reads given statements	-writes expanded in short form or as a single number	Creative thinking Effective communication Critical thinking	Explanation Discussion	Writing numbers from expanded form to single numbers	Chalkboard illustrations	Mk Maths book 6 pg 38 P.6 Curr page 153	

								Question and answer					
	4			Standard form scientific notation of whole number	Standard or scientific notation is the writing of a given number such that it lies between 0 and 10. Example Write 4639 in scientific notation method I 4639= 4639 ÷ 10 =463.9 463.9 ÷ 10 46.39 46.39 ÷ 10 4.639 =4.639 x 10^3 Method II 4639 = 4.639 = 4.639x 10^3	-describes scientific or standard notation	-writes whole numbers in scientific notation	Creative thinking Effective communication Critical thinking	Explanation Discussion Question and answer	Writing whole numbers in standard notation	Chalkboard illustrations	Mk Maths book 7 P.6 Curr page 153	
	5		NUMERATION SYSTEM AND PLACE	Rounding off whole number	Rounding off whole numbers Examples Round off: 1)677 to the nearest tens 677 = 6 7 7 + 1 6 8 0 2) 1234 to the nearest hundreds. 1234 = 1 2 3 4	-reads and interprets statements	-names digts used to change a number before them by adding 0 or 1 to it. -identifies place values of digits in	Creative thinking Effective communication Critical thinking	Explanation Discussion	Rounding off whole numbers	Chalkboard illustrations	Mk Maths book 6 page 38 P.6 Curr page 153	

			VALUES		+ 0 1 2 0 0		given numbers - rounds off whole numbers correctly		Question and answer				
	6			Decimal number	Place values of decimals Tenths | Hundredths | Thousandt 1/10 | 1/100 | 1/1000 10^{-1} | 10^{-2} | 10^{-3} Writing place values of digits Example Write the place value of each digit in 19.47 19.47 Hundredths Tenths Ones Tens	-reads place values of decimals -spells and pronounces place values of decimals correctly	-identifies and writes place values of each digit -finds the value of decimal numbers	Creative thinking Effective communication Critical thinking	Explanation Discussion Question and answer	Writing place values of digits in given numbers	Chalkboard illustrations A chart showing place values of decimals	Mk Maths book 6 page 43-44 P.6 Curr page 153	
			NUMERATION SYSTEM AND PLACE	Decimal number	Values of decimal numbers Example What is the value of each digit in 4.6? 4.6 = 4.6 Tenths=6 Ones=4x1 6 =0.6 4x1 =4	-reads place values of decimals -spells and pronounces place values of decimals correctly	-identifies and writes place values of each digit -finds the value of decimal numbers	Creative thinking Effective communication	Explanation Discussion	Finding values of decimal numbers	Chalkboard illustrations	MK Maths book 6 page 45 P.6 Curr	

					10			Critical thinking				page 153	
	7		VALUES		Reading and writing decimal numbers in words Example. Write 0.125 in words. 0.125= 125/1000 One hundred twenty five thousandths	-reads place values of decimals -spells and pronounces place values of decimals correctly	-identifies and writes place values of each digit -finds the value of decimal numbers		Question and answer	Writing decimal numbers in words	Chalkboard illustrations	Mk Maths book 6 page 46 Understanding Maths book 6 P.6 Curr page 153	
4	1				Writing decimal numbers from words to figures. Example Write twenty four and six tenths in figures. Twenty four= 24 Six tenths 6/10 = +0.6 24.6	-reads and solves problems involved in decimals	-changes decimals to fractions -writes decimal numbers in words -writes decimal	Creative thinking Effective communication Critical thinking	Explanation Discussion	Writing decimals in figures	Chalkboard illustrations	Mk Maths book 6 pg 45 P.6 Curr page 153	

						numbers in figures		Question and answer				
	2		NUMERATION SYSTEM AND PLACE VALUES	Decimal number	Writing decimal numbers in expanded form Examples 1)Write 3.54 in expanded form using place values. 3.54 Hundredths $\frac{1}{100}$ Tenths $\frac{1}{10}$ Ones (1) Solution: $(3x1)+(5x^1/_{10})+(4x^1/_{100})$ 2) Expand 3.54 using values 3.54 $\frac{1}{100} = 4x\frac{1}{100} = \frac{4}{100}$ $= 0.04$ $\frac{1}{10} = 5 \times \frac{1}{10} = \frac{5}{10} = 0.5$ 3x1=3 Solution 3+0.5+0.04	-reads and interprets problems involved in expanding decimals	-writes decimal numbers in expanded notation	Creative thinking Effective communication Critical thinking	Explanation Discussion Demonstration Question and answer	Writing decimal numbers in expanded form using place values and values	Chalkboard illustration	MK Maths book 6 2000 of 59 P.6 Curr page 153	
	3		NUMERATION	Decimal number	Expanding decimal numbers using powers of ten. Example	-reads and interprets problems involved in	-writes decimal numbers in	Creative thinking	Explanation	Writing decimal numbers in	Chalkboard illustrations	Mk Maths book	

			SYSTEM AND PLACE VALUES		Expand 3.54 using powers of ten. $3.54=3^{100}.5^{10-1}4^{10-2}$ $(3x10^{0})+(5x10^{-1})+(4x10^{-2})$	expanding decimals	expanded notation	Effective communication Critical thinking	Discussion Demonstration Question and answer	expanded form using powers of ten		6 old edition pg 59 P.6 Curr page 153	
	4			Decimals	Writing expanded decimal number in short form or as single numerals. Write as single numerals 1) 4+0.6+0.02 4.00 0.60 +0.02 4.62 2) 3+0.03+0.003 3.000 0.030 +0.003 3.033 3) $(4x10^{2})+(6x10^{0})+(1x10^{-1})$ 4x10x10+6x1+1x1/10 4x100+6+1/10 | 400.0 6.0	-reads and interprets the statements correctly	-writes expanded decimal numbers in short form	Creative thinking Effective communication Critical thinking	Explanation Discussion Question and answer	Writing expanded decimal numbers in short forms	Chalkboard illustrations	MK Maths book 6 Old edition pg 59 P.6 Curr page 153	

					400+6+0.1 + 0.1 =406.1 406.1								
	5		NUMERATION SYSTEM AND PLACE	Decimals	Writing decimal numbers in scientific notation Example Write 0.4 in standard form 0.4 =4 x tenths = 4 x $\frac{1}{10}$ =4 x 10^{-1} = 4.0 x 10^{-1}	-reads and solves problems involved in decimals	-writes decimal numbers in scientific notation	Creative thinking Effective communication Critical thinking	Explanation Discussion Question and answer	Writing decimal numbers in scientific form	Chalkboard illustrations	MK Maths book 6 old edition pg 60 P.6 Curr page 153	
	6		VALUES		Rounding off decimal numbers. Example 1)Round off 0.625 to the nearest tenths(One decimal place, first decimal place) 0 hundredths 0.625-Thousandths + 0 0.6	-mentions place values of decimal numbers -reads and interprets given statements	-identifies the digits in the required place values -rounds off as required correctly			Rounding off decimal numbers	Chalkboard illustration	Mk Maths book 6 Old Edition pg 61 P.6 Curr page 153	

		7		Roman numeral	Relationship of Roman and Hindu Arabic numerals. Example Hindu | 1 | 5 | 10 | 50 Roman | I | V | X | L 100 | 500 | 1000 | 5000 C | D | M | V  Reading and writing of Roman numerals. Examples 2 is read as II 20 is read as XX 200 is read as CC	Reads abd relates roman numerals in Hindu Arabic numerals	-identifies the basic roman numerals. - expresses Hindu Arabic as Roman numerals	Creative thinking Effective communication Critical thinking	Guided discussion Explanation Question and answer	Relating Roman numerals and Hindu Arabic numerals Reading and writing Roman numerals	A chart showing relationship of Roman numerals and Hindu Arabic numerals Chalkboard illustrations	Mk Maths book 6 page 32-33. P.6 Curr page 153	
5	1		NUMERATION SYSTEM AND PLACE	Roman numeral	Expressing Hindu Arabic numerals as Roman numerals Example Express 29 as a Roman numeral. 29= 20 + 9 = xx + ix = xxix	Reads and relates roman numerals in Hindu Arabic numerals	-identifies the basic roman numerals. - expresses Hindu Arabic as Roman numerals	Creative thinking Effective communication	Discussion Explanation	Writing Hindu Arabic numerals as Roman numerals	Chalkboard illustrations	Mk Maths book 6 pg 32-33 P.6 Curr	

			VALUES					Critical thinking	Question and answer				page 153	
	2				Writing Roman numerals as Hindu Arabic numerals Examples i)Express xiii as Hindu Arabid numerals. Xiii = x + iii = 10+ 3 =13 ii)Change Lxxv to Hindu Arabic numerals Lxxv = L+xx+v =50+20+5 = 70 + 5 = 75	-reads and interprets statements correctly	-expresses roman numerals as Hindu Arabic numerals	Creative thinking Effective communication Critical thinking	Discussion Explanation Question and answer	Discussion Explanation Question and answer	Writing Roman numerals as Hindu Arabic numerals	Chalkboard illustrations	MK Maths book 6 pg 33 P.6 Curr page 153	

	3				Application of Roman numerals in real life situations -Reading time in Roman numerals on clock faces -reading bank notes in Roman numerals	-reads and solves problems involving Roman numerals	-Writes roman numerals -solves problems involving roman numerals			Reading -time in Roman numerals -bank notes in Roman numerals	Clock faces Bank notes	Functional Primary Mathematics book 7 page 22 Teacher's collection	

	4			Bases (REVISION)	*Base names up to base twelve Base two –Binary Base three-Ternary Base four –Quartenary Base five quinary e.t.c. *Place values of bases Examples Write the place and values of each digit in 432_{five} $4\ 3\ 2_{five}$ └Ones └Fives └Five fives (twenty fives)	-reads base names up to 12 -reads place values of different bases	Writes base names up to 12 -writes place values of different bases			Reading and writing bases	A chart showing base names and digits for each base Chalkboard illustrations	Mk Maths book 6 P.6 Curr page 153	
	5		NUMERATION SYSTEM AND PLACE VALUES	Bases	Expanding numbers in bases Example Expand i)23_{five}= 23_{five} 2 fives + 3 ones (2x5) + (3 x 1) $(2 \times 5^1)+(3 \times 5^0)$ ii)102_{three} =102_{three} 1three threes + 0threes +2 ones $(1 \times 3 \times 3)+(0 \times 3)+(2 \times 1)$ $(1x3^2)+(0x3^1)+(2x3^0)$	-reads numbers in their respective bases -	-expands numbers in their respective bases	creative thinking Effective communication Critical thinking	Explanation Discussion Question and answer	Expanding numbers in bases	Chalkboard illustrations	Mk Maths book 5 page 71 P.6 Curr page 153	

	6				<u>Conversion of bases</u> Changing from non-decimal bases to decimal base. <u>Example</u> Change 23_{five} to base ten $23_{five} = 2^{5}1\ 3^{5}0_{five}$ $(2x5^{1})+(3x5^{0})$ 2x5 + 3x1 10 + 3 = 13ten	-reads and interprets given problems	-identifies place value of each digit in a given number -changes from any non decimal base to decimal base -convert from decimal base to non decimal base			Changing from non-decimal bases to decimal base	Chalkboard illustrations	Mk Maths book 6 Old Edition pg 39 P.6 Curr page 153	
	7				<u>Conversion of bases</u> Changing from decimal base to non decimal base. <u>Example</u> Change 38_{ten} to base five. B | N R 5 | 38 5 | 7 | 3 5 | 1 | 2 0 | 1 = 123_{five}	-reads and interprets given problems	-identifies place value of each digit in a given number -changes from any non decimal base to decimal base	creative thinking Effective communication	Explanation Discussion	Changing from decimal base to non-decimal base.	Chalkboard illustrations	Mk Maths book 6 Old Edition page 39 P.6 Curr	

						-convert from decimal base to non decimal base	Critical thinking	Question and answer			page 153	
	6	1	NUMERATION SYSTEM AND PLACE VALUES	Bases	Changing from non – decimal base to non-decimal base Example Change 123five to base six. -Change to decimal base(base ten)first $123_{five}=1^{52}2^{51}3^{50}$ $(1x5^2)+(2x5^1)+(3x5^0)$ 1x5x5+2x5+3x1 25+10+3 25 + 13 38_{ten} B | N | R 6 | 38 | 6 | 6 | 2 6 | 1 | 0 | 0 | 1 $= 102_{six}$ $123_{five}=102_{six}$	-reads and interprets problems correctly	-converts from non decimal base to non decimal base			Changing non-decimal to non-decimal base	Chalkboard illustrations	Mk Maths book 6 Old Edition page 40	
		2	NUMERATION	Bases	Solving for the unknown base	Reads and interprets	-solves the	creative thinking	Explanation	Solving for the	Chalkboard	Mk Math	

			SYSTEM AND PLACE VALUES		Example Solve for P in $34_p = 19_{ten}$ $3^p1 4^p0_p = 19ten$ $(3xp^1)+(4xp^0) = 19$ 3xp + 4x1 = 19 3p + 4 =19 3p+4-4 =19-4 $\frac{3p}{3} = \frac{15}{3}5$ P = 5(base five)	given problems correctly	unknown bases	Problem solving Effective communication	Discussion Question and answer	unknown base	illustrations	s book 6 page 49	
					Operation on bases. -Addition of bases Example Simplify $23_{five} + 14_{five}$ 23_{five} (0,1,2,3,4) $+14_{five}$ 7÷5=1r2 42_{five}	-reads and writes statements.	-adds numbers in given bases -subtracts numbers in given bases	Critical thinking		Adding numbers in different bases	Chalkboard illustrations	Mk Maths book 6 pg 41	
					Operation on bases -subtraction in bases Example Simplify $101_{two}- 11_{two}$ 101_{two} - 11_{two} 10_{two}	-reads and writes statements.	-adds numbers in given bases -subtracts numbers in given bases	creative thinking Problem solving Co-operation	Explanation Guided discussion	Subtracting numbers in different bases	Chalkboard illustrations	Mk Maths book 6 page 42	

							Effective communication Critical thinking	Question and answer					
E.L.O: The learner solves mathematical problems with competence and confidence using the four operations													
		3	NUMERATION SYSTEM AND PLACE VALUES	Addition of whole number	Addition of large numbers. Example Work out: 2 3 3 0 4 6 +4 1 3 7 2 1 6 4 6 7 6 7	-reads and interprets statements involving addition of large numbers	-adds large numbers with or without regrouping -solves word problems involving addition	creative thinking Problem solving Co-operation Effective communication Critical thinking	Explanation Guided discussion Question and answer	Adding large numbers	Chalkboard illustrations	Mk Maths book 6 page 54 P.6 Curr page 156	
				Addition of whole Numbers in word problems	Word problems involving addition. Example 1.There were 246240 books in the library and the headmistress 167645 more books to the same library. How many books are in the library altogether? 246240books +167645books 413885books	-reads and interprets statements involving addition of large numbers	-adds large numbers with or without regrouping -solves word problems involving addition			Adding large numbers in word problems	Chalkboard illustrations	Mk Maths book 6 page 55 P.6 Curr page 156	

		4	OPERATION ON WHOLE NUMBERS	Subtraction of whole number	Subtraction of large whole numbers Example Work out: 1. 946786 - 423252 523534	-reads and complehends statements involving subtraction	-subtracts large numbers with out or with regrouping - determines other terms used in subtraction -solves word problems involving subtraction			Subtracting large numbers in word problems	Chalkboard illustrations	Mk Maths book 6 page 57. P.6 Curr page 156	
			OPERATION ON WHOLE	Subtraction of whole number in word problem	Word problems involving subtraction Example A diary processed 6500650 litres of milk and sold 5650945 litres. How many litres were left?	-reads and complehends statements involving subtraction	-subtracts large numbers with out or with regrouping	creative thinking Problem solving	Explanation	Subtracting large numbers in word problems	Chalkboard illustrations	Mk Maths book 6 page 57	

			NUMBERS		6500650-5650945 = 849705 6500650 - 5650945 849705		- determines other terms used in subtraction -solves word problems involving subtraction	Co-operation Effective communication Critical thinking	Guided discussion Question and answer Think and pair			P.6 Curr page 156	
		5		Multiplication of large number	Multiplication of large numbers Example Multiply 1432 x 132 1432 X 132 2864 42960 + 143200 189024	-reads mathematical statements of multiplication -reads and complehends problems involving multiplication	- multiplies whole numbers -solves word problems involving multiplication			Answering oral questions Multiplying whole numbers	Chalkboard Illustrations	Mk Maths book 6 page 58 Understanding Mathematics book 6 page 47-48.	

	6		Word problem involving multiplication	Word problems in multiplication Example A farmer has 45 cows. Each cow produces 13 litres of milk in a day. How many litres of milk does the farmer get in a week? In a day 1 cow gives 13 litres 45 cows give 45x13 =585litres In a week(7days) 5 8 5 4 5 X 7 x1 3 4095 135 +450 585	-reads mathematical statements of multiplication -reads and complihends problems involving multiplication	-multiplies whole numbers -solves word problems involving multiplication			Working out word problems involving multiplication	Chalkboard illustrations	Mk Math book 6 page 61 P.6 Curr page 156	
	7	OPERATION ON WHOLE NUMBERS	Addition and multiplication of number	Addition and multiplication of whole numbers. Example Simplify: 5 + 4 x 3 5+4 x 3=5+(4 x 3) = 5 + 12 = 17	-reads given mathematical statements	-identifies the operation in given statements -solves problems involving addition and multiplication	creative thinking Problem solving Co-operation Effective communication	Explanation Group work Guided discussion Demonstration	Solving numbers involving addition and multiplication	Chalkboard illustrations	Mk Maths book 6 page 59 P.6 Curr page 156	

							Critical thinking	Question and answer					
7	1			Division of large number	Division of large numbers. Example Work out 6360÷120 6360÷120 = 53 120/ 6360 600 360 - 360 --- = 53	-reads and complehends problems involving division	-carries out division of large numbers -mentions the terms used in division -solves word problems involving division			Working out division of large numbers	Chalkboard illustrations	Mk Maths book 6 page 60 P.6 Curr page 157	
			OPERATION ON WHOLE NUMBERS	Word problem involving division	Word problems in division <u>Example</u> A petrol station manager bought 22000litres of motor oil. If she put equal amount of oil in 440 drums, how many litres of oil were in each drum?	-reads and complehends problems involving division	-carries out division of large numbers -mentions the terms used in division -solves word problems	creative thinking Problem solving Co-operation	Explanation Group work Guided discussion	Working out word problems involving division	Chalkboard illustrations	Mk Maths book 6 page 61 P.6 Curr page 157	

						involving division	Effective communication Critical thinking	Demonstration Question and answer				
	2		All operations together (Use of BODMAS)	Use of BODMAS Brackets Of Division Multiplication Addition Subtraction Example Simplify: 18-(4x3)+6 BODMAS 1 2 3 18-12 + 6 18+6-12 24-12 12	-reads and interprets BODMAS	-applies BODMAS to solve problems involving all operation			Group work Writing an activity involving BODMAS	Chalkboard illustrations	MkMaths book 6 page 62 Understanding Mathematics book 6 page 54 P.6 Curr page 157	
	3		OPERATION ON WHOLE	Properties of number	Properties of numbers Commitative property a +b = b + a 4+ 5= 5 + 4 9 9 6 x 3 = 3 x 6 18 = 18 Associative property	-describe the properties of numbers	-proves that the order of numbers doesnot affect the results in addition and	creative thinking Problem solving Co-operation	Explanation discussion	Copying notes. Working out numbers using properties of	Chalkboard illustrations	Mk Maths book 6 Old Edition page	

			NUMBERS		3+(8+9)=(3+8)+9 3+17 = 11+9 20 20 (3x7)x2= 3x(7x2) 21x2 = 3 x 14 42 = 42		multiplication -applies distributive property to solve problems	Effective communication Critical thinking	Demonstration Question and answer	numbers		54-55 P.6 Curr page 157	
					Distributive property Examples Simplify using distributive property only. 1)4 x 5+ 4 x 6 4(5+6) 4(11) 4 x 11 44 2) (33x10)-(22x10) 10(33-22) 10(11) 10 x 11 = 110	-describe the properties of numbers	-proves that the order of numbers does not affect the results in addition and multiplication -applies distributive property to solve problems			Working out numbers using distributive property only	Chalkboard illustration	Mk Maths Book 6 Old Edition page 55. P.6 Curr page 157	
	4		NUMBER PATTERNS AND SEQUENCE	Divisibility	Divisibility tests by 2, 3, 4, 5, 8,9,10. 1)A number is divisible by 2 if the last digit of a given number is an even number. 0, 2, 4, 6, 8. 2)A number is divisible by 3 when the sum of the digits is a multiple of 3.	-reads statements correctly	-copies motes about divisibility tests -tests numbers for divisibility by 2, 3,4	creative thinking Problem solving Co-operation	Explanation Guided discovery discussion	Writing notes Identifying correct numbers for learnt	Chalkboard illustrations	Mk Maths book 6 page 142 P.6 Curr	

					3) A number is divisible by 4 when the last two digits of the given number are divisible by 4. 4) A number is divisible by 5 when the last digit is 0 ro 5. 5)A number divisible by 6 when it si divisible by 2 and3 e.t.c.		5, 8, 9 and 10 -identifies numbers divisible by any given numbers	Effective communication Critical thinking	Question and answer	divisibility tests		page 159
E.L.O: - the learner forms various forms of patterns and sequences -relates and applies simple computation skills in real life situations												
	5			Developing number patterns	Types of numbers 1)<u>Whole numbers</u> Whole numbers begin with 0. {0,1,2, 3,....} 2) <u>counting numbers</u> Counting numbers begin from 1. {1,2,3,.....} Another name for counting numbers is <u>natural</u>. 3)<u>Even numbers</u> These are exactly divisible by 2. {0,2, 4,6,....}The first number is 0. 4) <u>Odd numbers</u> These numbers are not exactly divisible by 2. {1,3,5,7,....}	-reads and describes types of numbers	-identifies types of numbers -lists sets of given types of numbers in a given range	creative thinking Problem solving Effective communication Critical thinking	Guided discussion	Naming numbers Listing numbers	Chalkboard illustrations	Mk Maths book 6 Old Edition pg 112 Understanding Maths book 6 page 66

											P.6 Curr page 159	
		NUMBER PATTERNS AND SEQUENCE	Developing number patterns	Types of numbers Prime numbers: These are numbers with only 2 factors 1 and itself. {2,3,5,7,11…….}. 2 is the only/even prime number Composite numbers These are numbers with more than 2 factors.{4,6,8,9,10,12,….}	-describes the types of numbers	-identifies and writes types of numbers -lists and names types of numbers -finds triangular numbers using a formular	creative thinking Problem solving Effective communication Critical thinking	Explanation Guided discovery discussion Question and answer	Naming different types of numbers Listing different types of numbers	Chalkboard illustrations	Mk Maths book 6 Old Edition page 112 Understanding Mathematics book 6 page 66 P.6 Curr page 159	

	7				Types of numbers Triangular numbers When you add consecutive natural numbers beginning with 1, you get a triangular number 1 = 1 1+2 = 3 1+2+3 = 6 1+2+3+4 = 10 1+2+3+4+5 = 15 1+2+3+4+5+6 = 21 1+2+3+4+5+6+7=28 {1,3,6,10,15,21,28,..} Finding triangular numbers Example Find the fifth triangular number. Formular used: $\frac{n(n+1)}{2}$ n representing the number $\frac{5(5+1)}{2}$ $\frac{5(6)}{2}$ 5x3 = 15	-describes the types of numbers	-identifies and writes types of numbers -lists and names types of numbers -finds triangular numbers using a formular	creative thinking Problem solving Effective communication Critical thinking	Explanation Guided discovery discussion Question and answer				
	7		NUMBER PATTE	Developing number patterns	Types of numbers Square number:	-describes square numbers	-reads and writes	creative thinking	Explanation	Finding square	Chalkboard	Mk Maths	

			RNS AND SEQUENCE		A square is a product of a number by itself Examples 1x1, 2x2, 3x3, 4x4, 1, 4, 9, 16, 5x5 25 Find the square of 16. $16 = 16^2$ $= 16x16$ $= 256$		square numbers -finds square numbers of whole numbers -finds the square of fractions and decimals	Problem solving Effective communication Critical thinking	Guided discovery discussion Question and answer	number s	illustrations	book 6 page 95 P.6 Curr page 159	
8	1		NUMBER PATTERNS AND SEQUENCE	Square number	Square numbers of fractions. Examples Find the square of: 1) ½ = (½)² = ½ x ½ = ¼ 2)0.6 = (0.6)² = 0.6x 0.6 = $\frac{6}{10} \times \frac{6}{10}$ = $\frac{36}{100}$ = 0.36	-describes square numbers	-reads and writes square numbers -finds square numbers of whole numbers -finds the square of fractions and decimals	creative thinking Problem solving Effective communication Critical thinking	Explanation Guided discovery discussion Question and answer	Finding squares of fractions	Chalkboard illustrations	Mk Maths book 6 page 95 P.6 Curr page 159	
	2			Square roots	Finding square roots of whole numbers Example Find the square root of 36. Method: Prime factorize	-reads and complehends mathematical problems	-identifies the symbol for the square root			Finding square roots of whole numbers	Chalkboard illustration	Mk Maths book 6	

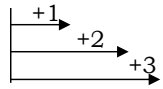
					2 | 36 2 | 18 3 | 9 3 | 3 1 (2x2)x(3x3) 2x3 = 6 OR $\sqrt{2x2x3x3}$ $\sqrt{2^2 \times 3^2}$ 2 x 3 6		-finds the square root of whole numbers					page 96 P.6 Curr page 159	
	3		NUMBER PATTERNS AND SEQUENCE	Square roots	Square roots of fractions Examples Find the square root of: 1) $\frac{4}{9} = \sqrt{\frac{4}{9}}$ 2 | 4 3 | 9 2 | 2 3 | 3 1 1 (2x2) (3x3) 2 3 $\sqrt{\frac{4}{9}} = \frac{2}{3}$	-reads and interprets given statements	-changes mixed fractions to improper fraction -finds the square root of fractions	creative thinking Effective communication Critical thinking	Explanation Guided discussion Question and answer	Finding square roots of fractions	Chalkboard illustrations	MK Maths book 6 pg 99-100 P.6 Curr page 159	
		3			$2\overline{)2\ \frac{1}{4}} = \sqrt{\frac{4 \times 2 + 1}{4}}$ $= \sqrt{\frac{9}{4}}$ 3 | 9 2 | 4 3 | 3 2 | 2								

	4	NUMBER PATTERNS AND SEQUENCE	Square roots	Square roots of decimals Example Find the square root of 0.36. $0.36 = \frac{\sqrt{36}}{100}$ 2 | 36 — 2 | 100 2 | 18 — 2 | 50 2 | 9 — 5 | 25 3 | 3 — 5 | 5 1 — 1 (2X2)X(3X3)(2X2)X(5X5) 2X3 = 6 — 2X5 = 10 $\frac{\sqrt{36}}{100} = \frac{6}{10}$ $\sqrt{0.36} = 0.6$	-reads and comprehend statements	-converts decimals to common fractions -finds the square root of decimal fractions	Critical thinking Effective communication Problem solving Creative thinking	Explanation Guided discussion Question and answer	Finding square roots of decimals	Chalkboard illustrations	Mk Maths book 6 page 100 P.6 Curr page 159	
	4	NUMBER PATTERNS AND SEQUENCE	Application of square roots in word problem	Square root in word problems Example 1a) Find the side of a square whose area is 16cm². Need for diagramatic ilustration. 16cm²	-reads and comprehend statements -reads and comprehend statements	-writes given statements -applies square root knowledge to solve word problems	Critical thinking Effective communication Problem solving	Explanation Guided discovery discussion	Finding square roots in word problems Finding square roots in word	Chalkboard illustrations	P.6 Curr page 159 Mk Maths book 6 page 100	

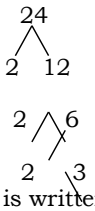
					□ | □ A =sxs 2 |16 S^2= 16 2 | 8 $\sqrt{S^2}$= $\sqrt{16}$ 2 | 4 2 | 2 S = 4cm (2x2)(2x2) 2x2 =4 b) Calculate its perimeter P=add all sides = S+S+S+S =4cm+4cm+4cm+4cm = 8 + 8 = 16cm		-writes given statements -applies square root knowledge to solve word problems	Creative thinking	Question and answer	problems		P.6 Curr page 159	
	5		NUMBER PATTERNS AND SEQUENCE		<u>Cubic number</u> A cubic number is obtained when a given number is multiplied by itself three times. Example Find the cube of 5. 5 = 5^3 = 5 x 5 x 5 = 25 x 5 = 125	-describes cubic numbers	-finds cubic numbers -find the next number in a given sequence			Finding cubic numbers	Chalkboard illustrations	Mk Maths book 6 Old Edition P.6 Curr page 159	
				Finding missing number	Finding missing numbers in a given pattern Examples Find the next number in the sequence.	-describes cubic numbers	-finds cubic numbers -find the next	Critical thinking	Explanation	Completing number sequences	Chalkboard illustrations	Mk Maths book 5 Old	

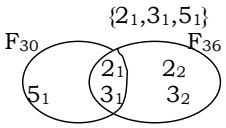
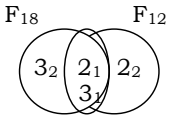
					1)1, 3, 6, 10, 15, 21, 28 +2+3+4+5+6+7 2) 25, 24, 21, 16, 9 25 24 21 16 9 -1 -3 -5 -7		number in a given sequence	Effective communication Problem solving Creative thinking	Guided discovery discussion Question and answer			Edition pg 113 P.6 Curr page 159	
	6			Finding consecutive even number	Finding consecutive even numbers. Pattern to follow. 0,1,2,3,4,5,6,7,8, +2 +4 +6 Example The sum of three consecutive even numbers is 18. Find the numbers Let the 1st number be n. n, n+ 2, n+4 n+n+2+n+4 = 18 n+n+n+2+4 = 18 3n + 6 = 18 3n + 6-6 = 18-6 $\frac{3n}{3} = \frac{12}{3}$ n =4	-describes even numbers -reads and comprehend statements	-mentions even numbers -analyses the pattern for finding even numbers -finds the consecutive even numbers			Practicing the pattern Finding consecutive even numbers	Chalkboard illustrations	MK Maths book 6 pg P.6 Curr page 159	

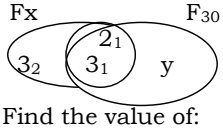
					n, n+ 2, n+ 4 4, 4+2, 4+4 4, 6, 8 The numbers are 4, 6 and 8								
			NUMBER PATTERNS AND SEQUENCE	Finding consecutive odd number	Finding consecutive odd numbers. Pattern to follow 1,2,3,4,5,6,7,8 +2 +5 +5 Example The sum of three consecutive numbers is 15. Find the numbers. Let the 1st number be y. Y, y+2, y+4 y+y+2+y+4 = 15 y+y+y+2 + 4 = 15 3y + 6 = 15 3y + 6-6 =15 – 6 3y = 9 3 3 y = 3 y, y+ 2, y+4 3, 3+2, 3+4 3 5 7 The numbers are 3, 5 and 7	-describes odd numbers -reads and comprehend statements	-mentions odd numbers –analyses the pattern for finding odd numbers -finds consecutive odd numbers	Critical thinking Effective communication Problem solving Creative thinking	Explanation Guided discovery discussion Question and answer	Finding consecutive odd numbers	Chalkboard illustrations	Mk Maths book 6 pg P.6 Curr page 159	
	7		NUMBER PATTE	Finding consecutive	Finding natural numbers. Pattern to follow	-describes natural numbers	-mentions natural numbers	Critical thinking	Explanation	Finding consecutive	Chalkboard	Mk Maths	

			RNS AND SEQUENCE	natural number	1,2, 3, 4,5,6,7,8,...  Example The sum of three consecutive numbers is 15. Find the numbers. Pattern to follow Let the 1st number be k. K, k+1, k+2 K+K+1+k+2 =15 K+k+k+1+2 = 15 3k + 3 = 15 3k+ 3-3 = 15-3 $\frac{3k}{3} = \frac{12}{3}$ K = 4 K, k+1, k+2 4, 4+1, 4+2 4, 5, 6 The numbers are 4,5 and 6		-analyses the pattern for finding counting numbers -finds consecutive natural numbers	Effective communication Problem solving Creative thinking	Guided discovery discussion Question and answer	natural/ counting numbers	illustrations	book 6 page P.6 Curr page 159	
9	1		NUMBER PATTERNS AND SEQUENCE	Multiples	Multiple: Is the product of a given number and any other whole number greater than zero. Listing common multiples Examples List the multiples of 4 between 10 and 20 1x4, 4x2, 4x3, 4x4	-describes a multiple -mentions multiples	-finds multiples of whole numbers -finds the lowest common Multiples	Critical thinking Effective communication	Explanation Guided discovery	Listing multiples Finding lowest common multiples(LCM)	Chalkboard illustrations	MK Maths book 6 page 76	

					4, 8, 12, 16 4x5 20 {12, 16} M_4 between 10 an 20 = {12, 16} Lowest common multiple (LCM) Example Find the LCM of 4 and 6. M_4={4,8,12,16,20, 24,28…} M_6={6,12,18,24,30,36,…} Common multiples {12, 24} LCM ={12}		of given numbers	Problem solving Creative thinking	discussion Question and answer			P.6 Curr page 159	
	2			Factors	Factors Listing factors Example List all factors of 12. 1x12 2x9 3x6 F_{12}={1,2,3,6,9,12} Common factors, lowest common factor (LCF) and Highest Common factors(HCF) Examples Find the highest common factor of 15 and 12. F_{15} =1x15 F_{12}=1x2 3x5 2x6 F_{15}={1,3,5,15}	-describes the term factors -reads given statements	-finds factors of given numbers Finds the HCF and LCF -lists factors of numbers	Critical thinking Effective communication Problem solving Creative thinking	Explanation Guided discovery discussion Question and answer	Copying notes about factors. Finding LCF, HCF and common factors of given numbers.	Chalkboard illustrations	Mk Maths book 5 Old Edition page 101 Mk Maths book 6 page 81	

					F_{12}={1,2,3,4,6,12} a) Common factors{1,3} b) HCF of 12 and 15={3} c) LCF of 12 and 15 ={1}						P.6 Curr page 159	
	3		NUMBER PATTERNS AND SEQUENCE	Prime factorisation	Prime factorization: is to find factors of a multiple using prime numbers. Example Prime factorise 24 **Ladder Method** **Factor Tree** 2 | 24 1 | 12 2 | 6 3 | 3 1  The answer is written in 1)Multiplication 2x2x2x 3 2)powers or exponents 2^3 x 3 3)subscripts or set form $2_1,2_2,2_3,3_1$	-describes the term prime factorization	-mentions different methods of prime factorization -prime factorizes given numbers -represents prime factors on a venn diagram -finds the LCM and GCF using prime factors	Critical thinking Effective communication Problem solving Creative thinking Co-operation	Explanation Guided discovery discussion Question and answer	Finding prime numbers	Chalkboard illustrations	Mk Maths book 6 pg 82 P.6 Curr page 159	
	4		NUMBER PATTERNS AND		Representing prime factors on a venn diagram. Example	-describes the term prime factorization	-mentions different methods of prime factorization	Critical thinking	Explanation Guided discovery	Identifying common factors	A chart showing prime factors on Venn-	Mk maths bk page 86.	

			SEQUENCE		Represent prime factors of 30 and 36 on a venn diagram. 2 | 36 — 2 | 18 — 3 | 9 — 3 | 3 2 | 30 — 3 | 15 — 5 | 5 — 1 $\{2_1,2_2,3_1,3_2\}$  		-prime factorizes given numbers - represents prime factors on a venn diagram -finds the LCM and GCF using prime factors	Effective communication Problem solving Creative thinking Co-operation	discussion Question and answer	Representing prime factors on Venn-diagrams.	diagrams Chalkboard illustrations	P.6 Curr page 159	
	4		NUMBER PATTERNS AND SEQUENCE	Prime factorization.	Finding the lowest common multiple and greatest common factor on a venn diagram. Example; Using the given venn diagram, find the LCM and HCF of 18 and 12.  LCM is the unon set;	-describes the term prime factorization	-mentions different methods of prime factorization -prime factorizes given numbers - represents prime factors on a venn diagram	Creative thinking Effective communication Critical thinking Problem solving	Explanation Illustration Guided discovery Problem solving	Finding LCM and HCF using a Venn diagram	A chart showing prime factors on a Venn diagram Chalk board illustrations	Mk maths book 6 page 87 P.6 Curr page 159	

					F_{18} U F_{12}=$\{3_2,2_1, 3_1,2_2\}$ =3X2X3X2 =6X6 =36 LCM = 36 HCF is the intersection set F_{18} n F_{12}=$\{2^1,3_1\}$ =2X3 =6 GCF = 6		-finds the LCM and GCF using prime factors						
	5		NUMBER PATTERNS AND SEQUENCE	Prime factorization	Finding the unknown on venn diagrams Example Study the venn diagram and answer questions that follow  Find the value of: 1) x Fx =$\{3_2,3_1, 2_1\}$ = 3 x 3 x 2 = 9 x 2 = 18 <u>X = 18</u> 2) y Fy =$\{2, 3, y\}$ = 30 <u>2x 3 x y</u> = <u>30</u>	-reads and interprets given information.	-draws venn diagrams -studies information on venn diagrams -uses venn diagrams to find the unknown	Creative thinking Effective communication Critical thinking Problem solving	Explanation Illustration Guided discovery Problem solving	Finding unknown values on a venn diagram	Chalkboard illustration	Mk Maths book 6 page 88-89 P.6 Curr page 159	

					2 x 3 2 x 3 Y = 5								
	6		NUMBER PATTERNS AND SEQUENCE	Prime factorization	Finding prime factorised numbers. Examples 1)Find the number that has been prime factorised $\{2_1, 2_2, 2_3, 3_1\}$ = 2 x 2 2 x 3 = 4 x 6 = 24 (2) If 2 x 3 x y = 30, find y. 2 x 3 x y = 30 $\frac{6y}{6} = \frac{30}{6}$ y = 5 3) 2^{2x} x 2 = 32, find x. Method: Prime factorize 32, then solve 2 | 32 2 | 16 2 | 8 2 | 4 2 | 2 | 1 2^{2x} x 2^1 = 32 2^{2x} x 2^1 = 2^5 2x + 1 = 5 2x + 1 – 1= 5 – 1 $\frac{2x}{2} = \frac{4}{2}$	-reads and comprehend statements .	-finds the value of the unknown -solves for the prime factorized multiple	Creative thinking Effective communication Critical thinking Problem solving	Explanation Illustration Guided discovery Problem solving	Finding missing numbers	Chalkboard illustrations	MK Maths book 6 page 83 P.6 Curr page 159	

					X = 2							
	7		NUMBER PATTERNS AND SEQUENCE	Application of lowest Common Multiple (LCM) in word problem.	Application of lowest common multiple(LCM) in word problems with or without remainders. Example Find the smallest number which when divided by 4 of 9 or 12 leaves 3 as a remainder. 2 | 4 | 9 | 12 + 3 2 | 2 | 9 | 6 3 | 1 | 9 | 3 3 | 1 | 3 | 1 | 1 | 1 | 1 2 x 2 x3 x 3 + 3 4 x 9 + 3 36 + 3 = 39	-reads, comprehends and interprets statements	-applies the LCM knowledge to solve word problems	Creative thinking Effective communication Critical thinking Problem solving Interpretation	Explanation Illustration Guided discovery Problem solving	Solving word problems involving lowest common multiple (LCM)	Chalkboard illustrations	Understanding Mathematics book 6 P.6 Curr page 159	
10	1			Application of lowest Common Multiple(LCM) and Greatest Common Factor (GCF) in word problem	Word problems involving GCF, LCM and given numbers. Example The lowest common Multiple(LCM) of two numbers is 144, their greatest common factor (GCF) is 12 and one of the numbers is 48. Find the other number. Let the other number be t	-reads and comprehend word problems	-solves word problems involving GCF and LCM to find missing numbers			Solving word problems involving greatest common factor and lowest common multiple	Chalkboard illustrations	Mk Maths book 6 P.6 Curr page 159	

					1^{st} no.x 2^{nd} no.= LCM x HCF 48 x t =144x 12 $\frac{48t}{48} = \frac{144x12}{48}$ t = 36 The other number is 36.								
	2		NUMBER PATTERNS AND SEQUENCE	Values of powers of number	Finding values of powers of numbers Examples 1)Find the value of 2^4 2^4 = 2x2 x2x2 = 4 x 4 = 16 2) What is the value of 7^3? 7^3 = 7 x7 x 7 49 = 49 x 7 x 7 = 343 343	-reads given mathematical statements	- interprets mathematical statements -finds values of powers - multiplies numbers	Creative thinking Effective communication Critical thinking Problem solving Interpretation	Explanation Illustration Guided discovery Problem solving	Finding values of powers	Chalkboard illustrations	Mk Maths book 6 page 84 P.6 Curr page 159	
	3			Expressing a number as a product of another number	Writing numbers as powers of given multiples Examples 1)Write 32 in powers of 2. 2 | 32 2 | 16 2 | 8 2 | 4 2 | 2 | 1 2 x 2 x2 x 2 x 2 32 = 2^5	-reads and interprets given statements	-writes given numbers in power form -prime factorize given numbers in power form	Creative thinking Effective communication Critical thinking Problem solving	Explanation Illustration Guided discovery Problem solving	Writing given numbers in power form	Chalkboard illustrations	MkMaths book 6 page 84 P.6 Curr page 159	

					2) Write 64 in powers of 4. 4 | 64 4 | 16 4 | 4 | 1 4 x 4 x 4 64 = 4^3									