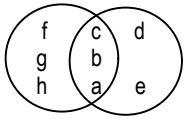
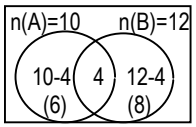
P.5 MATHEMATICS SCHEME TERM 1

WK	PD	TOPIC	SUB-TOPIC	SUBJECT COMP.	LANG. COMP.	CONTENT	METHOD	ACTIVITIES	T/LAIDS	REF	REM
1	1	Set concept	Types of sets	**The learner;** Defines a set What a set is States the types of sets Defines the types of sets	**The learner;** Reads, writes, pronounces and spells the words equal equivalent empty disjoint sets	**A set** Is a collection ofwell defined objects **Types of sets** Types of sets include; Equal sets Equivalent sets Empty sets **Equal sets** These are sets with the same number of elements and same elements (symbol used is =) **Examples** P=(a,e,i,o,u) Q =(o,e,i,a,u) P and Q are equal sets **Equivalent sets** These sets have the same number of elements but different elements (symbol is ⟷ Or ≡	Question and answer Guided discovery	Identifying what a set is Stating types of angles Defining what those types refer to	Use of real objects	Use of a new MK pupils book 5 page 1	
	2		Intersection of sets	Defines the meaning of set regions Finds number of elements	**The leaner;** Reads, writes and pronounces words such as set region	**Intersection of sets** If M = (a e i o u) and N = (a b c d e f g h i j) Find i)M ⋂ N ii) n(M ⋃ N) i) M ⋂ N = (a, e, i) ii) n(M ⋂ N (M ⋂ N= (a , e, i) n(M ⋂ N) = 3 elements	Guided discovery Explanation Technique	Defining of set region Finds the number of elements	Use of real objects	Mk pupils book 5 page 6	
	3	Set Concept	Listing members in intersecting sets	**The learner;** Identifies the question given Draws the venn diagram Lists elements	**The learner;** Reads, writes and pronounces words such as Listing interesting sets	**Listing members in intersecting sets** **Examples** List members for P, Q and P ⋂ Q **P Q**  i) P= (a, b, c, g, h, f) ii) Q = (a, b, c, d, e)	Brain storming Problem solving (skill)	Identifies the question Draws the venn diagrams Lists elements	Use of a text book	Use a new MK pupils' book 5 page 7	

						iii) P n Q = (a, b, c)					
	4		Union of sets	**The learner;** Defines the meaning of union of sets States the union set from two or more sets	**The learner;** Reads, writes and pronounces words such as union	**Union of sets** Given that set P(bananas, potatoes, Maize) Q(posho, maize, peas) i)Find PuQ ii)Find n(PuQ) i) Pu Q = (Bananas, potatoes, posho, maize, peas) ii) n(PuQ) P u Q = (Bananas, potatoes, posho, maize, peas) n(P u Q) = 5	Brain storming Guided discovery	Defines th meaning of union of sets States union of sets	Use of real objects	Use a new M<K pupils book 5	
	5		Representing intersection and union on venn diagram	**The learner;** Interprets the questions given List elements in the intersection Finds the number of elements	**The learner;** reads, pronounces and writes words such as representing intersection venn diagram	**Representation intersection and union on venn diagrams** Given that set M = (Matooke, maize, millet, sorghum) N =(cabbage, matooke, onions, tomatoes, egg plant) **M N** Maize Cabbage Millet MatookeOnions Sorghum tomatoes egg plant	Guided discussion Question and answer Technique	Interpet the questions given List elements in the intersection	Use of chalk board illustration	Teacher's collection	
	6	Sets concepts	Difference sets	**The learner;** Interprets the questions given Defines the words difference in sets Lists elements Finds number of elements	**The learner;** Reads, pronounces and writes words such as difference sets	**Finding difference of sets** **<u>Examples</u>** Given that set M = (a, e, i, o, u) N = (a, b, c, d, e, f) Find i) M – N ii) N – M iii) N(M – N) iv) N(N – M) i) M – N = (i, o, u) ii) N – M = (b, c, d, f) iii) n(M – N) M – N = (i, o, u) n(M – N) = 3	Guided discovery Explanation Technique	Interpreting the questions Defining the terms	Chalk board illustration	Pupils book 5 page 14	

						iv) n(N – M) N – M = (b, c, d, f) n(N – M) = 4					
	7		More about intersection union and difference of sets	**The learner;** Interprets the questions. Represent the information on the venn diagram Finds the union, intersection and difference Finds the number of elements	**The learner;** Reads, pronounces and writes words such as union	**More about intersection, union and difference of sets** **Examples** Given that set P = (a, e, i, o, u) and N = (a, b, c, d, e f) a)Represent the above information on the venn diagram b) Find elements in sets i) P n N ii) P u N iii) P – N iv) N – P v) N(P nN) n(P u N) n(P – N) n(N – P)	Brain storming Guided discussion	Interpreting Representing Finding number of elements	Chalkboard illustration	Teacher's own collection	
2	1	Sets	Shading venn diagrams	**The learner;** Draws the venn diagrams Puts the statement for the region Shades the required region	**The learner;** Reads, pronounces and writes words such as shading, regions	**Shading venn diagrams** **Shading sets** **Examples** Set A Set B Set A n B Set A – B Set B – A A u B (A n B)^1 (A u B)^1	Demonstration Guided discussion	Drawing the venn diagram Representing on venn diagram	Compass	Teacher's own collection	
	2		Listing and finding number of subsets	**The learner;** States the symbol use when finding subsets Defines the word subsets States the formula for finding subsets	**The learner;**	**Listing and finding number of subsets** A subset is a small set that can be obtaind from a big one symbol in $\subseteq$ Number of subset = 2^n **Examples** Find the number of subsets of set A = (cat, dog) **Method 1** $\{\ \}, \{cat\}, \{dog\}, \{cat\}, \{dog\}$ ∴ There are 4 subsets **Method 1** $\subset = 2^n$ $=2^2$ =2x 2 =4 subsets	Guided discovery Question and answer Techniques	Stating the symbol for subsets Defining the word subsets Stating the formula	Use of text books	Use a new MK pupils' book 6 page 18	

	3	Set concept	Application of sets	**The learner;** Interprets the questions given Finds the union	**The learner;** Reads, pronounces and writes word like application	**Application of sets** **Examples** In P.5 class there are given that n(A) = 10, n(B) = 12, n(AnB) = 4 a) Represent the above information on the venn diagram  b) Find $\cap$ (A u B) n(AuB) = 6 + 4 + 8 = 18	Guided discovery Question and answer technique	Interprets the question Finds the unknown	Use of chalkboard illustration	Teacher's collection	
	4		Finding probability when given number of itms	**The learner;** Interprets the question given effectively. Defines the term probability States the formula for probability	**The learner;**	**Finding probability when given number of items** **Examples** There are 4 red pens and 8 blue pens in a packet. A teacher picks one pen at random. What is the probability that the pen picked is a red one? n(Events) = 4 n(sample space) = 4 + 8 = 12 Probability = $\frac{n(Events)}{n(samplespace)}$ = $\frac{4}{12}$	Brain storming Explanation techniques	Interpreting the questions given Defining the term probability Stating the formula	Real objects	A new pupils book 6 page 28	
	5		Finding probability when a coin is tossed	**The learner ;** Identifies the question given Identifies the sides of a coin Lists the events and sample space Finds the number of events and sample space	**The learner;** Reads, writes and pronounces words such as probability	**Finding probability when a coin is tossed** **Example** If a coin is tossed once, what is the probability of a Head appearing on top? Sample space = Head, tail) n(S) = 2 Events = (Head) n(E) = 1 Probability = $\frac{n(E)}{n(S.S)}$ $\therefore$ Probability = $\frac{1}{2}$	Guided discussion Explanation technique	Identifying the question given Listing the events Finding probability	Use of a coin	Use a new MK pupils book 5	

	6		Rolling a die	**The learner;** States the features of a die Identifies some numbers on a die States the formula for finding probability	**The learner;** Reads, writes and pronounces words such as rolling die	**Rolling a die** **Examples** If a die is rolled once, what is the probability of an even number appearing on top? Sample space = (1 (2) 3 (4) 5 (6)) n(S) = 6 Events = (2, 4, 6) n(E) = 3 Probability = $\frac{n(E)}{n(S.S)}$ $\therefore$ Probability = $\frac{3}{6}$	Guided discussion Brain storming	Stating the features of a die Identifying Stating the formula	Use of chalk board illustration	Use of a new MK pupils book 5	
	7	Sets	Days of the week and months of the year	**The learner;** Identifies the question given Finds the number of days in the week or months in a year	**The learner;**	**Days of the week and months of the year** **Examples** 1. My mother will give birth to a baby next week. What is the probability that she will give birth on a day starting with letter "T"? Sample space = (S, M, (T), W, (T), F, S) n(S.S) = 7 Events = (T, T) n(E) = 2 Probability = $\frac{n(E)}{n(S.S)}$ $\therefore$ Probability = $\frac{2}{7}$ 2. Amina is supposed to go to India. What is the probability that she will go on a month that starts with letter "J"? Sample space = ((J), F, M, A, M, (J), (J), A, S, O, N, D) n(S.S) = 12 Events = (J, J, J) n(E) = 3 Probability = $\frac{n(E)}{n(S.S)}$	Guided discovery Question and answer technique	Identifying question given Finding the number of days	Use of chalkboard illustration	Use a new MK pupils book 5	

						∴ Probability = $\frac{3}{12}$					
3	1	Whole numbers	Forming numbers from digits	**The learner;** Finds all the numbers from the given digits Finds the sum, difference of the smallest and biggest numbers Identifies numbers basing on types of numbers		**Forming numbers from digits** **Examples** Given the digits 3, 7, 5, use them to answer questions that follow a) Form all possible 3 digit numbers b)Find the sum of the biggest and smallest numbers c)Work out the difference 3 5 7 357 537 735 375 575 753 **357,375,537,575,735,753** Smallest = 3 5 7 Biggest = + 7 5 3 1 1 1 0 Diffrence = Biggest number – smallest number 7 5 3 - 3 5 7 3 9 6	Brain storming Question and answer techniques	Finding all the numbers Identifying numbers basing on types	Use of chalkboard illustration	Use a new MK pupils book 5	
	2		Finding place values and values of whole numbers	**The learner;** Identifies the question given. Finds the values of each digit		**Finding place values and values of whole numbers** **Examples** 1. Find the place value of 2 in 4 2 6 9 3 5 Ones Tens Hundreds Thousands Ten thousands Hundred thousands ∴ The place valu of 2 is Hundred thousands **Find the value of 3 in 436958** 4 3 6 9 5 8 Ten thousands 3 x 10,000	Guided discovery Explanation technique	Identifying the question Finding the value of each digit	Use of chalk board illustration	Use a new MK pupils' book 5	

						30,000 ∴ The value of 3 is 30,000					
	3		Writing numbers in words	**The learner;** Identifies the sections of every three digits Reads in words		**Writing numbers in words** **Examples** Write 156036 in words Thousands | Units 156 | 036 One hundred fifty six thousand, thirty six	Question and answer techniques		A chart showing sections	A new MK pupils' book 5 page 28	
	4		Writing numbers in figures	**The learner;** Identifies the number given Arranges the numbers according to their place value order		**Writing numbers in figures** **Examples** Writes " Four hundred twenty five thousand three seventeen" Four hundred twenty five thousand = 4 2 5 0 0 0 Three hundred seventeen = + 3 1 7 4 2 5 3 1 7	Explanation technique	Identifying the number given Arranging the numbers	A chart showing sections	Use a new MK pupils book 5 page 29	
	5		Expanding whole numbers in place value, values and powers of 10s.	**The learner;** States the sections of the numbers Adds the values Uses powers of 10.		**Expanding whol numbers in place value, values and power forms** **Examples** Expand in place value form 4693 Th | H | T | O 4 | 6 | 9 | 3 (4x1000) +(6x100) + (9x10) + (3x1) Expand in value form 4693 Th | H | T | O 4 | 6 | 9 | 3 (4x1000) +(6x100) + (9x10) + (3x1) 4000 + 600 + 90 + 3 Expand 4693 using powers of 10 4 | 6 | 9 | 3 10^3 | 10^2 | 10^1 | 10^0 $(4x10^3) + (6x10^2) + (9x10^1) + (3x10^0)$	Guided discussion	Stating the sections Adding the values Using powers of tens	Chalkboard illustration	Use of new MK pupils book 5 page 30 – 31	

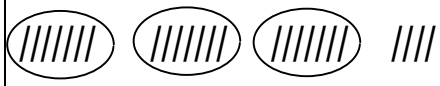
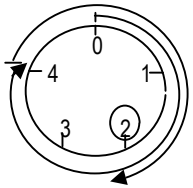
	6	Whole numbers	Finding expanded numbers	**The learner;** Identifies the question given Arranges numbers vertically when adding		**Finding expanded numbers** Write (4x100) +(5x10) +(8x1) as a single number (4x100) + (5x10) + (8x1) 400 + 50 + 8 400 +50 458	Question and answer techniques	Identifies the question Arranging the number vertically	chalk board illustration	Use a new MK pupils book 5 page 32	
	7			**The learner;** Identified the question given States the meaning of difference, sum and product		**Finding sum, difference and produce of the values of whole numbers** **Examples** Find the sum, difference and product of the value of 2 and 3 in 6213. i) Sum 6 2 1 3 3 x 1 = 3 2 x 100 = 200 3 0 0 + 3 2 0 3 ii) Difference 2 0 0 - 3 1 9 7 iii) Product 2 0 0 x 3 6 0 0	Guided discussion Observation	Interpreting the question Stating the meaning	Chalk board illustration	Teacher's collection	
4	1	Whole numbers	Roman numerals	**The learner;** Identifies major or basic Roman numerals Expands before changing	**The learner;** Reads, pronounces and writes words such as Roman, Numerals, Hindu	**Roman numerals and Hindu Arabic** Expressing Hindu –Arabic as Roman numerals **Examples** Change 25 to Roman numerals 20 + 5 xx + v **∴ 25 = xxv** Expressing Roman numerals to Hindu –Arabic numerals Change XIX in Hindu – Arabic X / IX Or X = 1 0 X + IXIX = + 9 10 + 9XIX = 1 9 1 0 + 9 1 9	Guided discussion Question and answer techniques	Identifying Explanation	A chart showing Roman numerals	A new MK pupils book 5 page 35	

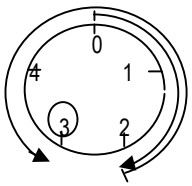
	2		Rounding off to the nearest place value	**The learner;** Defines the term rounding off Identifies the question given States when to round up or down	**The learner;** Reads, pronounces and writs words such as rounding off, nearest	**Rounding off to the nearest plac value required.** **Example** Round off 585 to the nearest tens 5 8 5 1◄ 5 9 0 ∴ **585 = 590** Round off 530 to the nearest hundreds 5 3 0 + 0◄ 5 0 0 ∴ **530 = 500**	Brain storming Guided discussion	Defining Rounding off Stating when to round up or down	A chart showing rounding off	A new MK pupils book 5 page 43	
	3	Operations on numbers	Addition of whole numbers up to 6 digits	**The learner;** Identifies the given questions Arranges the number vertically Regroups where necessary Interprets the word applications about additions	**The learner;** Reads, pronounces, writes words such as whole, addition, digit	**Addition of whole numbers upto 6 digits** **Examples** Add: 4 7 3, 4 4 2 + 3 6 9, 2 1 5 4 7 3 4 4 2 + 3 6 9 2 1 5 **8 4 2 6 5 7** A steel rolling factory made 3 8 4, 7 2 9 Iron sheets in May and 297,345 iron sheets in June. How many sheets were made in the two months altogether? May = 3 8 4, 7 2 9 iron sheets June = + 2 9 7 3 4 5 iron sheets ∴ **682074 iron sheets were made**	Guided discussion Explanation techniques	Identifying the question Arranging the number vertically Regrouping	Use if counters and stones	Use a new MK pupils book 5 page 47 and 48	
	4		Subtraction up to 6 digits	**The learner;** Identifies the question given Arranges numbers vertically according to their respective place values		**Subtraction up to 6 digits** **Examples** 1.Subtract: 1 2 3 6 4 3 – 3 6 7 4 9 1 2 3 6 4 3 – 3 6 7 4 9 8 6 8 9 4 2. By how much is 367,015 grater than 346 729? 3 6 7 0 1 5 – 3 4 6 7 2 9 2 0 2 8 6	Guided discussion Explanation techniques	Identifying the question given Arranging the number vertically	Use of counter	Use a new MK pupils' book 5 page 50,57	

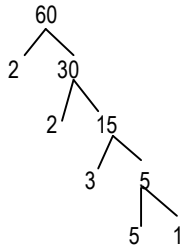
	5	Operation on Numbers	Multiplication by two digit numbers	**The learner;** Multiplies ones by ones by tens Multiplies tens by ones and tens by tens	**The learner;**	**Multiplication by two digit numbers** **Examples** Multiply : 35 by 2 3 5 | 2 x 5 = 10 x 2 | 2 x 3 = 6 + 1 7 0 Multiply : 35 by 1 2 3 5 | 2 x 5 = 10 x 1 2 | 2 x 3 = 6 + 1 = 7 7 0 | 2 x 3 = 6 + 3 6 | 1 x 3 = 3 4 3 0	Question and answer technique	Multiplying	Real objects such as fingers	Use a new pupils book 5 page 54	
	6		More about Multiplication	**The learner;** Interprets the question given Arranges the numbers vertically Puts the units where necessary	**The learner;**	**More about multiplication** **Examples** A rectangular flow is covered by 26 tiles along its length and 15 along its width. How many tiles are there altogether? 2 6 | 5 x 6 = 30 x 1 5 | 5 x 2 = 10 + 3 = 13 1 3 0 | 1 x 6 = 6 + 2 6 | 1 x 2 = 2 3 9 0 **390 tiles**				New MK pupils book 5 page 55	
	7		Division of whole numbers	**The learner;** Identifies the question given Finds the multiples of the divisor	**The learner;**	**Division of whole numbers** **Exampls** Divide 5424 by 2					
5	1	Operation on numbers	Division of whole numbers	**The learner;**	**The learner;**	2 7 1 2 2 ⟌ 5 4 2 4 - 2x2 = 4 1 4 2 1x2 - 2 4 2x2 - 4 2 x 0 = 0 2 x 1 = 2 2 x 2 = 4 2 x 3 = 6 2 x 4 = 8 2 x 5 = 10 ∴ 5424 ÷ 2 = 2712	Guided discovery Question and answer	Identifying the question Finding the multiples	Chalk board illustration	Use MK pupils book 5	

						1260 pupils sat for examination. If each class presented 60 pupils, how many classes were there? 1260 ÷ 60 0 0 2 1 60 | 12 6 0 - 0x60 = 0 1 2 0x600 0 1 2 6 2x60 -1 2 0 6 0 1x60 - 6 0 ●● 60 x 0 = 0 60 x ① = 60 60 x ② = 120 60 x 3 = 180 60 x 4 = 240 60 x 5 = 300 60 x 6 = 360 60 x 7 = 420 ∴ There were 21 classes					
	2	Operation on numbers	Mixed operations	**The learner;** Follows the order of BODMAS Works out numbers basing on BODMAS	**The learner;**	**Mixed operations** **BODMAS stands for** B O D M A S Bracket Of Division Multiplication Addition Subtraction **Examples** Workout : 42 ÷ (7 x 6) x 2 7 x 6 S/W 40 BODMAS (42 ÷ 42) x 2 1 x 2 = 2	Brain storming Guided discussion Observation	Stating BODMAS in full Working out numbers	Chalkboard illustration	Use a new MK pupils book 5 page 63	
	3	Operation on numbers	Counting in twos and fives	**The learner;** Counts in twos and fives effectively	**The learner;**	**Counting numbers in base five** **Examples** Count 6 in base five ///// 1 group of fives, 1 ones 11**five**	Observation Explanation technique	Counting fives	Use of counters	Use a new MK pupils book 5 page 68	

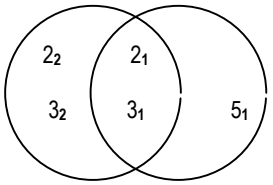
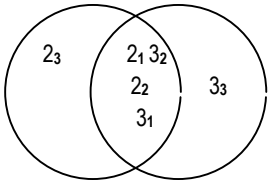
	4	Operation on numbers	Finding place values and values of bases	**The learner;** Identifies the question given Finds the place values of each digit Multiplies the digit by the place value in order to get the value	**The learner;**	**Finding place values and values of bases** **Examples** Find the place value of each digit below : 1 2 3 **five** 1 2 3 **Five** → Ones → Fives → Five – fives Work out the value of each digit in 123 five 1 2 3 **Five** d x p = value Ones = 3 x 1 = 3 Fives = 1 x 5 = 5 Five – fives = 1 x 5 x 5 = 25	Guided discovery Question and answer technique	Identifying the question Finding the place value Multiplying the digit	A chart showing place values of bases	Use a new pupils book 5 page 70	
	5	Operation on numbers	Changing base five to base ten	**The learner;** Identifies the question given Finds the values of the digits Adds up the digits to get base 10	**The learner;**	**Changing base five to base ten** **Examples** Change 213**Five** to base ten 2 1 3 **Five** Ones = 3 x 1 = 3 Fives = 21x 5 = 5 Five – fives = 2 x 5 x 5 = 50 50 + 5 + 3 5 0 5 + 3 5 8 ten	Guided discussion Explanation technique	Finding the values Adding up the digits	Chalkboard illustration	A new MK pupils book 5 page 71	
	6	Operation on numbers	Changing base ten to base five	**The learner;** Identifies the question given Divides the number by the required base	**The learner;**	**Changing base ten to base five** **Examples** Change 58_{ten} to base five B N R 5 58 3 5 11 1 5 2 2 ∴ **$58_{ten} = 213_{five}$**	Guided discussion Brain storming	Identifying the question Dividing the number	Chalkboard illustration	A new MK pupils book 5 page 72	

	7	Operation on numbers	Addition of bases	**The learner;** Identifies the question given Arranges the numbers according to their place values orders	**The learner;**	**Addition bases** **Examples** Add: 12 Five + 11Five 1 2 five + 1 1 five **2 3 five** Work out: 1 3 3 five + 241 five 1 3 3five + 2 4 1five **4 2 4five** 1 + 2 = 3 1 + 2 = 2 1+ 3 = 4 4 ÷ 5 = 0 groups of 5 remainder 4 3 + 4 = 7	Guided discovery Question and answer technique	Identify Arranging the numbers vertically	Chalkboard illustration	A new MK pupils book 5 page 73	
6	1	Operation on numbers	Subtracting in bases	**The learner;** Identifies the question given Arranges the numbers vertically before subtracting Regroups in fives	**The learner;**	**Subtracting in bases** **Examples** Subtract : 1 0 2 **five** – 22 **five** 1 0 2 **five** - 2 2 **five** 3 0 **five**					
	2	Operation on numbers	Expressing and addition in finite five and seven	**The learner;** Identifies the question Groups in fives and sevens Adds effectively	**The learner;**	**Expressing and adding in finite fives and sevens** **Example** Write 25 to finite 7  3 groups of sevens remainder 4 ∴ 25 = 4 (finite 7) Add : 4 + 3 = _____(finite 5) Method 1Method 2 4+3=_____(finite 5) 7 ÷ 5 = 1 rem 2 ∴ 4 + 3 = 2 (finite 5)  ∴ 4 + 3 = 2 (finite 8)	Guided discovery Question and answer technique	Identifying Grouping in fives Adding effectively	Use of counters	Use a new MK pupils book 5 page 210 and 211	

	3	Operation on numbers	Subtracting in finite 5 and 7	**The learner;** Identifies the question given Subtracts effectively	**The learner;**	**Subtracting in finite 5 and 7** **Example** Work out : 2 – 4 = ___(finite 5) Method 1Method 2 2-4=_____(finite 5) (2+5)-4 = ___(finite 5) 7 – 4 = 3 (finite 5) 2 – 4 = 3 (finite 5)  ∴ 2-4 = 3 (finite 5)	Explanation techniques	Subtracting	Use of chalkboard compass	MK pupils book 5 page	
	4	Number patterns and sequences	Divisibility test for 2, 3 and 5	**The learner;** Defines the words divisibility Finds when to divide a number by 2, 3, or 5	**The learner;** Reads, pronounces, writes the words such as Divisibility Tests	**Divisibility test for 2, 3, 5** A number is divisible by 2 when th last digit is 0,2,4,6,8. A number is divisible by 3 when the digits of a number are sumed up and you get a multiple of 3 such as 3, 6, or 9. A number is divisible by 5 when its last digit is either 0 or 5	Guided discovery Explanation technique	Defining Finding when to divide	Use of chalkboard illustration	Use fountain primary Maths book 6 page 41	
	5	Number patterns and sequences	Prime numbers	**The learner;** Identifies prime numbers from others Use prime numbers such as 2,3,5 o identify others	**The learner;**	**Prime numbers** These are numbers that have got two factors one and its self **Example** Write elements in a set of prime numbers between 10 and 40 ~~10~~ 11 ~~12~~ 13 ~~14~~ ~~15~~ ~~16~~ 17 ~~18~~ 19 ~~20~~ ~~21~~ ~~22~~ 23 ~~24~~ ~~25~~ ~~26~~ ~~27~~ ~~28~~ 29 ~~30~~ 31 ~~32~~ ~~33~~ ~~34~~ ~~35~~ ~~36~~ 37 ~~38~~ ~~39~~ ~~40~~ $\{11, 13, 17, 19, 23, 29, 31, 37\}$		Identifying prime numbers Using prime numbers		Use of a new MK pupils book 6 page 80	
	6	Number patterns and sequences	Prime factorization	**The learner;** Defines the term factorization Uses prime factors to break down big numbers	**The learner;**	**Prime factorisation** **Example** Find the prime factors of 60 2 | 60 2 | 30 3 | 15 5 | 5	Guided discovery Brain storming	Defining the term Using prime factors		Use a new MK pupils book 6 page 83	

						Or  Set notation = F_{60} = (2_1, 2_1, 3_1, 5_1) Multiplication = (2 x 2 x 3 x 5) Power form (2^2 x 3^1 x 5^1)				
	7	Number patterns and sequences	Finding factors of numbers	**The learner;** Identifies the questions given Divides in order to get factors of a number	**The learner;**	**Finding factors of numbers** **<u>Examples</u>** How many factors has 12? $\frac{12}{1}$ = 12 $\frac{12}{2}$ = 6 $\frac{12}{3}$ = 4 1 x 12 = 12 2 x 6 = 12 3 x 4 = 12 F_{12} = (1, 2, 3, 4, 5, 12) **There are 6 factors**	Guided discussion Question and answer technique	Identifying the question given Dividing	Use of chalk board illustration	Use a new MK pupils book 5 page 81	
7	1	Number patterns and sequences	Finding GCF/LCF	**The learner;** States GCF and LCF in full Lists the factors of given numbers Finds the GCF and LCF	**The learner;**	**Finding GCF / LCF** **<u>Example</u>** Find the factors of 12 and 15 1 x 12 = 12 2 x 6 = 12 3 x 4 = 12 1 x 15 = 15 3 x 5 = 15 F_{12} = (1 2 3 4, 6, 12 F 15 = (1 3 5) ∴ GCF = C.F = 1,3) ∴ GCF = 3 LCF = 1	Brain storming Explanation technique	Stating GCF and LCF in full Listing the factors Find the GCF /LCF	Use of text books	Use a new MK pupils book 5 page 82	

	2	Number patterns and sequences	Finding GCF by prime factorizing	**The learner;** Interprets the question given Uses prime factors to break down the number	**The learner;**	**Finding GCF of 12 and 18** 2 | 12 | 18 3 | 6 | 9 | 2 | 3 2 x 3 = 6 ∴ The GCF of 12 and 18 is 6	Guided discovery Decision making	Interpreting the question given Using prime factors	Chalk board	Use a new MK pupils book 5 page 87	
	3	Number patterns and sequences	Finding LCM using multiples	**The learner;** Interprets the question given Finds the multiples States the common multiples Identifies the lowest common multiple	**The learner;**	**Find LCM using multiples** **<u>Examples</u>** Find the lowest common multiple of 4 and 3 M_4 = (4, 8, (12), 16, 20, (24), 28, 32, ___) M_3 = (3, 6, 9, (12) 15, 18, 21, (24), 27, 30, ___) C.M = ((12) 24, __) ∴ L.C.M of 4 and 3 is 12	Guided discussion Explanation technique	Interpreting Finding the multiples Stating the common multiples	Real objects	Use a new MK pupils book 5 page 80	
	4	Number patterns and sequences	Finding LCM using prime factors	**The learner;** Identifies the question given Arranges the numbers vertically then uses prime factors to divide	**The learner;**	**Finding LCM using prime factors** **<u>Examples</u>** Find the L.C.M of 12 and 18 2 | 12 | 18 2 | 6 | 9 3 | 39 3 | 1 | 3 1 | 1 (2 x 2) x (3 x 3) 4 x 9 = 36 ∴ L.C.M of 12 and 18 is 36	Question and answer technique Guided discovery	Identifying the questions Arranging the numbers	Chalk board illustration	Use a new MK pupils book 5 page 86	
	5	Number patterns and sequences	Prime factoring numbers and respresenting them on a venn diagram	**The learner;** Interprets the questions given Prime factorizes the numbers separately Writes prime factors in subscript form	**The learner;**	**Prime factorizing numbers and representing them on a venn diagram** **<u>Examples</u>** Use a venn diagram to show prime factors of 36 and 30 2 | 36 2 | 18 3 | 9 3 | 3 | 1 2 | 30 3 | 15 5 | 5 F_{36} = ((2), 2_2, (3), 3_2) F_{30} = ((2), (3), 5)	Guided discussion Question and answer technique	Interpreting Prime factorizing Representing prime factors on a venn diagram	Compass Ruler	Use a new MK pupils book 6 page 87	

						$F_{36}F_{30}$ 					
	6	Number patterns and sequences	Using a venn diagram to find LCM and GCF	**The learner;** Studies the venn diagram effectively Identifies where GCF lies and LCM Multiplies the prime factors to get LCM and GCF	**The learner;**	**Using a venn diagram to find LCM and GCF** **<u>Example</u>** Find the value of x and y, GCF and LCM F_xF_y 	Brain storming Guided discovery	Studying the venn diagram Identifying	A chart showing prime factors on a venn diagram	Use a new MK pupils book 6 page 89	
	7	Number patterns and sequences	Square numbers and square roots	**The learner;** Defines square numbers, square roots Prime factorizes to get the square root	**The learner;**	**Square root** **Square number** 1 x 1 1 2 x 2 3 x 3 4 4 x 4 5 x 5 9 **Example** What is the square of 1? $1^2 = 1 \times 1 = 1$ <u>Workout the square root of 16</u> 2 | 16 2 | 8 2 | 4 2 | 2 1 $\sqrt{2^2 \times 2^2}$ $= 2 \times 2$ $= 4$ $\therefore \sqrt{16} = 4$	Guided discussion Explanation technique	Defining square numbers and square roots Prime factorizing to get the square root	Use of chalk board illustration	A new MK pupils book 5	

8	1	Number patterns and sequences	Other types of numbers	**The learner;** Identifies the numbers Defines the numbers	**The learner;**	**Other types of num bers** These numbers include:- - Natural numbers - Countring numbers - Even numbers - Odd numbers - Triangular numbers - Composite numbers	Brain storming Question and answer technique	Identifying the numbers Defining the types of numbers	Use a chart showing types of numbers	Use a new MK pupils book 5	
	2	Number patterns and sequences	Finding the next number in the sequence	**The learner;** Defines the word sequence Identifies the pattern used Fills in the next number in the sequence	**The learner;**	**Finding the next number in the squences** **<u>Examples</u>** Find the next number in the sequence 1, 3, 6, 10, 15, 21, ___ 1 , 3, 6, 10, 15, 21 ,28 +2 +3 +4 +5 +6 +7 1 , 4, 9, 16, 25, 36 1x1 2x2 3x3 4x4 5x5 6x6 0 , 2, 4, 6, 8, 10 +2 +2 +2 +2 +2 2, 3, 5, 7, 11 , 13, 17 (Prime numbers)	Guided discovery Explanation techniques	Defining the word sequence Identifying the pattern used Filling in the next number in the sequence	Use of chalk board illustration	Use a new MK pupils book 5	
	3	Numeracy	Conversion in fractions	**The learner;** Identifies the types and parts of fractions Changes mixed numbers to improper fractions Changes improper fractions to mixed	**The learner;**	**Conversion of fractions mixed to improper fractions** **<u>Example</u>** Change $4\frac{2}{3}$ to improper fraction **<u>S/W</u>** $\frac{(D \times W) + N}{D}$ D = 3, W= 4, N = 2 $\frac{(3 \times 4) + 2}{3}$ $\frac{12 + 2}{3}$ $\frac{14}{3}$	Guided discussion Observation technique	Effective communication Problem solving	Grouping items Doing a written exercise	Use a new MK pupils book 5 Page 116	

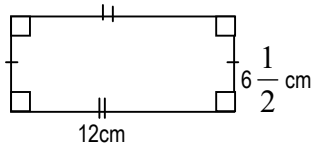
	4	Numeracy	Equivalent fractions	**The learner;** Describes what an equivalent fraction is States the equivalent fractions of given fractions	**The learner;** Writes and pronounces equivalent Writes the fractions correctly	**Equivalent fractions** **<u>Examples</u>** Write 5 equivalent fractions of $\frac{3}{4}$ $\frac{3}{4} = \frac{3x1}{4x1}, \frac{3x2}{4x2}, \frac{3x3}{4x3}, \frac{3x4}{4x4}, \frac{3x5}{4x5}$ $= \frac{3}{4}, \frac{6}{8}, \frac{9}{12}, \frac{12}{16}, \frac{15}{20}, \text{------}$ Fill in the box: $\frac{1}{2} = \frac{\square}{10}$ $\frac{1}{2} = \frac{1x1}{2x1}, \frac{1x2}{2x2}, \frac{1x3}{2x3}, \frac{1x4}{2x4}, \frac{1x5}{2x5}$ $= \frac{1}{2}, \frac{2}{4}, \frac{3}{6}, \frac{4}{8}, \frac{5}{10}, \text{------}$ $= \frac{1}{2} = \frac{\boxed{5}}{10}$	Discovery Discussion Observation technique	Describing Stating fractions	Chalkboard illustration	Use a new MK pupils book 5 page 117 – 118	
	5	Numeracy (Fractions)	Reducing fractions	**The learner;** Describes what reducing a fraction is States the steps followed when reducing fractions Reducing any given fraction	**The learner;** Pronounces Reads Spells the words Reducing	**Reducing fraction** Reduce the following fractions $\frac{12}{24}$ 3 1 ~~6~~ $\frac{\cancel{12}}{\cancel{24}}$ ~~12~~ ~~6~~ 2 $\frac{1}{2}$	Question and answer technique Guided discovery Explanation technique	Describing Stating Reducing	Chalkboard illustration	MK pupils book 5 page 117 – 118	

	6	Numeracy (Fractions)	Ordering fractions	**The learner;** States the LCM of the fractions Gets the value fraction Arranges the fractions	**The learner;**	**Ordering fractions** **<u>Examples</u>** Arrange $\frac{3}{8}, \frac{7}{12}$ and $\frac{5}{8}$ in descending order $\frac{3}{\cancel{8}} \times \cancel{24} = 3 \times 3$ $1 \quad = 9$ $\frac{7}{\cancel{12}} \times \cancel{24} = 7 \times 2$ $1 \quad = 14$ $\frac{5}{\cancel{8}} \times \cancel{24} = 5 \times 3$ $1 \quad = 15$ 24 $\frac{3}{8}, \frac{7}{12}, \frac{5}{8}$ 2 | 8 | 12 | 8 2 | 4 | 6 | 4 2 | 2 | 3 | 2 3 | 1 | 3 | 1 1 | 1 | 1 (2 x 2) x (2 x 3) 4 x 6 = 24	Guided discussion Guided discovery Observation technique	Describing words Arranging fractions Doing a written exercise	Chalkboard	Mk Pupils book 5 page 119	
	7	Fractions	Addition of fractions	**The learner;** States the LCM of the denominators Adds the fractions	**The learner;**	**Addition of fractions** **<u>Example</u>** Add : $\mathbf{1}\frac{1}{2} + \mathbf{3}\frac{1}{4} + \frac{5}{6}$ $\frac{3}{2} + \frac{13}{4} + \frac{5}{6}$ (6x3) + (3 x 13) + (2 x 5) $\frac{18 + 39 + 10}{12}$ $\frac{67}{12}$ $= \mathbf{5}\frac{7}{12}$ 2 | 2 | 4 | 6 2 | 1 | 2 | 3 3 | 1 | 1 | 3 1 | 1 | 1 (2 x 2) x3 4 x 3 = 12	Observation technique Guided discovery	Stating the LCD Adding the fractions	Chalk board	MK pupils book 5 page 121-125	

9	1	Fractions	Subtraction of fractions	**The learner;** States the LCD of the denominators Subtracts fractions with different denominators	**The learner;**	**Subtraction of fractions** Subtract : $5\frac{1}{4} - 2\frac{1}{2}$ $5 \times \frac{1}{4} - 2 \times \frac{1}{2}$ $\frac{21}{4} - \frac{5}{2}$ $\frac{(1\times21) - (2\times5)}{4}$ $\frac{21-10}{4}$ $\frac{11}{4}$ 2 r 3 $2\frac{3}{4}$ 2 | 4 | 2 2 | 2 | 1 1 | 1 2 x 2 = 4 2 1 - 1 0	Discussion Explanation Technique	Stating the LCD Subtracting effectively	Chalk board	MK pupils book 5 page 126 – 127	
	2	Fractions	Mixed operation on addition and subtraction	**The learner;** Identifies various operations used Re-arranging the operations following BODMAS	**The learner;**	**Mixed operations** **Example** Workout : $\frac{5}{6} - \frac{5}{9} + \frac{7}{18}$ $\frac{5}{6} + \frac{7}{18} - \frac{5}{9}$ (3x5) +(1x7) – (2x5) $\frac{15 + 7 - 10}{18}$ $\frac{\cancel{6}\ 2}{\cancel{12}\ \cancel{18}\ \cancel{9}\ 3}$ $\frac{2}{3}$ 2 | 6 | 18 | 9 3 | 3 | 9 | 9 3 | 1 | 3 | 3 1 | 1 | 1 (2 x 3) x 3 6 x 3 = 18	Brain storming Guidd discovery	Identifying Re-arranging	Chalkboard	Use a new MK pupils book 5 page 128	

	3	Fractions	Multiplication of fractions	**The learner;** Multiplies top and bottom numbers directly. Reduces the fractions where necessary	**The learner;**	**Multiplication of fractions** **<u>Examples</u>** 4 x $\frac{1}{2}\frac{1}{4}$ x $\frac{2}{3}$ $=\frac{4}{1}$ X $\frac{1}{2}$ $\quad\quad$ $\frac{1}{4}$ x $\frac{2}{3}$ $=\frac{2x1}{1x1}$ $\quad\quad$ $\frac{1x1}{2x3}$ $=\frac{2}{1}$ $\quad\quad$ $\frac{1}{6}$ = 2	Guided discussion Explanation	Multiplying Reducing	Chalkboard	Use a new MK pupils bo5 page 130	
	4	Fractions	Application of fractions	**The learner;** Interprets the questions given. Converts units Reduces where necessary	**The learner;** Writes, pronounces and reads the word application	**Application of fractions** **<u>Examples</u>** what is $\frac{1}{4}$ of 60 minutes 1hr = 60 minutes $\frac{1}{4}$ hr =($\frac{1}{4}$ x 60) minutes (1x15) minutes **15 minutes** What is $\frac{1}{7}$ of shs. 3500? $\frac{1}{7}$ x shs. 3500 $\frac{1}{7}$ x shs. 3500 $\frac{1}{7}$ x shs 500 sh. **500**	Brain storming Observation technique	Interpreting the question Converting Reducing	Chalk board	MK pupils book 5 page 131	

	5	Fractions	More about application of fractions	**The learner;** Identifies the question given Interprets the question effectively Works out the given problem.	**The learner;**	**More about application of fractions** **<u>Examples</u>** A mathematics book contains 200 pages. A pupil read $\frac{3}{5}$ of it a) Find the un read fraction b) Calculate the total pages that were read. **<u>Whole Read fraction un read</u>** **1** $\frac{3}{5}$ **1**-$\frac{3}{5}$ $\frac{5}{5} - \frac{3}{5} = \frac{5-3}{5}$ $= \frac{2}{5}$ Read fraction $\frac{1}{2}$ **Total** = 200pgs =($\frac{3}{5}$ of 200) pages =($\frac{3}{\cancel{5}}$ x $^{40}\cancel{200}$) pages = (3 x 40) pages = 4 0 pages <u>x 3</u> **<u>12 0 pages</u>**					
	6	Fractions	More about application of fractions	**The learner;** Interprets the question Multiplies effectively	**The learner;**	**More about application of fractions** **<u>Examples</u>** A mother gave $\frac{1}{2}$ pancake to each of her 4 children. How many pancakes did she have?	Explanation technique Guided discussion	Interpreting Multiplying	Use of chalk board	MK book 5 page 132	

						Each got $\frac{1}{2}$ Total number of children = 4 Pancake = $\frac{1}{2}$ x 4 = 1 x 2 **= 2 pan cakes** Find the area of the figure below  Area = L x W = 12cm x $\mathbf{6}\frac{1}{2}$ cm = 12cm x $\frac{13}{2}$ cm = 6cm x 13cm Area = 78cm²					
	7	Fractions	Finding reciprocal	**The learner;** Interprets the question given Defines the word reciprocal Finds the reciprocal of the numbers	**The learner;**	**Finding reciprocal** **<u>Examples</u>** Find the reciprocal of $\mathbf{1}\frac{1}{3}$ Let the reciprocal be y $\mathbf{1}\frac{1}{3}$ of y = 1 $\mathbf{1}\frac{1}{3}$ x y = 1 $\frac{4}{3}$ x y = 1 3 x $\frac{4y}{3}$ = 1 x 3	Guided discovery Question and answer technique	Interpreting defining Finds	Chalk board		

						4y = 3 $\frac{4y}{4} = \frac{3}{4}$ Y = $\frac{3}{4}$					
10	1	Fractions	Division of fractions	**The learner;** Interprets the question given Divides a whole number by fraction Divides the fraction by fraction Reduces where necessary	**The learner;**	**Division of fractions** **<u>Examples</u>** Divide : **2** $\div \frac{1}{2}$ **2** x $\frac{2}{1}$ $\frac{1}{1x1}$ $\frac{4}{1}$ **= 4** How many $\frac{1}{4}$ loaves of bread cab be got from 2 loaves? **2** $\div \frac{1}{4}$ **2** x $\frac{4}{1}$ $\frac{8}{1}$ **= 8 quarter loaves**	Question and answer technique Explanation technique	Interpreting Dividing Reducing	Real objects Chalkboard illustration	Use a new MK pupils book 5 page 134	

	2	Fractions	Division of fractions by whole numbers	**The learner;** Identifies the question given Gets the reciprocal Multiplies effectively	**The learner;**	**Division of fractions by whole numbers** **Examples** Divide $\frac{2}{3} \div \mathbf{2}$ $\frac{2}{3} \div \frac{2}{1}$ $\frac{2}{3} \times \frac{1}{2}$ $\frac{1x1}{3x1}$ $= \frac{1}{3}$					
	3	Fractions	Division of a fraction by a fraction	**The learner;** Identifies the questions given Finds the reciprocal Reduces where necessary	**The learner;**	**Division of a fraction by a fraction** **Exampls** Divide $\frac{3}{4} \div \frac{1}{2}$ $\frac{3}{4} \times \frac{2}{1}$ $\frac{3x1}{2x1}$ $\frac{3}{2}$ 1 r 1 **1** $\frac{1}{2}$ Divide $2\frac{1}{2}$ by $1\frac{1}{4}$ $2\frac{1}{2} \div 1\frac{1}{4}$ $\frac{5}{2} \div \frac{5}{4}$ $\frac{5}{2} \times \frac{4}{5}$ $\frac{1x2}{1x1}$	Guided discovery Guided discussion	Identifying the question Finding the reciprocal Reducing where necessary	Chalk board illustration	Use a new MK pupils book 5	