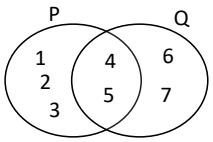
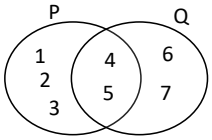
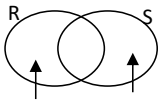
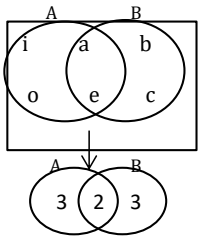
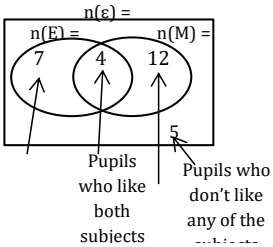
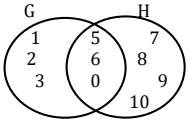
MATHEMATICS SCHEME OF WORK FOR PRIMARY FIVE FOR TERM ONE

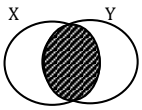
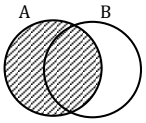
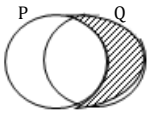
WK	PD	THEME	TOPIC	SUBTOPIC	CONTENT	SUBJECT COMPETENCE	LANGUAGE COMPETENCE	METHODS	LIFE SKILLS	T/ AIDS	ACTIVITY	REF
1	**1**	**SET CONCEPTS**	**SETS**	**Intersection of sets**	Intersection of sets. Given the venn diagram below. Find the intersection set  Find: i) P∩Q ii) ∩(P∩Q) Solution i) P∩Q = (4,5) ii) ∩(P∩Q) = 2 elements	- The learner identifies an intersection set. - Finds the number of elements in the intersection set. - Identifies a symbol for intersection sets	- The learner identifies an intersection set. - Spells the word intersection	Brain storming Guided discovery	Critical thinking Effective communication	A chart showing sets on a venn diagram	Finding members in the given sets Finding the intersection sets	MK pupil's bk5 pg 4-7
	2			**Union of sets**	Union of sets. Given the venn diagram below.  i) Find P ∪Q ii) P∪Q = (1,2,3,4,5,6,7) iii) ∩(P∪Q) = (1,2,3,4,5,6,7) = 7 elements	- The learner identifies the members in the union set. - Finds the number of elements in the union set. - Identifies the symbol for union sets.	- The learner identifies a union set	Illustration			Finding members in the union sets. Finding the number of elements in the given sets.	Oxford primary maths bk5 pages 8-14

	3			**Difference or complement of sets**	Difference/complement of sets  R-S(R only) Or S^1 S-R (set S only) R^1	-	-					
	4	**set concept**	**sets**	**comparing of sets**	Given the venn diagram below, study it and answer the questions that follow.  	- Compares the given sets - Counts elements	- Reading the given words. - Pronounces the new words correctly	Guided discovery Brain storming	Effective communication Critical thinking	A chart Chalkboard illustration	Counting drawing Adding	Mk bk 6 pg 23

	5			**Subsets**	Study the venn diagram below showing how people like English and Maths.  n(E) = 7+4 = 11 n(M) = 4+12 = 16 n(ε) = (7+4) + (12+5) = 11 + 17 = <u>28</u>	- Interprets the venn diagram correctly -Solves problems about venn diagrams		Explanation	Confidence			

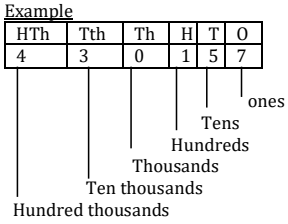
	6			**Subsets**	**<u>Subsets:</u>** A subset is a smaller set formed from a bigger set. Symbol for subjects "C" Forming subsets. <u>Example</u> Set A ={a, b} Form all possible subsets from set A A ={a,b} = { } {a} {b} {a,b} Note: i) An empty set is a subset of every set. ii) Every set is a subset of itself.	- defines a subset - draws the symbol for a subset - lists down possible subsets from a given set	- spells the word subset. - pronounces the word subset correctly.	Guided discovery Brain storming	Critical thinking Logical thinking	flash cards	picking listing	
2	**1**			**Finding the snumbers of subsets**	Finding the number of subsets Example Set P = (1,2,3) Find the number of subsets in set P i) <u>By listing</u> Set P = (1,2,3) = ( ), (1), (2), (3), (1,2), (1,3), (2,3), (1,2,3) <u>Set P has 8 subsets</u>	- finds the number of subsets by using the formular.		Explanation			writing	
	2				ii) <u>By formular</u> Number of subsets = 2^n where "n" stands for the number of elements. set P = (1,2,3) = 2^n = 2^3 = (2x2)x2 = 4x2 = 8 subsets	- multiplies the numbers correctly.		problem solving Confidence		counting	

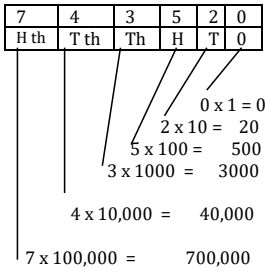
	3			**Difference of sets**	Example: Study the venn diagram below.  Find i) G – H G – H = {1,2,3}	- finds the complement and difference of sets. - finds the number of elements in the difference of sets	- defines difference of sets. - pronounces the word complement correctly.	Question and answer Brain storming	Effective communication		Counting members	MK MTC bk4 pg 15
					ii) Find number of members in set H - G H – G = (7,8,9,10) n(H-G) = 4 elements	-	-	Guided discovery				

	4			**Decribing regions on a venn diagram**	Description of Regions on a venn diagram a) Describe the shaded region.  i) Shaded X n Y ii) Un shaded (X n Y)^1  i) Shaded Set A ii) Un shaded Set B – A/A^1  i) Shaded – Set Q only ii) Un shaded – Set P	- draws venn diagrams - Identifies the shaded regions - identifies the un shaded regions	- Interprets set symbols correctly			A chart showing shaded regions	Shading Drawing venn diagrams	Collection MK bks

	5			**Probability**	Probability (Tossing) Probability is the measure if a chance. Example A dice has 6 faces (1,2,3,4,5,6) Sample space = 6 Prob of getting a 2 on top $= \frac{2}{1,2,3,4,5,6} = \frac{1}{6}$	- defines the word probability. -	-reads and pronounces the word probability -reads the word problem			A dice	counting	MK pupils bk 6 pg 26-27
					A coin has 2 faces = HT Sample space Prob of getting a head on top = $= \frac{H}{HT}$ $= \frac{1}{2}$	- identifies the sample space and the desired chance. -	-					
	6			Random picking	Random picking Example: In a box, there are 6 ripe mangoes and 7 un ripe mangoes. a) i) ripe mango $= \frac{\text{No. of events}}{\text{sample space}}$ $= \frac{\text{No. of ripe mangoes}}{\text{Total no.}}$ $= \frac{6}{6+7}$ $= \frac{6}{13}$ b) Un ripe mango -	- defines random picking - finds probability of events - adds numbers corrects	- reads the word problems - reads and pronounces the word random picking	Guided discussion	Sharing Accuracy			MK book 5 pg 24-25

3	**1**	**NUMERACY**	**WHOLE NUMBERS**	**Forming numerals from digits**	A number is the idea of quantity. A numeral is a symbol that represents a number. Example: Given the digits 4,5,6, use them to form all possible numerals. Numerals are 456, 465, 546, 564, 654, 645 a) Find the sum of the biggest and smallest numeral formed. Sum = 456 + 654 = 1110 b) Write the even numerals formed. 456, 546, 564, 654 c) Find the range of the biggest and the smallest numerals formed.	The learner; - finds the sum of the largest and the smallest numerals formed. forms numerals -	- reads and uses the words correctly	Guided discovery Brain storming Problem solving	Critical thinking Effective communication	chalkboard illustrations	defining a numeral and a number	

	2			**Place values of whole numbers**	PLACE VALUES Example  a) Find the sum of all the place values of 3 and 1 in the above numbers. b) find the product of place values of 5 and 7.	<u>The learner:</u> - identifies the place values if all digits	- writes the place values correctly - reads the place values of digits.					Understanding Mathsbk 5 pg 15-19

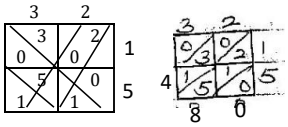
	3			**Values of whole numbers.**	**VALUES OF WHOLE NUMBERS** Example Find the value of each digits in the number below.  **Note**: Sum, product, difference and quotient should be considered.	Finds the value of each digit in the given numeral.	- Reads the place values	Brain storming Guided discovery Question and answer	Critical thinking Effective communication	Chart chalkboard illustrations	Finding values of digits Finding sum, product, difference and quotient of values	New MK bk 5 pg 36
	4			**Writing in words**	Writing in words Example Write 230 425 in words 230/425 = 230,000 425 - 230,425 230,425 = Two hundred thirty thousand four hundred twenty five	writes numbers in words.	- Reads the number words in figures					

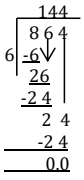
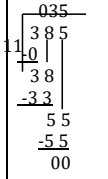
	5			**Writing in figures**	Writing in figures Example 1. Three thousand, five hundred thirty six. Three thousand 3000 Five hundred 500 thirty six + 36 3,536 2. Eight hundred four thousand, four hundred three. 804,000 + 403 804,403	The learner writes numbers in figures.	- The learner reads the number in words	Guided discovery problem solving	Effective communication Critical thinking	Chalkboard illustration	Reading in words Writing in figures	New MK pupils bk 5 pg 29-31
	6			**Expanding numbers**	**EXPANDING IN EXPONENTS** a) Expand 49872 using 10^5 10^4 10^3 10^2 10^1 10^0 4 9 8 3 7 2 Expand using powers of ten. $=(4x10^5) + (9x10^4) + (8x10^3) + 3x10^2) + (2x10^0)$ Note: Place value form and value form should be considered.	The leaner expands given numbers in values and place values	- reads and writes numbers that have been expanded		Logical flow of ideas		expanding reading	

4	**1**			**Writing in short**	Writing in short or finding expanded number Example: Find the number that has been expanded. a) 20,000 + 700 + 6 = 20,000 700 + 6 20,706		-					MK bk 5 pg 32 Oxford Primary Maths bk5 pages 12-18 Understanding Maths bk5 pg 36
	2		Rounding off whole numbers	**Rounding off whole numbers**	Rounding off whole numbers Rounding off simply means the estimate to the nearest.	rounds off whole numbers	- reads and pronounces the words correctly	brain storming		Number cards	Rounding off whole numbers	
	3				Example 1. round off 654 to the nearest Hundred 6 ~~4~~ ~~5~~ +0 600 2. Round off 52 to the nearest Tens. 5 2 + 0 50	- identifies the place values of digits	-				Adding numbers	Oxford Mathsbk 5 pg 20-24

	4		Whole numbers	**Roman numerals**	Hindu-Arabic to Roman numerals Basic Roman numerals 1 – I 100 - C 5 – V 500 - D 10 - X 1000 - M 50 - L Example 1. Write 58 in Roman numerals. 58 = 50 + 8 = L + VIII = LVIII 2. Write 29 in Romans 29 = 20 + 9 = XX + IX = XXIX	- Writes Hindu-Arabic numerals	- reads and pronounces the words correctly	Guided discovery	Effective communication	Number cards showing Hindu-Arabic and Roman numerals	expressing Hindu-Arabic to Roman numerals	MK bk 5 pg 38
	5					-	-					
	6					-	-					

5	**1**			**Application of Roman Numerals**	Application of Roman numerals Example: Nakku is twenty seven years old. Write her age in Roman symbols. Nakku is 27 years old (20 + 7) years old (XX + VII) years old XXVII years old	The learner: - solves problems involving Roman numerals	- Reads and interprets questions	Explanation	Adding numbers	Chalkboard illustration	Problem solving	New MK pupils bk 5 pg 47-56
	2			**Operation on numbers Addition and subtraction**	Addition and subtraction of whole numbers Examples: a) Add: 473 442 + 369 215 842 257 b) Find the sum of 828,194 and 111,428 c) Find the difference between 48,765 and 11413 solution 48,765 - 11,413 37,342 d) Okiria had sh. 25,970, then he gave Akol sh. 12,585. How much did okiria have left? Had sh. 25,970 Gave out - sh. 12,585 sh. 12,385	The learner: Adds and subtracts numbers including word problem -	The learner - identifies the key words used in addition and subtraction of whole numbers	Guided discovery Group work	Subtracting numbers Reading statements	use of counters	effective communication Explanation	understanding Mathsbk 5 pg 40-50

	3			**Multiplication of numbers**	<u>Multiplication</u> Multiply: 32 x 15  32 X 15 = 480 **or:** 3 2 x <u>1 5</u> 160 <u>+ 32</u> <u>480</u>	<u>The learner:</u> - Multiplies by 2 digits numbers	<u>The learner:</u> - reads and interprets word problems	Brain storming				Oxford primary Mathematics book 5 pg 30-33

	4			**Division**	Division of whole numbers Example: Divide 864 by 6  864 ÷ 6 = 144 385 by 11  385 ÷ 11 = 35	The learner: - divides 3 – digits numerals using long divisions	The learner: - reads problems - gives the divisibility facts of 2,3,4,5 and 10	Explanation Guided discussion	Dividing numbers	Chalkboard illustration	Co-operation Accuracy Respect	MK book 5 pg 50-56

	5			**Mixed operation**	B O D M A S Brackets, Of, Division, Multiplication, Addition, Subtraction Example: a) Work out 2 + 6 – 3 (2+6) – 3 8 – 3 = 5 8 x 4 + 3 (8x4) + 3 32 + 3 = 35 6-10+7 (6+7)-10 13 – 10 = 3 b) Work out: 18-(4x3)÷6	The learner: - solves problems with many signs of operation	The learner: - Uses BODMAS - Gives the meaning of BODMAS				problem solving	MK book 5 pg 63
	6			**Average or Mean**	Average / Mean a)Average = Total of items / Number of items Find the average of 0,2,4 = (0+2+4) / 3 = 6 / 3 Average = 2 b) The average weight of 5 boys is 12kgs. Find their total weight.	The learner: - finds average or mean - finds total when given average	The learner: reads questions and interpret		Finding average and total			MK bk 5 pg 64-65

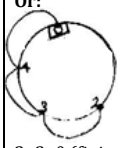
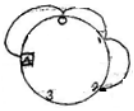
6	**1**		Operation on Numbers	**Bases**	Bases are systems of counting in groups. Counting in bases Examples: 1. 3 (Base five) 3 = /3 ones = 3 five 2. 3 (Base two) 3 = (II) | = 1 group of twos 1ones = 1 1 two 3. 17 (Base five) 17 = (IIII) (IIII) (IIII) II 3 groups of fives 2 ones = 3 2 five	The learner: - counts numbers in bases. - groups in all bases. - writes the place values of bases. - write bases in words	The learner - defines Bases - reads the names of bases and units used in each base	Explanation Guided discovery	Counting in Bases	chalkboard illustration		New MK pupils bk 5 pg 68-70
	2				Place values of Bases. Examples: 12 five 1 2 five Ones fives 1 0 2 four ones fours fives Writing base in words Examples 4 3 five = 4, 3 base five four, three base five 203 four = 2, 0, 3 base four Two, zero three base four			Question and answer		use of counters	Effective communication Accuracy	

					Expanding 1 3 five using place values. 1 group of five and three ones = (1x5) (3x1)							

	3		Whole numbers	**Bases**	Expanding bases using powers 3^2 | 3^1 | 3^0 1 | 1 | 2 $(1x3^2) + (1x3^1) + (2x3^0)$ <u>Changing to base ten</u>. <u>Example</u> Change 121 three to base ten. 3^2 | 3^1 | 3^0 1 | 2 | 1_{three} $= (1x3x3) + (2x3^1) + (1x3^0)$ $= (1x9) + (2x3) + (1x1)$ $9 + 6 + 1$ 16_{ten} <u>Changing to non-decimals</u> <u>Example</u> Change 9ten to base five 9 = (IIII) IIII = 1 group of fives and 4 ones $1\ 4_{five}$ **Or:** <u>Base | No. | Rem</u> 5 | 9 | 4 1 $9 = 1\ 4_{five}$	- should be able to change non decimals to decimal (base ten) - changes from base ten to non decimals	- reads and interprets questions	Guided discovery Explanation changing to non-decimals Group work	Reading questions changing to base ten changing to non-decimals	chalkboard illustration Use of counters	creative thinking problem solving effective communication	MK pupils bk 5 pg71-73

	4			**Addition Of Bases**	**Adding in Bases** Examples: Add: 1. $1\,1_{two} + 1_{two}$ $1\,1_{two} +$ $+\ 1_{two}$ 100_{two}		-				
					2. $1\,2\,3_{five} + 32_{five} = 210_{five}$	- Adds the given base numbers	- reads the base numbers given		Adding in bases		Critical thinking	
	5			**Bases**	**Subtraction In Bases.** Examples Subtract 231_{Five} (3+5)-4 $-\ 40_{Five}$ 8-4= 4 140_{Five} 2. $1\,1\,1_{Two} - 11_{Two} = 100_{Two}$ **Multiplication In Bases** Example 2_{five} X 3 = 6 $\frac{6}{5}$ = 1 rem 1 6 = (IIII) I 11_{five} 2. $3\,2_{five}$ X 3 $\frac{6}{5}$ 1 rem 1 201_{five} $\frac{10}{5}$ 2 rem o	The learner: - carries out subtraction in bases - Multiplies bases	The learner - reads questions - Identifies the bases used	Guided discovery Explanation	Subtracting in bases Multiplying in bases	Use of counters Chalkboard illustration	Problem solving Critical thinking	Mk bk 6 Mk bk 5 pg 74

	6			**Finite system**	**Clock Arithmetic/Finite system** Clock, Modular or Finite system is a system of finding remainders, in a given base. e.g 2(finite 5) 0 (mod 3) Base Base Remainder Remainder **Finding equivalent values.** 1. Find the equivalent value of 2(finite 5) 2(finite 5) = 2, (2+5), (2+5+5), 2(finite 5) .... = 2, 7, 12, 17 ..... 2. Find the equivalent value of 0(finite 3) 0(finite 3) = 0, (0+3) (0+3+3), (0+3+3+3) = 0, 3, 6, 9, _ _ _	**The learner** - finds the equivalent numbers in finite system.	The learner - defines finite system. - reads the new terms used.					

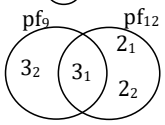
7	1		Whole numbers		**Addition in finite** Add: 2+3 = ----(finite 5) 2+3 = ___ (finite 5) 5 = __ (finite 5) $\frac{5}{5}$ = 1 rem 0 (finite 5) ∴ 2+3 = 0(finite 5) **Or:**  2+3=0 (finite 5)	**The learner;** - Adds in finite system with/without using a dial.	The learner Reads questions.					Oxford primary Mathsbk 5 pg 26
	2				**Subtraction in finite system.** **Example** Subtract 2-3 = _____ (finite 5) 2-3 = __ (finite 5) (2+3)-3 = ___ (finite 5) 7-3 = 4 (finite) ∴ 2 – 3 = 4 (finite 5) **Or:**  2 – 3 =4 (finite 5)	**The learner** - Subtracts numbers in finite systen using or without using a dial	The learner reads and interprets questions	Guided discovery Explanation	Drawing dials	Chalkboard illustration	Creative thinking Problem solving	Oxford primary Maths bk 5 pgs 26-27

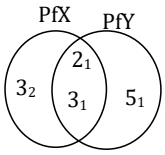
	3			**Application of finite**	**Application of finite** **Example** 1. Today is Monday, what day of the week will it be 5 days from today? Monday = 1 Will is represented by (+) ∴ 1 + 5 = ___ (finite 7) 6 = ___ (finite 7) 6 = Saturday	The learner: - Applies finite systen to slove dial life	The learner: - reads and interprets questions	Brain storming				
	4		**Number patterns and sequences**	**Types of Numbers**	**Types of Numbers** The following are the different types of numbers. 1. Whole numbers 2. Counting numbers 3. Odd numbers/ven numbers 4. Prime numbers 5. Composite numbers 6. Triangular numbers	The learner; - Gives examples of different types.	The learner: - defines the various groups of numbers.	Guided discussion	Listing numbers in different groups		Effective communi cation	Mk pupils bk 4, 5 & 6

	5			**Sequences**	**Number sequences.** **Examples** Find the next number. 0 1 3 6 10 15 (sequence) +1 +2 +3 +4 +5 (pattern) 2. 1 4 9 16 25 __ Is a group of square numbers got by squaring counting numbers. ∴ 1 4 9 16 25 36 1^2 2^2 3^2 4^2 5^2 6^2 (1x) (2x2) (3x3) (4x4) (5x5) (6x6)	The learner - determines the patterns used. - finds the next number in sequence	The learner Identifies the category of numbers given.	Guided discovery	Finding missing numbers in the sequence.	Chalkboard illustration	Creative thinking	Oxford primary Mathsbk 5 pgs 49-51
	6			**multiples**	**Multiples** Multiples are numbers got after multiplying a given number by each of the counting numbers. Example Find the multiple of 3 less than 15. (3x1), (3x2), (3x3), (3x4), (3x5), (3x6) ..... M3 lessthan i5 are 3, 6, 9, 12	The learner; - finds multiples between or less than given numbers	The learner - reads the multiples of different numbers.	Question and answer	Finding multiples		Problem solving	Mk primary bk 5 Mathspgs 91, 79-80

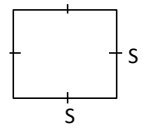
8	**1**				**Finding L.C.M** Example Find the lowest common multiple of 4 and 6. **Method 1** M4 = 4, 8, 12, 16, 20, 24 ... M6 = 6, 12, 18, 24 ... Common multiples = 12, 24 ... L.C.M = 12 **Method 2** 2 | 4 | 6 2 | 2 | 3 LCM = 2x2x3 3 | 1 | 3 = 4 x 3 1 | 1= 12	The learner Finds the L.C.M of numbers	The learner Reads through the numbers	Explanation	Finding L.C.M		Accuracy Neatness	

	2	Numeracy		**Factors**	A factor is a number that divides another number exactly. Question 1. How many factors has 12. F_{12} = 1 x 12 2x6 3x4 F_{12} = 1, 2, 3, 4, 6, 12 ∴12 has 6 factors 2. Find the sum of all factors of 14. F_{14} = 1 x 14 2 x 7 F_{12} = 1, 2, 7, 14 Sum = (1+2+7+14) = 24	The learner; - find the number of factors of a number. - Finds the form of all factors of a given number.	The learner; - defines a factor - reads questions and factors of a number	Explanation Question and answer	Finding factors Listing factors Reading factors	Chalkboard Illustration Creative thinking	Effective communication Critical thinking Accuracy	New Mk pupils' bk 5 pg 81-87
	3				**Greatest Common Factor** Examples: 1. Find the GCF of 6 and 9. F6 = (1, 2, 3, 6) F9 = (1, 3, 9) Common factors = (1, 3) GCF = 3 2. Find the Greatest Common factor of 10 and 15.	The learner - finds the G.C.F of numbers.	The learner; - Identifies the common factors.					

	4				**Prime-factorisation** **Example** Prime factorise 12 and write the answer as below. 2 | 12 2 | 6 3 | 3 1 In Notation form (subscritpt set) $12 = 2_1, 2_2, 3_1$ In multiplication form 12 = 2x2x3 In exponent form $12 = 2^2 \times 3^1$	The learner; - primefactorises numbers using any possible method	The learner; - defines the diefferent forms of writing the primefactorised numbers.		Dividing numbers		Neatness	
	5			**Application of venn diagrams**	Prime factors on the venn diagram Represent the primefactors of 9 and 12 on the venn diagram. 3 | 9 3 | 3 1 2 | 12 2 | 6 3 | 3 1 $Pf_9 = (3_1) 3_2$ $pf_{12} = 2_1\ 2_2\ (3_1)$ 	The learner; - Uses venn diagrams to show prime factors	The learner; Identifies the common prime factors.	Brain storming Guided discovery	Drawing venn diagram		Effective communication	Mk pupils book 6 pg __

	6				Finding G.C.F and L.C.M Study the venn diagram below and use it to answer questions.  i) Find the value of X.	The learner - finds the L.C.M & G.C.F using a venn diagram	The learner reads prime factors from the venn diagram.	Group discussion	Finding L.C.M	Chalkboard illustration		
					ii) Find the value of Y iii) Find the G.C.F of X and Y iv) Find the L.C.M of X and Y							
9	**1**			**Square numbers**	**Square Numbers** Example Find the square of: a) 6 b) 2 $= 6^2$ $= 2^2$ = 6x6 = 2x2 = 36= 4	The learner finds the square of number.	The learner defines sqaure numbers	Explanation	Finding G.C.F			

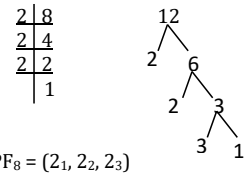
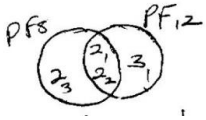
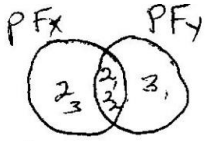
	2			**Square roots**	**<u>Square roots</u>** a) Find the square root of 4. Sq. root of 4 = 2|4 2|2 1 $\sqrt{4} = \sqrt{2x2}$ $= \sqrt{2^2}$ $\sqrt{4} = 2$ b) Find the square root of 36. Sq. root of 36 = 2|36 2|18 2|9 3|3 1 $\sqrt{36} = \sqrt{2x2x(3x3)}$ $= \sqrt{2^2x3^2}$ = 2 x 3 <u>= 6</u>	The learner finds the square roots of number.	The learner reads questions.	Brain storming Guided discussion	Finding square root Dividing numbers	Multiplication tables Chalkboard illustration	Critical thinking Problem solving	Mk pupils bk 6

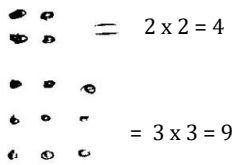
	3			**Application of square roots**	**Application of square roots** Example: Find the side of a sqaure whose area is 81cm²  Area = S^2 $\sqrt{S^2} = \sqrt{81m^2}$ $\sqrt{S^2} = \sqrt{3x3x3x3xmxm}$ $S = \sqrt{3^2x\ 3^2x\ m^2}$ S = 3 x 3 x m S = 9 x m S = 9m 3 | 81 3 | 27 3 | 9 3 | 3 1 One side of a square = 9m	The learner Finds the side of a square whose area has been given.	The learner Reads and interpretes questions	Explanation Guided discovery			Creative thinking	

	4			**Groups of numbers**	• Whole numbers • Even numbers • Odd numbers • Prime numbers • Composite numbers • Square numbers • Counting numbers • Triangular numbers	The learner gives examples on different types of numbers	The learner defines various groups of numbers. Pronounces the new words given.	Brain storming	Effective communication Critical thinking	Chalkboard illustrations	Listing numbers from different groups.	Mk pupils book 4,5,6 pgs 77-92
	5			**Number sequences**	Finding next numbers in the sequence. a) 0, 2, 4, 6, 8, ___ b) 1, 3, 5, 7, 9, __, ___	The learner finds the next number in the sequence. Identifies patterns used in the sequences.	The learner reads the number sequences	Guided discovery Demonstration			Finding missing numbers in the sequence	
	6			**Multiples of numbers**	Multiples of 2. M_2 = (2, 4, (6), 8, 10, (12) .....) Multiples of 3. M_3 = (3, (6), 9, (12), 15, ...) Common multiples of 2 and 3 $M_2 \cap M_3$ = (6, 12) L.C.M of 2 and 3 is 6.	The learner Lists multiples of numbers. Identifies common multiples. Finds the Lowest Common Multiples of numbers	The learner reads mutliples of numbers. Writes multiples of numbers	Guided discussion	Sharing	Chalkboard illustrations	Listing multiples of different numbers. Identifying common multiples Finding L.C.M	A new Mk Mathsbk 5 pgs 91, 79-80

10	**1**			**Factors of numbers**	Factors of 6 1 x 6= 6 F_6 = {1 2 3 6} 2 x 3 = 6 Factors of 12 1 x 12 = 12 F_{12}= {1 2 3 4 6 12} 2 x 6 = 12 3 x 4 = 12 Common factors of 6 and 12 = 1, 2, 3, 6 G.C.F of 6 and12 = 6	• The learner lists factors of numbers. • Finds the G.C.f of numbers.	• The learner reads sentences involving finding factors of numbers, common factors and G.C.F.	Problem solving	Problem solving		Listing factors of numbers. Identifying common factors Finding G.C.F	A new Mk Maths bk 5 pgs 81-87
	2			**Prime factorisation**	- Using factor tree - Using a ladder - Writing answers in multiplication form - Writing answers in subscript/set notation form	• The learner prime factorises numbers using a ladder. • Primefactorises numbers using a factor tree • Writes primefactorised numbers in multiplication and set notation forms.	• The leaner reads prime factors • writes prime factors	Guided discussion Brain storming Guided discovery	Sharing Critical thinking		Prime factorizing numbers using a ladder and factor tree. Writing answer in multiplication and subscript /set notation or power form.	

	3			**Numbers which have been prime factorised**	What number has been prime factorised below? a) $2^3 \times 3^2 = 2x2x2x3x3$ $= 8 \times 9$ $= 72$ b) $\{2_1, 2_2, 2_3, 3_1\}$ $= 2x2x2x3$ 8×3 $= 24$	• The learner finds numbers which have been prime factorised.	• The learner reads numbers which have been prime factorised	Demonstration Problem solving	Accuracy	Chalkboard illustration	Finding numbers which have been prime factorized	
	4			**Finding G.C.F and L.C.M using prime factors**	Prime factors of 8 $= \{2_1 \quad 2_2 \quad 2_3\}$ Prime factors of 12 $= \{2_1 \quad 2_2 \quad 3_1\}$ G.C.F = product of $PF_8 \cap PF_{12}$ $= (2x2)$ $= 4$ L.C.M = product of $PF_8 \cup PF_{12}$ $= (2x2x2x3)$ $= 8x3$ $= 24$	• The learner Identifies common prime factors. • Finds the product of common factors • Forms a union set of prime factors • Multiplies members in the union set to get the L.C.M	• The learner writes common prime factors. • Reads common prime factors		Effective communication		Finding G.C.F and L.C.M using prime factors.	A new Maths pupils' bk 6 pg 98

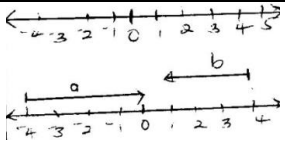
	5			**Prime factorisation involving venn diagram**	a) Prime factorise 8 and 12 and represent the prime factors on a venn diagram.  $PF_8 = (2_1, 2_2, 2_3)$ $PF_{12} = (2_1, 2_2, 3_1)$	• The learner represents prime factors on venn diagram. • Finds numbers prime factorised using venn diagram.	• Reads prime factors • Writes prime factors.	Demonstration Brain storming	Sharing Effective communication		Representing prime factors Finding G.C.F and L.C.M using venn diagram	A new Maths pupils' bk 6 pg 98
					 b) Find the value of X and Y on the venn diagram below.  i) X ii) Y Find i) G.C.F ii) L.C.M	• Uses the venn diagram to find the L.C.M	•	Guided discussion	Critical thinking	Chalkboard illustration		

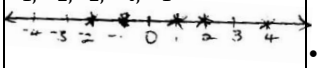
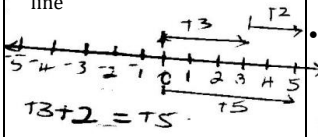
	6			**Squares of numbers**	 = 2 x 2 = 4 = 3 x 3 = 9	• Finds squares of numbers	• Reads new words	Problem solving			Finding square numbers	
11	**1**			**Square roots of numbers**	Find the square root of 9 3 | 9 3 | 3 1 $\sqrt{9} = 3$	• Finds square roots of numbers	• Reads square roots of numbers				Finding square roots of numbers.	
	2		**Fractions**	**Reducing fractions**	Examples Reduce $\frac{8}{12}$ to the lowest terms. $\frac{8 \div 4}{12 \div 4} = \frac{2}{3}$	• Reduces fractions to lowest terms	• Reads fractions	Demonstration	sharing		Reducing fractions to lowest terms	Understanding MTC pupil's bk 5 pg 65
	3		**fractions**	**Comparing fractions**	Which one is greater? $\frac{1}{2}$ or $\frac{1}{3}$? L.C.D = 6 ½ x 6 3, $\frac{1}{3} x 6$ 2 $\frac{1}{2} > \frac{1}{3}$	• Finds L.C.D of given fractions. • Identifies greater fractions	• Reads fractions • Writes fractions	Guided discussion	Critical thinking	Chalkboard illustration	Comparing fractions using L.C.D	Understanding MTC pupil's bk 5 pg 66

	4			**Ordering fractions**	Write $\frac{1}{3}$, $\frac{1}{6}$, $\frac{1}{2}$ and $\frac{3}{4}$ in ascending and descending order. L.C.D = 12 $\frac{1}{3}x$ ~~12~~ 4, $\frac{1}{6}x$ ~~12~~ 2, $\frac{1}{2}x$ ~~12~~ 6 $\frac{3}{4}x$ ~~12~~3 i) Ascending : $\frac{1}{6}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{3}{4}$ ii) Descending $\frac{3}{4}$, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{6}$	• Finds L.C.D • Arranges fractions in ascending and descending order	• Reads sentences involving ordering fractions	Problem solving			Ordering fraction	New MK MTC bk 5 pg 125
	5			**Addition of fractions**	- With same denominators - With different denominators - Addition of fraction I,e proper and mixed.	• Adds fractions with same denominators. • Adds fractions with different denominators	• Pronounces new words used.	Brain storming			Adding fractions	A new Mk MTC bk 5 pg 126 Understanding MTC bk4 pg 68
	6			**Subtraction of fractions**	- Fractions with different denominators. - Fractions involving word problems	• Subtracts fractions	• Reads sentences involving subtraction of fractions				Subtracting fractions	Mk MTC bk5 pg 133

12	1			**Multiplication of fractions**	a) ½ x 14 b) $\frac{3}{4}$ of 20 b) 18 x $\frac{1}{6}$ c) $\frac{2}{3}$ x $\frac{3}{4}$	• Multiplies fractions with fractions and fractions with wholes.	• Reads fractions				Multiplying fractions with fractions and fractions with wholes	Mk MTC bk 5 pg 137 Understanding MTC bk5 pg 118
	2			**Finding reciprocal**	When a number is multiplied by its reciprocal the result is 1. Find the reciprocal of 4. Let the reciprocal be y. $\frac{4}{4}$ x y = $\frac{1}{4}$ y = $\frac{1}{4}$ The reciprocal of 4 is ¼	• Finds reciprocal of numbers	• Reads questions given	Brain storming	Critical thinking	Chalkboard illustration	Finding reciprocals of numbers	New Mk pupil's bk 5 pg 140
	3			**Division of fraction**	a) Divide $\frac{2}{3} \div \frac{1}{6}$ i) $\frac{2}{3} x \frac{6}{1}$ = (2 x 2) (using reciprocal) = 4 ii) $\frac{2}{\cancel{3}} x \cancel{6}2 \div \frac{1}{\cancel{6}} x \cancel{6}1$ = 4 ÷ 1 = 4 (using L.C.D)	• Divided fractions using L.C.D • Divided fractions using reciprocals	• Writes fractions • Reads fractions	Guided discussion	Effective communication		Dividing fractions	Mk MTC bk 5 pg 142 Understanding MTC bk5 pg 123
	4			**Mixed operations**	Use of (BODMAS) a) Work out $\frac{2}{3}$ of 24 + 16 − 9	• Uses BODMAS to work out given numbers correctly.	• Reads word problem involved	Demonstration	Sharing		Simplifying numbers	MK MTC bk5 pg 135

	5			**Application of fractions**	Word problems involving ftactions	• Interpretes given mathematical sentences	• Reads given sentences	Problem solving	Logical thinking		Solving word problems	A new MK MTC bk 5 pg 138
	6			**Decimals**	• Changing fractions to decimals • Ordering decimals • Addition of decimals • Subtraction of decimals • Multiplication of decimals • Division of decimals • Mixed operations	• Changes fractions to decimals. • Changes decimals to fractions • Orders decimals in ascending and descending order • Adds decimals • Multiplies decimals	• Reads given mathematical sentences		Problem solving		Changing fractions to decimals and vice versa. Ordering decimals Adding decimals Subtracting decimals	MK MTC pupil's bk5 pg 148-156 Understanding MTC bk5 pg 126-132
					•	• Divides decimals	•				Dividing decimals	

13	**1**		**integers**	**Additive inverse**	What is the inverse of +3. A number added to its inverse the result is 0 i.e Let the inverse be y 3 + y = 0 3-3+y = 0-3 0 + y = ⁻3 y = ⁻3 The inverse of +3 is -3	• Finds the inverse of numbers	• Reads given questions	Brain storming Guided discussion	Critical thinking	Chalkboard illustrations	Finding inverses of numbers	A new MK MTC pupil's bk5 pg 159
	2			**Showing integers on a numberline**	 Name the integers a) a = ⁺4 b) b = -3	• shows integers on the numberline • writes integers shown on the number line	• writes integers • Reads integers	Problem solving	Sharing Effective communication		Writing integers on the number line Writing integers represented by arrows on a number line	A new MK MTC pupil's bk5 pg 160-164

	3			**Ordering integers**	Arrange these integers in ascending and descending order using a number line. -1, +2, -2, +4, +1  i) Ascending order = -2, -1, 1, 2, 4 ii) Descending order 4, 2, 1, -1, -2	• Shows integers on a numberline • Arranges integers using a number line	• Reads integers • Writes integers	Guided discovery	Rational thinking		Arranging integers	A new MK MTC pupil's bk5 pg 168 Understanding MTC bk5 pg 99
	4			**Addition of integers**	a) Add: $^{+}4 + {}^{+}3 = {}^{+}4+3 = {}^{+}7$ b) Show +3 + +2 on the number line  	• Adds integers using a numberline • Adds integers without using a number line	• Reads integers	Brain storming	Critical thinking	Chalkboard illustration	Adding integers	A new MK MTC pupil's bk5 pg 159 Understanding MTC bk5 pg 102-103

	5			**Subtraction of integers**	Subtracting integers without using a numberline. Subtracting integers using a number line.	• Subtracts integers	•	Guided discussion Demonstration Problems solving	Effective communication sharing		Subtracting integers	