

P5 MATHEMATICS SCHEME OF WORK TERM ONE

Wk	Pd	The me	T p	S p	Content	L/SK L	Competences		Activity	Methods / tech	Learnin g material s	RS	R m
							Subject	Language					
2	2	SET CONCEPTS	EQUAL SETS, EQUIVALENT SETS	Types of sets	<p><u>TYPES OF SETS</u></p> <p>i) Definition of a set.</p> <p>ii) Types of sets</p> <p><u>EQUAL SETS</u></p> <p>i) Definition of an equal set.</p> <p>ii) Symbol of an equal set</p> <p>iii) Examples of equal sets</p> <p><u>EQUIVALENT SETS</u></p> <p>i) Definition of equivalent sets</p> <p>ii) Symbol of equivalent sets</p> <p>iii) Examples of equivalent sets.</p>	Critical thinking and problem solving.	<p>Learners should be able to:</p> <p>i) Define a set.</p> <p>ii) Name different types of sets.</p> <p>iii) Define an equal set</p> <p>iv) Give the symbol of equal sets</p> <p>v) Give examples of equal sets.</p> <p>Learners should be able to:</p> <p>i) Define an equivalent set</p> <p>ii) Write the symbol of an equivalent set</p> <p>iii) Form examples of equivalent sets through own experiences.</p>	<p>Leaners should:</p> <p>1) Read vocabularies with correct intonation and pronunciation.</p> <p>2) Spell the vocabularies correctly</p>	<p>Naming types of sets.</p> <p>Drawing set symbols</p> <p>Shading sets</p> <p>Applying symbols in given sets</p> <p>Reading applied symbols</p> <p>Doing some exercises</p>	<p>1) Class discussion and Demonstration.</p> <p>Explanation</p> <p>Discovery Question and answer.</p>	<p>Pens, sets, pencil. & Other real objects. - charts showing types of sets.</p>	<p>New Mk Primary mathematics 2000, Page 1</p> <p>New Mk Primary mathematics 2000, Page 1 - 2</p>	

2		2	SET CONCEPTS	Types of sets	<p>NON EQUIVALENT SETS</p> <p>i) Definition of non-equivalent sets.</p> <p>ii) Symbol of non-equivalent sets</p> <p>iii) Examples of non-equivalent sets.</p> <p>EMPTY SETS</p> <p>i) Definition of an empty set.</p> <p>ii) Symbol of non-equivalent set</p> <p>iii) Examples of an empty set.</p> <p>INTERSECTION SETS</p> <p>i) Definition of intersection of sets.</p> <p>ii) The symbol of intersection of sets.</p> <p>iii) Finding number of elements in intersection.</p> <p>iv) Shading and representing intersection on a Venn diagram.</p> <p>v) Identifying members of intersection.</p> <p>vi) Deriving members of intersection from a venn diagram.</p>	<p>Critical thinking and problem solving</p>	<p>Learners should be able to:</p> <p>Define a non-equivalent set.</p> <p>Write the symbol of a non-equivalent set</p> <p>Form non-equivalent sets</p> <p>Learners should be able to:</p> <p>i) Define an empty set.</p> <p>ii) Write and identify the symbols of an empty set.</p> <p>iii) Identify empty sets.</p> <p>Learners should be able to:</p> <p>i) Define intersection of sets</p> <p>ii) Identify and Draw the symbol of intersection of sets.</p> <p>iii) State the number of intersection of sets.</p> <p>iv) Shade and represent intersection on a venn diagram.</p> <p>v) Identify members of intersection.</p> <p>vi) Derive members of intersection from a venn diagram.</p>	<p>Leaners should:</p> <p>3) Read - vocabularies with correct intonation and pronunciation.</p> <p>4) Spell vocabularies correctly</p>	<p>Drawing set symbols</p> <p>Shading sets</p> <p>Applying symbols in given sets</p> <p>Reading applied symbols</p> <p>Doing some exercises</p>	<p>Class discussion. Demonstration. Explanation Discovery</p>	<p>Pens, sets, pencil. & Other real objects. chart showing types of sets.</p>	<p>New Mk Primary mathematics 2000, Page 2</p> <p>New Mk Primary mathematics 2000, Page 3</p> <p>New Mk Primary mathematics 2000, Page 4 - 7</p>	
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2	2	SET CONCEPTS CEPTS	Union of sets	<p>UNION OF SETS</p> <p>i) Definition of union of sets. ii) Symbol for union of sets. iii) Finding union of sets. iv) Number of elements in the union of sets. v) Representing union sets on a Venn diagram.</p> <p>THE DIFFERENCE OF SETS</p> <p>i) Definition of difference of sets. ii) How difference of sets is represented symbolically. iii) Diagrammatic representation of difference of sets. iv) Listing members of the difference of sets. v) Number of members in the difference of sets.</p>	Critical thinking and putting information on the Venn diagram	<p>Learners should be able to:</p> <p>i) Define union of sets. ii) Write the symbol for union of sets. iii) Form union of sets from given sets. iv) Write the number of elements in the union of sets. v) Represent union of sets on a Venn diagram. vi) Derive members of union of sets from a Venn diagram.</p> <p>Learners should be able to:</p> <p>i) Define difference of sets. ii) Represent difference of sets symbolically. iii) Represent difference of sets diagrammatically. vi) Identify and list members of the difference of sets. iv) Write number of members in the difference of sets.</p>	<p>Leaners should:</p> <p>3) Read vocabularies with correct intonation and pronunciation. 4) Spell vocabularies correctly.</p>	<p>Drawing set symbols Shading sets Applying symbols in given sets Reading applied symbols Doing some exercises</p>	<p>Class discussion. Demonstration. Explanation</p>	<p>Pens, sets, pencil. & Other real objects. chart showing types of sets.</p>	<p>New Mk Primary mathematics 2000, Page 8 – 12</p> <p>New Mk Primary mathematics 2000, Page 13 - 14</p>	
	2		Types of sets			3						

3	2	SET CONCEPTS	Set elements	SUB SETS OF A SET i) Description of a sub - set. ii) The symbol for a sub set. iii) Listing sub sets of a given set. iv) Finding number of sub sets in a given set. v) Representing subsets on a Venn diagram vi) Using the formula	Critical thinking and putting information on the Venn diagram	Learners sh'd be able to: i) Shade the required set on a Venn diagram. ii) Identify elements from a given set on the Venn diagram. iii) State number of elements in a given set. Learners sh'd be able to: i) Define a sub set. ii) Write the symbol for a sub set. iii) List sub sets of a given set. iv) State number of sub sets in a given set. v) Represent sub sets on a Venn diagram. Define probability. i) State the formula used to find probability. ii) Solve probability involving a coin and a dice by using the formular.	Leaners should: 3) Read vocabularies with correct intonation and pronunciation. 4) Spell vocabularies correctly.	Drawing set symbols Shading sets Applying symbols in given sets Reading applied symbols Doing some exercises Carrying out some demonstrations by tossing the coins and the dice.	Class discussion Demonstration. Explanation	Pens, sets, pencil. & Other real objects. chart showing Venn diagrams with illustrations of elements in a set and subsets	New Mk Primary mathematics 2000, Page 14 – 16		
	2			PROBABILITY i) Definition of probability. ii) Formula to find probability. iii) Probability using a coin. iv) Probability using a Dice.									
	2												Coin and a dice.

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3		THE NUMERATION SYSTEM	Place values	Place values of whole numbers	<p><u>THE NUMERATION SYSTEM</u></p> <p><u>Introduction</u></p> <p>i) Meaning of a numeration system</p> <p>ii) The numeric symbols. E.g. 0, 1, 2, 3...</p> <p>iii) Formation of numerals from digits. The largest and smallest.</p> <p>iv) The difference between the smallest and largest numbers.</p> <p><u>PLACE VALUES OF WHOLE NUMBERS</u></p> <p>i) Place values of each digit in a given number of up to hundreds of thousands.</p> <p>ii) Place values of underlined digits in a given number.</p> <p><u>VALUES OF WHOLE NUMBERS</u></p> <p>i) Finding values of each digit in a given number.</p> <p>ii) Finding values of underlined digits in a given number.</p>	Critical thinking and problem solving	<p>Learners sh'd be able to:</p> <p>i) State the meaning of Numeration system.</p> <p>ii) Give examples of numeric symbols.</p> <p>iii) Use given digits to form larger and smaller numbers</p> <p>iv) Work out the difference between the smallest and largest numbers formed.</p> <p>Learners sh'd be able to:</p> <p>i) State place values of each digit in a given number of up to hundreds of thousands.</p> <p>ii) Identify place values of underlined digits in a given number.</p> <p>Learners sh'd be able to:</p> <p>i) Work out values of each digit in a given number.</p> <p>ii) Work out values of underlined digits in a given number.</p>	<p>Leaners should:</p> <p>3) Read vocabularies with correct intonation and pronunciation.</p> <p>Spell vocabularies correctly.</p>	<p>Class discussion in lesson , answering oral questions Doing an exercise</p> <p>Learners' participation in lesson as guided by the teacher. Doing an exercise</p>	<p>Chalkboard illustration Explanation Oral questioning and answer. Mental work Discussion.</p>	<p>- Chalk board illustration - chart showing place values.</p>	<p>New Mk Primary mathematics 2000, Page 24 - 25</p> <p>New Mk Primary mathematics 2000, Page 26</p> <p>New Mk Primary mathematics 2000, Page 27</p>	
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	2												

4	2	THE NUMERATION SYSTEM	Writing figures in words	Writing figures in words	<p><u>WRITING FIGURES IN WORDS</u></p> <p>i) Use of the place value table to write figures up to hundreds of thousands in words.</p> <p><u>WRITING NUMBER WORDS IN FIGURES</u></p> <p>i) Use of the place value table to write number word up to hundreds of thousands in figures.</p> <p><u>COMPARING NUMBERS</u></p> <p>i) Arranging up to six digit numbers from the smallest to the highest.</p> <p>ii) Arranging up to six digit numbers from the highest to the smallest.</p>	Critical thinking and problem solving	<p>Learners should be able to:</p> <p>i) Use the place value table to write figures of up to hundreds of thousands in words.</p> <p>Learners should be able to:</p> <p>i) Use the place value table to write number word up to hundreds of thousands in figures.</p> <p>Learners should be able to:</p> <p>i) Arrange up to six digit numbers from the smallest to the highest.</p> <p>ii) Arrange upto six digit numbers from the highest to the smallest.</p>	<p>Leaners should:</p> <p>4) Read vocabularies with correct intonation and pronunciation.</p> <p>Spell vocabularies correctly.</p>	<p>. Learners' participation in lesson as guided by the teacher Doing an exercise</p> <p>Learners 'participation in lesson as guided by the teacher. Doing an exercise</p> <p>Learner s participation in lesson as guided by the teacher. Doing an exercise</p>	<p>Chalkboard illustration . Explanation Oral questioning and answer. Mental work Discussion.</p>	<p>Chart showing Place values</p> <p>Chart showing Place values</p> <p>Chalkboard illustration .</p>	<p>New Mk Primary mathematics 2000, Page 28</p> <p>New Mk Primary mathematics 2000, Page 29</p> <p>New Mk Primary mathematics 2000, Page 29</p>
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4	2	THE NUMERATION SYSTEM	Expanded form of whole numbers	Expanding whole numbers	<u>EXPANDING WHOLE NUMBERS USING VALUES</u> i) Revision on values of digits in a given number. ii) Expanding numbers using values	Critical thinking and problem solving	Learners should be able to: i) Work out the values of digits in a given number. ii) Expand numbers with the help of values	Leaners should: 5) Read vocabularies with correct intonation and pronunciation. Spell vocabularies correctly.	Learners' participation in lesson as guided by the teacher. Doing an exercise <
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4	2	THE NUMERATION SYSTEM	Expanded form of whole numbers	Expanded form of whole numbers	<u>EXPANDING NUMBERS USING POWERS/ EXPONENTS</u>	Critical thinking and problem solving	Learners sh'd be able to: i) Supply powers to digits in a given number to aid expansion. ii) Expanding numbers using powers. Learners should be able to: i) Derive numbers that were expanded using values. ii) Derive numbers that were expanded using powers. iii) Derive numbers that were expanded using multiples of ten. Learners should be able to: i) State the place values of digits in decimal numbers. ii) State the place values of underlined digits in decimal numbers.	Leaners should: 6) Read vocabularies with correct intonation and pronunciation. Spell vocabularies correctly.	Learners' participation in lesson as guided by the teacher. Learner s participation in lesson as guided by the teacher. Doing an exercise. Learner s participation in lesson as guided by the teacher. Doing an exercise.	Chalkboard illustration . Explanation Oral questioning and answer. Mental work Discussion.	Chalkboard illustration . Chart showing Place values including Decimal numbers.	New Mk Primary mathematics 2000, Page 32
					<u>FINDING EXPANDED NUMBERS</u>							
					<u>PLACE VALUES OF DECIMALS</u>							
5	2											

5	2	THE NUMERATION SYSTEM	Decimal numbers	Values of decimal numbers	<p><u>VALUES OF DIGITS IN DECIMAL</u></p> <p>i) Work out the values of digits in decimal numbers.</p> <p>ii) Work out the values of underlined digits in decimal numbers.</p>	Critical thinking and problem solving	<p>Learners should be able to:</p> <p>i) Work out the values of digits in decimal numbers.</p> <p>ii) Work out the values of underlined digits in given decimal numbers.</p>	<p>Leaners should:</p> <p>7) Read vocabularies with correct intonation and pronunciation.</p> <p>Spell vocabularies correctly.</p>	Identifying place values of each digit. Doing an exercise.	<p>Chalkboard illustration .</p> <p>Explanation Oral questioning and answer. Mental work Discussion .</p>	<p>Chart showing Place values including Decimal numbers Chalkboard illustration .</p>	<p>New Mk Primary mathematics 2000, Page 34 – 35</p> <p>New Mk Primary mathematics 2000, Page 35</p> <p>New Mk Primary mathematics 2000, Page 35 - 36</p>	
	2				<p><u>WRITING DECIMAL NUMBERS IN WORDS</u></p> <p>i) Place values of digits in decimal numbers.</p> <p>ii) Writing decimal numbers in words.</p>		<p>Learners should be able to:</p> <p>i) State the place values of digits in decimal numbers.</p> <p>ii) Write decimal numbers in words up to hundredth correctly.</p>						
	2				<p><u>WRITING DECIMAL FRACTIONS IN FIGURES</u></p> <p>i) Writing decimal fractions in figures.</p> <p>ii) Writing up to hundredth decimal fractions in figures.</p>		<p>Learners should be able to:</p> <p>i) Write decimal fractions in words to figures up to hundredth.</p>						

6	2	THE NUMERATION SYSTEM	Decimal numbers	Expanding decimal numbers	Critical thinking and problem solving	<p>Learners should be able to:</p> <p>i) Expand decimal numbers.</p> <p>ii) Expand wholes and decimal numbers.</p> <p>Learners should be able to:</p> <p>i) Write the Hindu Arabic Numerals and their equivalents</p> <p>ii) Express Hindu Arabic Numerals as Roman Numerals up to 500.</p> <p>Learners should be able to:</p> <p>i) Use the given rules when writing Roman Numerals correctly.</p> <p>ii) Convert Roman Numerals as Hindu Arabic Numerals.</p> <p>iii) Solve word problems in relation to Roman Numerals.</p>	<p>Leaners should:</p> <p>8) Read vocabularies with correct intonation and pronunciation.</p> <p>Spell vocabularies correctly.</p>	<p>Identifying place values of each digit. Doing an exercise.</p> <p>Learner's participation in as guided by the teacher. Learners will do an exercise.</p>	<p>Chalkboard illustration .</p> <p>Explanation Oral questioning and answer. Mental work Discussion.</p>	<p>Chalkboard illustration .</p>	<p>New Mk Primary mathematics 2000, Page 36</p>	
	2			<p>EXPANDING DECIMAL NUMBERS</p> <p>i) Expanding decimal numbers.</p> <p>ii) Expanding wholes and decimal numbers.</p> <p>ROMANS AND HINDU ARABIC NUMERALS.</p> <p>i) Hindu Arabic Numerals and their equivalents</p> <p>ii) Expressing Hindu Arabic Numerals as Roman Numerals up to 500.</p>								
	2		Roman numerals	<p>EXPRESSING ROMAN NUMERALS AS HINDU ARABIC NUMERALS</p> <p>i) The rules used in writing Roman numerals.</p> <p>ii) Converting Roman Numerals to Hindu Arabic Numerals up to 500.</p> <p>iii) Solve word problems in relation to Roman Numerals.</p>								

6	2	THE NUMERATION SYSTEM	Rounding off	Rounding off whole numbers	<p><u>ROUNDING OFF WHOLE NUMBERS</u></p> <p>i) Using a number line to aid in rounding off numbers.</p> <p>ii) Rounding off to the nearest tens.</p> <p>iii) Rounding off to the nearest Hundreds</p> <p>iv) Rounding off to the nearest thousands.</p> <p><u>ROUNDING OFF DECIMAL NUMBERS</u></p> <p>i) Rounding off numbers to the nearest tenth.</p> <p>ii) Rounding off numbers to the nearest Hundredth.</p>	Critical thinking and problem solving	<p>Learners should be able to;</p> <p>i) Use a number line to aid in rounding off numbers.</p> <p>ii) Round off numbers to the nearest tens.</p> <p>iii) Round off numbers to the nearest Hundreds.</p> <p>iv) Round off numbers to the nearest thousands.</p> <p>Learners should be able to:</p> <p>i) Round off numbers to the nearest tenth.</p> <p>ii) Round off numbers to the nearest hundredth.</p>	<p>Leaners should:</p> <p>9) Read vocabularies with correct intonation and pronunciation.</p> <p>Spell vocabularies correctly.</p>	<p>Learners' participation in lesson as guided by the teacher. Responding to oral questions Learners will do an exercise.</p> <p>Learners' participation in lesson as guided by the teacher. Responding to oral questions</p>	<p>Chalkboard illustration . Explanation -Oral questioning and answer. Discussion.</p> <p>Chalkboard illustration .</p>	<p>New Mk Primary mathematics 2000, Page 39 – 44</p> <p>New Mk Primary mathematics 2000, Page 44</p>	
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7	2	O P E R A T I O N O N N U M B E R S	Addition of numbers	Addition of whole numbers	<u>ADDITION UPTO SIX DIGITS</u> i) Arranging digits vertically in respect of place values before adding. ii) Adding numbers with up to six digits. iii) Regrouping numbers by carrying when adding. iv) Carrying out addition involved in word problem.	Critical thinking and problem solving	Learners should be able to: i) Arrange digits vertically in respect of place values before adding. ii) Add numbers with up to six digits. iii) Regroup numbers by carrying when adding. iv) Carry out addition involved in word problem. Learners should be able to: i) Arrange digits vertically in respect of place values before subtracting. ii) Subtract numbers with up to six digits. iii) Subtract numbers involved in word problem. iv) Interpret the questions correctly.	Learners should: 10) Read vocabularies with correct intonation and pronunciation. Spell vocabularies correctly.	Chalkboard illustration. Explanation Oral questioning and answer. Mental work Discussion.	Learners' participation in lesson as guided by the teacher. Learners will do an exercise. Learners' participation in lesson as guided by the teacher. Learners will do an exercise.	Chalkboard illustration .	New Mk Primary mathematics 2000, Page 47 – 49	
	2		Subtraction of numbers	Subtraction of natural numbers	<u>SUBTRACTION OF NATURAL NUMBERS</u> i) Arranging digits vertically in respect of place values before subtracting. ii) Subtract numbers with up to six digits. iii) Apply borrowing when subtracting. iv) Carrying out subtraction involved in word problem.						Chalkboard illustration .	New Mk Primary mathematics 2000, Page 50 - 51	

7	2	O P E R A T I O N O N N U M B E R S	Multiplication	Multiplication of a two by two digit number	Critical thinking and problem solving	<u>MULTIPLICATION BY A TWO DIGIT NATURAL NUMBER</u> i) Arranging digits vertically in respect of place values before multiplying. ii) Multiplying two digit numbers. iii) Applying carrying when multiplying two digit numbers. iv) Carrying out multiplication involved in word problem.	Learners should be able to; i) Arrange digits vertically in respect of place values before multiplying. ii) Multiply two digit numbers. iii) Carry when multiplying two digit numbers. iv) Solve numbers involving multiplication in word problem. Learners should be able to: i) Apply divisibility test to easily divide numbers. v) Compare multiplication with division. vi) Divide numbers by multiples of 10 with remainder. v) Divide three digit numbers with and without remainders. vi) Solve numbers involving division in word problems.	Leaners should: 11) Read vocabularies with correct intonation and pronunciation. Spell vocabularies correctly.	Chalkboard illustration. Explanation Oral questioning and answer. Discussion.	Learners' participation in lesson as guided by the teacher. Learners will do an exercise.	Chalkboard illustration .	New Mk Primary mathematics 2000, Page 52 – 56
	2			<u>DIVISION OF NUMBERS.</u> i) Divisibility test. ii) Comparing multiplication with division. iii) Dividing three digit numbers with and without remainders. iv) Dividing numbers by multiples of 10.								

7	2	O P E R A T I O N	Co mb ine d op er a t i o n s	Co mb ine d op er a t i o n s	<u>COMBINED OPERATION</u> i) Solving mixed operation numbers. ii) Use of BODMAS .	Critical I thinki ng and proble m solvin g	Learners should be able to: i) Solve numbers with mixed operation. ii) State what each letter for BODMAS stands for. iii) Use BODMAS when solving numbers with mixed operation.	Leaners should: 12) Read vocabularies with correct intonation and pronunciation. Spell vocabularies correctly.	Chalkboard illustration. Explanation Oral questioning and answer. Mental work Discussion.	Responding to oral questions Learners will do an exercise.	Chart showing BODMAS and what it means. Chalkboard illustration .	New Mk Primary mathematics 2000, Page 63		
					<u>AVERAGE (MEAN) OF NUMBERS</u> i) Formula for finding average ii) Finding average (mean) of numbers by adding the items given and divide them by the number of items.		Learners should be able to: i) State the Formula for finding average. ii) Work out the average (mean) of numbers by adding the items given and divide them by the number of items. iii) Apply the idea of averages in solving daily life situations							
					<u>COMPARING MEANAND TOTAL</u> i) Find the total when number and the average are given.		Work out the total when number and the average are given.							
8	2	N U M B E R S	Me an	Fin din g me an										
	2													

8	2	O P E R A T I O N O N N U M B E R S	Ba ses	<p><u>SYMBOLS $>, <, \geq, \leq$ AND $=$</u></p> <p>i) The meaning of each symbol.</p> <p>ii) Applying each symbol in different mathematical phrases.</p>	Critical thinking and problem solving	<p>Learners should be able to:</p> <p>i) State the meaning of each symbol.</p> <p>iii) Apply each symbol in a given mathematical phrase.</p>	Learners should: 13) Read vocabularies with correct intonation and pronunciation. Spell vocabularies correctly.	Chalkboard illustration. Explanation Oral questioning and answer. Mental work Demonstration. Discussion.	Responding to oral questions Learners will do an exercise.	Chart of symbols with what they mean.	New Mk Primary mathematics 2000, Page 66	
	2			<p><u>BASE FIVE AND TEN</u></p> <p>i) Meaning of decimal system.</p> <p>ii) Meaning of non-decimal system.</p> <p>iii) Counting in base five.</p> <p>iv) The basic digits of base five.</p>		<p>Learners should be able to:</p> <p>i) State the meaning of decimal system.</p> <p>ii) State the meaning of non-decimal system.</p> <p>iii) Count in base five.</p> <p>iv) Mention the basic digits of base five.</p>						
	2			<p><u>PLACE VALUE</u></p> <p>i) Place values of each digit in base five</p> <p>ii) Finding the values of each digit in base five numbers with up to three digits.</p>		<p>Learners should be able to:</p> <p>i) Work out the place values of each digit in a base five number.</p> <p>iii) Work out the values of each digit in base five numbers with up to three digits.</p>				Chalkboard illustration.	New Mk Primary mathematics 2000, Page 68 – 69	
			Base five and base ten							Chart showing place values of base numbers	New Mk Primary mathematics 2000, Page 70	

9	2				Critical thinking and problem solving	<p><u>WRITING BASE FIVE NUMBERS IN WORDS</u></p> <p>i) Converting base five numbers to words.</p> <p>ii) Reading digit in a base five.</p>	<p>Learners should be able to:</p> <p>i) Convert base five numbers to words.</p> <p>ii) Reading each digit in a base five number separately so as to easily write in words.</p> <p>Learners should be able to:</p> <p>i) State the place value of each digit in a base five number.</p> <p>ii) Expand in base five by applying multiplication and addition.</p> <p>Learners should be able to:</p> <p>i) Expand in base five by using multiplication and addition.</p> <p>ii) Add the expanded expression to find base ten.</p>	<p>Leaners should:</p> <p>14) Read vocabularies with correct intonation and pronunciation.</p> <p>Spell vocabularies correctly.</p>	<p>Chalkboard illustration. Explanation Oral questioning and answer. Mental work Discussion.</p>	<p>Learners' participation in lesson as guided by the teacher. Responding to oral questions Learners will do an exercise</p> <p>Learners' participation in lesson as guided by the teacher.</p>	<p>Chalkboard illustration .</p>	<p>New Mk Primary mathematics 2000, Page 70</p>	
	2		Bases			<p><u>EXPANDING IN BASE FIVE</u></p> <p>i) The place values of each digit in base five number .</p> <p>ii) Expanding in base five</p>					<p>Chalkboard illustration .</p>	<p>New Mk Primary mathematics 2000, Page 71</p>	
	2		Conversion of numbers to different bases			<p><u>CHANGING BASE FIVE TO BASE TEN</u></p> <p>i) Application of expanding in bases five by multiplication and addition.</p> <p>ii) Adding the expanded expression to find base ten.</p>					<p>Chalkboard illustration . Chart showing base number place values.</p>	<p>New Mk Primary mathematics 2000, Page 71</p>	

9	2	O P E R A T I O N O N N U M B E R S	Ba ses	Co nve rsio n of nu mb ers to diff ere nt bas es	<p><u>CHANGING BASE TEN TO BASE FIVE</u></p> <p>i) Using division to change base ten to base five.</p> <p>ii) Finding the remainder after each consecutive division carried out.</p> <p>iii) Reading the answer from the remainder column.</p>	Critical thinkin g and proble m solving	<p>Learners should be able to:</p> <p>i) Use division to change base ten to base five.</p> <p>ii) Obtain the remainder after each consecutive division carried out.</p> <p>iii) Read the answer from the remainder column from down up wards.</p>	<p>Leaners should:</p> <p>15) Read vocabularies with correct intonation and pronunciation.</p> <p>Spell vocabularies correctly.</p>	Chalkboard illustration. Explanation Oral questioning and answer. Mental work Discussion.	Learners' participation in lesson as guided by the teacher. Learners will do an exercise	Chalkboard illustration .	New Mk Primary mathematics 2000, Page 72
	2			Ad diti on in bas es	<p><u>ADDITION IN BASE FIVE</u></p> <p>i) Digits applied in base five.</p> <p>ii) Use of division to get the remainder.</p> <p>iii) Regrouping the whole number and the remainders to obtain the answer.</p>		<p>Learners should be able to:</p> <p>i) Name the operational digits of base five when adding.</p> <p>ii) Use division to get the remainder.</p> <p>iii) Regroup the whole number and the remainders to obtain the answer.</p> <p>iv) Add in base five.</p>			Learners' participation in lesson as guided by the teacher. Responding to oral questions Learners will do an exercise	Chalkboard illustration .	New Mk Primary mathematics 2000, Page 73

10	2	O P E R A T I O N O N N U M B E R S	Ba ses		<u>MULTIPLICATION IN BASE FIVE</u> i) Carry out simple multiplication. ii) Maintaining the operational digits in base five by division and a remainder obtained. iii) Multiplying numbers in base five.	Critical thinkin g and proble m solving	Learners should be able to: i) Carry out simple multiplication. ii) Maintain the operational digits in base five by division and a remainder obtained. iii) Multiply numbers in base five.	Leaners should: 16) Read vocabularies with correct intonation and pronunciation. Spell vocabularies correctly.	Chalkboard illustration. Explanation Oral questioning and answer. Rote Discussion.	Learners answer oral questions in time of discussion Chalk board illustration .	Chalkboard illustration .	New Mk Primary mathematics 2000, Page74
	2		Fin ite sys tem	Clo ck arit hm etic	<u>CLOCK ARITHMETIC</u> <u>EXPRESSING NUMBERS IN FINITE 5 AND 7.</u> i) Explanation of clock arithmetic. ii) Explanation of finite system. iii) Application of division in the finite system. iv) Finding the remainder after division as the answer		Learners should be able to: i) Explain clock arithmetic. ii) Explain finite system. iii) Divide in the finite system. iv) Read the remainder after division as the answer v) Express numbers in finite 5 and 7.				Chalkboard illustration .	New Mk Primary mathematics 2000, Page 204 and 208 - 9

10	2	O P E R A T I O N O N N U M B E R S	Finite system	Clock arithmetic	<p><u>ADDITION USING A DIAL</u></p> <p>i) Drawing a dial.</p> <p>ii) Identifying the digits applied in base 5 and 7 respectively.</p> <p>iii) Inserting the digits of a particular finite in a dial.</p> <p>iv) Clockwise movement for addition in positive integers.</p> <p>v) Applying addition of numbers in the finite system.</p>	Critical thinking and problem solving	<p>Learners should be able to:</p> <p>i) Draw a dial.</p> <p>ii) Identify the digits applied in base 5 and 7 respectively.</p> <p>iii) Insert the digits of a particular finite in a dial.</p> <p>iv) Demonstrate clockwise movement on a dial for addition in positive integers.</p> <p>v) Apply addition on a dial for numbers in the finite system.</p>	<p>Leaners should:</p> <p>17) Read vocabularies with correct intonation and pronunciation.</p> <p>Spell vocabularies correctly.</p>	<p>Chalkboard illustration. Explanation Oral questioning and answer. Mental work Demonstration. Discussion.</p>	<p>Drawing dials Demonstration of mov't of the dial clock and anticlock wise</p>	<p>Chalkboard illustration .</p>	<p>New Mk Primary mathematics 2000, Page 211</p>	
	2				<p><u>ADDITION IN FINITE WITHOUT USING A DIAL.</u></p> <p>i) Carrying out simple addition in finite system.</p> <p>ii) Applying division to get the remainder considered to be the answer.</p>		<p>Learners should be able to:</p> <p>i) Carry out simple addition in finite system.</p> <p>ii) Apply division to get the remainder considered to be the answer</p>			<p>Learners' participation in oral questions and answer. Responding to oral questions Learners will do an exercise</p>	<p>Chalkboard illustration .</p>	<p>New Mk Primary mathematics 2000, Page 212</p>	

10	2	I N T E G E R S	Integer s	Arranging integers on a number line	INTEGERS i) Definition of integers. ii) Description of positive integers. iii) Representing positive integers on a number line. iv) Description of negative integers. v) Writing expressions that represent negative integers.	Critical thinking and problem solving	Learners should be able to: i) Define integers. ii) Describe positive integers. iii) Represent positive integers on a number line. vi) Describe negative integers. iv) Give expressions that represent negative integers. Learners should be able to: i) Identify negative and positive integers. ii) Describe the Symbols used for the positive and negative integers. iii) Draw a number line. iv) Place integers on a number line. v) Order integers using a number line. vi) Compare the directions of integers on a number line	Leaners should: 18) Read vocabularies with correct intonation and pronunciation. Spell vocabularies correctly	Chalkboard illustration. Explanation Oral questioning and answer. Rote Discussion.	Mental work Learners' participation in class discussion.	Chalkboard illustration . Chart showing parts of a number line.	New Mk Primary mathematics 2000, Page 95 – 96
	2				THE NUMBER LINE AND ORDERING INTEGERS i) Integers on a number line. ii) Symbols used for the positive and negative integers respectively. iii) Drawing a number line. iv) Placing integers on a number line. v) Ordering integers using a number line. vi) Comparing the directions of integers on a number line.							

11	2	I N T E G E R S	Integers	Ordering integers	<u>ORDERING INTEGERS USING SYMBOLS <, >, ≤, ≥</u> i) The meaning of each symbol. ii) Ordering the integers using the symbols iii) Using the number line to get the required set of integers.	Critical thinking and problem solving	Learners should be able to: i) State The meaning of each symbol. ii) Order the integers using the symbols iii) Use a number line to get the required set of integers.	Learners should: 19) Read vocabularies with correct intonation and pronunciation. Spell vocabularies correctly	Chalkboard illustration. Explanation Oral questioning and answer. Mental work Demonstration. Discussion.	Mental work Learners' participation in class discussion. Drawing number lines	Chalkboard illustration . Chart showing parts of a number line.	New Mk Primary mathematics 2000, Page 99
	2				<u>INVERSE OF INTEGERS AND ADDITIVE INVERSE</u> i) Definition of inverse. ii) Matching inverses on a number line. iii) Giving examples of inverses of given integers. iv) Meaning of additive inverse. v) The inverse property. vi) Working out the additive inverses of integers on a number line.		Learners should be able to: i) Define an inverse. ii) Match inverses on a number line. iii) Give examples of inverses of given integers. iv) State the meaning of additive inverse. v) State the inverse property. vi) Work out the additive inverses of integers on a number line.				Chalkboard illustration . Chart showing parts of a number line.	New Mk Primary mathematics 2000, Page 100 - 101

11	2	I N T E G E R S	Integers	<p>addition of integers on a number line</p> <p><u>ADDITION OF INTEGERS USING A NUMBERLINE.</u></p> <p>i) Identifying positive and negative directions on the number line in respect of the given integers to be added.</p> <p>ii) Carrying out the actual addition on the number line.</p> <p>iii) Showing the answer on the number line using the dotted line.</p>	Critical thinking and problem solving	<p>Learners should be able to:</p> <p>i) Identify positive and negative directions on the number line in respect of the given integers to be added.</p> <p>ii) Carry out the actual addition on the number line.</p> <p>iii) Show the answer on the number line using the dotted line.</p>	<p>Leaners should:</p> <p>20) Read vocabularies with correct intonation and pronunciation.</p> <p>Spell vocabularies correctly</p>	<p>Chalkboard illustration. Explanation Oral questioning and answer. Mental work Discussion.</p>	<p>Mental work Learners' participation in class discussion. Drawing number lines Adding and subtracting integers on a number line.</p>	<p>Chalkboard illustration . Chart showing parts of a number line.</p>	New Mk Primary mathematics 2000, Page 102 - 104	
	2			<p>subtraction of integers on a number line</p> <p><u>SUBTRACTION OF INTEGERS USING A NUMBERLINE.</u></p> <p>i) Identifying positive and negative directions on the number line in respect of the given integers to be added.</p> <p>ii) Carrying out the actual subtraction on the number line.</p> <p>iii) Showing the answer on the number line using the dotted line.</p>		<p>Learners should be able to:</p> <p>i) Identify positive and negative directions on the number line in respect of the given integers to be added.</p> <p>ii) Carry out the actual (-) tion on the number line.</p> <p>iii) Show the answer on the number line using the dotted line.</p>				<p>Chalkboard illustration . Chart showing parts of a number line.</p>	New Mk Primary mathematics 2000, Page 105 108	

11	2	I N T E G E R S	Integers	Forming mathematical statements from a number line	Problem solving	<p>FORMING MATHEMATICAL STATEMENTS FROM NUMBER LINES.</p> <p>i) Starting from zero when writing a mathematical statement.</p> <p>ii) Locating the answer from the number line.</p>	<p>Learners should be able to:</p> <p>i) Identify where to start from when writing a mathematical statement from a number line.</p> <p>ii) Locate the answer from the number line.</p> <p>iii) Interpret and write statements on a number line</p>	<p>Leaners should:</p> <p>21) Read vocabularies with correct intonation and pronunciation.</p> <p>Spell vocabularies correctly</p>	Chalkboard illustration. Explanation Oral questioning and answer. Mental work Discussion.	Mental work Learners' participation in class discussion. Drawing number lines Interpreting statements on a number line.	Chalkboard illustration	New Mk Primary mathematics 2000, Page109 – 110	
	2			<p><u>ADDITION OF INTEGERS WITHOUT USING A NUMBER LINE.</u></p> <p>i) Some important points to note when adding integers.</p> <p>ii) Carrying out addition without using a number line.</p> <p>iii) Use of the additive inverse.</p>		<p>Learners should be able to:</p> <p>i) State some important points to note when adding integers.</p> <p>ii) Carry out addition of integers without using a number line.</p> <p>iii) Easily use the additive inverse property when adding integers.</p>							


11	2	I N T E G E R S	Integers	Subtraction of integers	<p><u>SUBTRACTION OF INTEGERS WITHOUT USING A NUMBER LINE.</u></p> <p>i) Subtraction of integers without using a number line.</p> <p>ii) Making use of greater or less than to determine the answer.</p> <p>iii) Transforming [-] into as positive.</p> <p>iv)</p>	Problem solving	<p>Learners should be able to:</p> <p>i) Subtract integers without using a number line.</p> <p>ii) Making use of greater or less than to determine the answer.</p> <p>v) Transforming [-] into as positives or as to carry out subtraction easily.</p>	<p>Learners should:</p> <p>22) Read vocabularies with correct intonation and pronunciation.</p> <p>Spell vocabularies correctly</p>	Chalkboard illustration. Explanation Oral questioning and answer. Mental work Discussion.	Mental work Learners' participation in class discussion.	Chalkboard illustration	New Mk Primary mathematics 2000, Page 112	

9	2	O P E R A T I O N O N N U M B E R S	Bas es	Bas e five	<u>WRITING BASE FIVE NUMBERS IN WORDS</u> iii) Converting base five numbers to words. iv) Reading digit in a base five.	Proble m solving	Learners should be able to: iii) Convert base five numbers to words. iv) Reading each digit in a base five number separately so as to easily write in words.	Leaners should: 23) Read vocabularies with correct intonation and pronunciation. Spell vocabularies correctly	Chalkboard illustration. Explanation Oral questioning and answer. Mental work Discussion.	Learners' participation in lesson as guided by the teacher. Responding to oral questions Learners will do an exercise	Chalkboard illustration .	New Mk Primary mathematics 2000, Page 70			
	2				<u>EXPANDING IN BASE FIVE</u> iii) The place values of each digit in base five number. iv) Expanding in base five		Learners should be able to: iii) State the place value of each digit in a base five number. iv) Expand in base five by applying multiplication and addition.						Learners participation in lesson as guided by the teacher.	Chalkboard illustration . Chart showing base number place values.	New Mk Primary mathematics 2000, Page 71
	2				<u>CHANGING BASE FIVE TO BASE TEN</u> iii) Application of expanding in base five by multiplication and addition. iv) Adding the expanded expression to find base ten.		Learners should be able to: iii) Expand in base five by using multiplication and addition. iv) Add the expanded expression to find base ten.								

PRIMARY FIVE MTC SCHEME OF WORK TERM TWO

WK	PD	THM	TPC	S/TP	L/SKL	COMPETENCES		CONTENT	METH	A) S/ACT	L/AID	REF	RE
						SUBJECT	LANGUAGE						
2	1	ALGEBRA	ALGEBRA	COLLECTING LIKE TERMS	Critical thinking and problem solving	The learner <ol style="list-style-type: none"> Sorts and groups similar items. Uses an appropriate letter to represent the items. Collects like terms considering application of BODMAS. Collects like terms involved in word problems 	Read words correctly. Writes BODMAS in full.	<u>COLLECTING LIKE TERMS</u> Example: Write the following in short: $1\text{pen} + 1\text{pen} + 1\text{pen} + 1\text{pen}$ Let each pen be p $p + p + p + p$ $= 4p$ = 4 pens	<ul style="list-style-type: none"> • Demonstration • Discussion 	Collecting like terms	Chalkboard illustration, pens, pencils, rubbers, stones, books etc.	A NEW MK PRIMARY MTC BK 5 PAGE 267 – 268	
	2	ALGEBRA	ALGEBRA	SIMPLIFYING ALGEBRAIC EXPRESSION	Critical thinking and problem solving	The Learner: <ol style="list-style-type: none"> Writes an algebraic expression by either adding or subtracting Collects like terms and simplify where necessary. 	Read words correctly. Writes BODMAS in full.	<u>SIMPLIFYING ALGEBRAIC EXPRESSION</u> Example: Write in short form: $q + 7q + 4q$ = 12q	<ul style="list-style-type: none"> • Discussion 	Collecting like terms	Chalkboard illustration, pens, pencils, rubbers, stones, books etc.	A NEW MK PRIMARY MTC BK 5 PAGE 268 – 269	

3	1	ALGEBRA	ALGEBRA	WORD PROBLEMS	Critical thinking and problem solving Appreciation.	The learner: 1. Derives equations from given word problems. 2. Solves for the unknown.	Collecting like terms. Reading mathematical statements.	WORD PROBLEMS Example What number when added to 5 gives 11 Let the number be x $x + 5 = 11$ $x + 5 - 5 = 11 - 5$ $x = 11 - 5$ <u>$x = 6$</u>	<ul style="list-style-type: none">DiscoveryDiscussion	i)Forming algebraic expressions. ii) solving simple problems involving algebra.	Chalkboard illustration, pens, pencils, rubbers, etc	A NEW MK PRIMARY MTC BK 5 PAGE 273	
	2	ALGEBRA	ALGEBRA	<u>SOLVING EQUATIONS BY ADDITION</u>	Critical thinking and problem solving	The learner: 1. Collects like terms correctly. 2. Uses the inverse operation to eliminate the unwanted number from either sides of an equation 3. Solves for the unknown.	Collecting like terms. Reading mathematical statements.	<u>SOLVING EQUATIONS BY ADDITION</u> Example Find the value of n: $n - 5 = 3$ $n - 5 = 3$ $n - 5 + 5 = 3 + 5$ $n = 3 + 5$ <u>$n = 8$</u>	Class discussion	solving simple problems involving algebra.	Chalkboard illustration.	A NEW MK PRIMARY MTC BK 5 PAGE 274	
	3	ALGEBRA	ALGEBRA	WORD PROBLEMS	Critical thinking and problem solving	The Learner: 1. Derives equations from given word problems. 2. Solves for the unknown.	Collecting like terms. Reading mathematical statements	WORD PROBLEMS Example A boy used 3 of his exercise books and remained with 4books. How many books did he have first? Let the number of books he had be x $n - 3 = 4$ $n - 3 + 3 = 4 + 3$ $n = 4 + 3$ $n = 7$ <u>He had 7 books at first.</u>	<ul style="list-style-type: none">DiscoveryDiscussion	i)Forming algebraic expressions. ii) solving simple problems involving algebra.	Chalkboard illustration.	A NEW MK PRIMARY MTC BK 5 PAGE 275	

7	1	NUMERACY	FRACTIONS	MIXED FRACTIONS AS IMPROPER	Effective communication and problem solving	The Learner: Expresses mixed fraction as improper fraction.	i) Expressing improper fractions as mixed fractions ii) Expressing mixed fractions as improper fractions	MIXED FRACTIONS AS IMPROPER Example Express $4\frac{2}{3}$ as an improper fraction $4\frac{2}{3} = \frac{W \times D + N}{D}$ $= \frac{4 \times 3 + 2}{3}$ $= \frac{12 + 2}{3}$ $4\frac{2}{3} = \frac{14}{3}$	Class discussion	Expressing mixed fractions to improper fractions.	Chalkboard illustration	A NEW MK PRIMARY MTC BK 5 PAGE 116
	2	NUMERACY	FRACTIONS	EQUIVALENT FRACTION	Effective communication and problem solving	Learner: 1. Represents equivalent fractions diagrammatically. 2. Works out equivalent fractions by calculation.	Finding equivalent fractions	EQUIVALENT FRACTION Diagrammatic representation of equivalent fractions  $\frac{1}{2} = \frac{1}{2}$ $\frac{2}{4} = \frac{1}{2}$ $\frac{3}{6} = \frac{1}{2}$ Equivalent fractions by calculation Example Write four fractions equivalent to $\frac{1}{2}$ $\frac{1}{2} = \frac{1 \times 2}{2 \times 2}, \frac{1 \times 3}{2 \times 3}, \frac{1 \times 4}{2 \times 4}, \frac{1 \times 5}{2 \times 5}$ $\frac{1}{2} = \frac{2}{4}, \frac{3}{6}, \frac{4}{8}, \frac{5}{10}$	Class discussion	Finding equivalent fractions	Chalkboard illustration	A NEW MK PRIMARY MTC BK 5 PAGE 117
	3	NUMERACY	FRACTIONS	REDUCING FRACTIONS	Effective communication and problem solving	The learner: 1. Derives common factors of given parts of a fraction. 2. Uses the GCF to reduce the given fraction	Reducing fractions	REDUCING FRACTIONS Example Reduce $\frac{12}{24}$ to its simplest term $F_{12} = \{1, 2, 3, 4, 6, 12\}$ $F_{24} = \{1, 2, 3, 4, 6, 8, 12, 24\}$ $CF = \{1, 2, 3, 4, 6, 12\}$ $GCF = 12$ $\frac{12}{24} \div 12$ $= \frac{1}{2}$	Class discussion	Reducing fractions using GCF.	Chalkboard illustration	A NEW MK PRIMARY MTC BK 5 PAGE 118

9	4	NUMERACY	FRACTIONS	WORD PROBLEMS IN SUBTRACTION OF FRACTIONS	Critical thinking and problem solving	The learner: <ol style="list-style-type: none"> Solves word problems involving subtraction of fractions Changes mixed fractions to improper fractions before adding the fractions Reduces the fractions to simpler terms or change it to mixed fractions 	Subtraction of fractions with different denominators	WORD PROBLEMS IN SUBTRACTION OF FRACTIONS Example A baby was given $\frac{5}{6}$ litres of milk and drunk $\frac{7}{12}$ litres. How much milk remained? Given – Drunk $= \frac{5}{6} - \frac{7}{12}$ $= \frac{10 - 7}{12}$ LCM = 12 $= \frac{3}{12}$ Reduce $= \frac{1}{4}$	Class discussion	Subtraction of fractions with different denominators	Chalkboard illustration	A NEW MK PRIMARY MTC BK 5 PAGE 127
	5	NUMERACY	FRACTIONS	ADDITION AND SUBTRACTION OF FRACTIONS	Effective communication and problem solving	The learner: <ol style="list-style-type: none"> Solves fractions by adding and subtracting. Applies the knowledge of BODMAS when adding and subtracting fractions Changes mixed fractions to improper fractions before adding the fractions Reduces the fractions 	Subtraction and addition of fractions with different denominators	ADDITION AND SUBTRACTION OF FRACTIONS Example $\frac{1}{2} + \frac{1}{3} - \frac{1}{4}$ LCM = 12 $= \frac{6 + 4 - 3}{12}$ Add first $= \frac{10 - 3}{12}$ $= \frac{7}{12}$	Class discussion	Mixed addition and subtraction of fractions with different denominators	Chalkboard illustration	A NEW MK PRIMARY MTC BK 5 PAGE 128
	10	NUMERACY	FRACTIONS	MULTIPLICATION OF FRACTIONS	Effective communication and problem solving	The learners: <ol style="list-style-type: none"> Multiplies fractions by wholes. Converts 'of' to a times sign. Reduces the answers to simpler terms. 	Reading and solving problems involving multiplication of fractions by whole numbers.	MULTIPLICATION OF FRACTIONS Example I $\frac{1}{4} \times 3$ $= \frac{1}{4} \times \frac{3}{1}$ $= \frac{1 \times 3}{4 \times 1}$ $= \frac{3}{4}$ Example II $\frac{1}{2}$ of 16 'of' becomes x $= \frac{1}{2} \times 16$ $= \frac{1}{2} \times \frac{16}{1}$ $= \frac{1 \times 16}{2 \times 1} = \frac{16}{2}$ Reduce $= 8$	Class discussion		Chalkboard illustration	A NEW MK PRIMARY MTC BK 5 PAGE 129 – 130

10	2	NUMERACY		WORD PROBLEMS INMULTIPLICATION OF FRACTIONS	Effective communication and problem solving	The learner: 1. Solves word problems involving multiplication of fractions 2. Changes mixed fractions to improper fractions before adding the fractions 3. Reduces the fractions to simpler terms or change it to mixed fractions	Reading and solving problems involving multiplication of fractions by whole nbers.	WORD PROBLEMS IN MULTIPLICATION OF FRACTIONS Example A mathematics book contains 200 pages. A pupil reads $\frac{3}{5}$ of the book. How many pages did the pupil read? A pupil reads $\frac{3}{5}$ of 200 pages. $= \frac{3}{5}$ of 200 pages $= \frac{3}{5} \times \frac{200}{1}$. Pages $= 3 \times \frac{200}{5}$ pages $= 3 \times 40$ $= 120$ Pages	Class discussion		Chalkboard illustration	A NEW MK PRIMARY MTC BK 5 PAGE 131 - 132	
	3	NUMERACY	FRACTIONS	RECIPROCAL OF FRACTION	Effective communication and problem solving	The learner: 1. Give the reciprocal of a fraction given. 2. Give reciprocals of whole numbers.	Reading and solving problems involving multiplication of fractions by whole nbers.	RECIPROCAL OF FRACTION Example a) The recip. of $6 = \frac{6}{1}$ b) The recip. of $\frac{2}{3} = \frac{3}{2}$ c) The recip. of $\frac{5}{8} = \frac{8}{5}$ d) The recip. of $1\frac{1}{2} = \frac{2}{3}$	Class discussion	ii) Multiplication of fractions by fractions.	Chalkboard illustration	A NEW MK PRIMARY MTC BK 5 PAGE 133	
	4	NUMERACY	FRACTIONS	RECIPROCAL BY CALCULATION	Effective communication and problem solving	The learner: 1. States the underlying principle of when a fraction is multiplied by its reciprocal, the answer is always 1. 2. Works out the reciprocal of a fraction. 3. Solves related problems involving reciprocals	Reading and solving problems involving multiplication of fractions by whole numbers.	RECIPROCAL BY CALCULATION We should take note that a number multiplied by its reciprocal gives 1 Example What is the reciprocal of $\frac{3}{5}$? Let the recip. be y $\frac{3}{5} \times y = 1$ $\frac{3}{5} \times \frac{y}{1} = 1$ $\frac{3y}{5} = \frac{1}{1}$ $3y \times 1 = 5 \times 1$ $\frac{3y}{3} = \frac{5}{3}$ $y = \frac{5}{3}$ The reciprocal is $\frac{5}{3}$	Class discussion	Multiplication of fractions by fractions.	Chalkboard illustration	A NEW MK PRIMARY MTC BK 5 PAGE 133	

					Effective communication and problem solving	The learner: 1. Carries out division of fractions making necessary changes involving use of reciprocal. 2. Simplifies the fractions by canceling using the common factors.	Reading and solving problems involving division of fractions	<u>DIVISION OF FRACTIONS</u> Example I Divide: $\frac{1}{5} \div 4$ $= \frac{1}{5} \div \frac{4}{1}$ $= \frac{1}{5} \times \frac{1}{4}$ $= \frac{1 \times 1}{5 \times 4}$ $= \frac{1}{20}$	Class discussion	Division of fractions by whole numbers	Chalkboard illustration	A NEW MK PRIMARY MTC BK 5 PAGE 134 - 140	
11	5	NUMERACY	FRACTIONS	DIVISION OF FRACTIONS	Effective communication and problem solving	The learner: 1. Describes decimal places. 2. Converts fractions whose denominators are multiples of ten to decimal fractions. 3. Uses the number of zeros a denominator has to determine the number of decimal places. 4. Expresses mixed fractions as decimals by changing the mixed fraction to an improper fraction first.	Reading and solving problems involving division of fractions	<u>EXPRESSING FRACTIONS AS DECIMAL FRACTIONS</u> Example a) Write $\frac{25}{10}$ as a decimal fraction $\frac{25}{10} = \underline{2.5}$ (1 zero 1 dec. place) b) Write $\frac{25}{100}$ as a dec. fraction $\frac{25}{100} = \underline{0.25}$ (2 zeros, 2 dec. places)	Class discussion	Converting fractions to decimals	Chalkboard illustration	A NEW MK PRIMARY MTC BK 5 PAGE 141 - 142	
	1	NUMERACY	FRACTIONS	EXPRESSING FRACTIONS AS DECIMAL FRACTIONS	Effective communication and problem solving	The learner: 1. Uses the number of decimal places to determine the denominators. 2. Converts decimals to common fractions. 3. Reduces fractions where necessary.	Reading and solving problems involving division of fractions	<u>CHANGING DECIMALS TO FRACTIONS</u> Example Express 6.9 as a common fraction. $6.9 = \frac{69}{10}$. (1 dec. place gives 1 zero on the denominator). $= \frac{69}{10}$. Change to mixed. $= \underline{6\frac{9}{10}}$	Class discussion	Converting decimals to fractions and vice	Chalkboard illustration	A NEW MK PRIMARY MTC BK 5 PAGE 143	
	2	NUMERACY	FRACTIONS	CHANGING DECIMALS TO FRACTIONS	Effective communication and problem solving								

P.5 MTC SCHEMES OF WORK TERM THREE

WK	PD	THM	TPC	S/TP	L/SKL	COMPETENCES		CONTENT	METH	ACT	L/AID	REF	RE														
						SUBJECT	LANGUAGE																				
2	1 & 2	Graphs	Pictographs	TABLES	Critical thinking and problem solving	The leaner: 1. Represents and interpret the information on the pictograph. 2. Answers the questions about the pictograph.	The leaner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	PICTOGRAPH Information is represented in pictorial form. It always has a title and scale. Example: Study the pictograph below and answer the questions that follow. Number of pupils who scored different grades: (Refer to Pictograph in notes pg.1) a) How many sat for the test? b) How many are in excellent grade? Exc = 2 ½ @ star = 10 pupils 2 ½ = 5/ 2 x 10 ⁵ = 25 pupils.	Demonstration Discussion Observation	Drawing a pictograph Learners will do exercise A1 in the lesson notes.	Mk text books Real objects e.g. pens	New Mk Bk. 5 Page 214–217															
2	3 & 4	Graphs	Tables	TABLES	Critical thinking and Problem solving.	The leaner : Answers questions about the table.	The leaner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	READING AND INTERPRETING TABLES Example: A farmer recorded the number of pineapples he harvested each month as shown in the table below; <table border="1"><tr><th>Month</th><th>J</th><th>F</th><th>M</th><th>A</th><th>M</th><th>J</th></tr><tr><th>Ppls</th><td>420</td><td>360</td><td>330</td><td>380</td><td>400</td><td>480</td></tr></table> 1. Highest number of pineapples was harvested in June. 2. The lowest harvest was in June. 3. The difference between the highest and the lowest was; 480 – 330 = 150. d) The sum of all pineapples Harvested was 2370.	Month	J	F	M	A	M	J	Ppls	420	360	330	380	400	480	Discovery Discussion Observation	Learner's participation in class discussion Learners will do exercise A2 in the lesson notes	Chalkboard illustration	Mk 2000 (new) Bk. 5 Pg 218–219	
Month	J	F	M	A	M	J																					
Ppls	420	360	330	380	400	480																					

2	5 & 6	Graphs	Drawing tables	Tables	Critical thinking and problem solving.	The learner: 1. Draws tables and represent the information given 2. Solves problems related to the table.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	DRAWING AND INTERPRETING TABLES Example A farmer collected 20eggs on Monday, 25 on Tuesday, 15 on Wednesday, 30 on Thursday and 25 on Friday. Draw a table to represent the above information. <table border="1"><tr><td>Day</td><td>Mon.</td><td>Tue</td><td>Wed.</td><td>Thur.</td><td>Fri</td></tr><tr><td>Eggs</td><td>20</td><td>25</td><td>15</td><td>30</td><td>25</td></tr></table> Questions. On which day was the highest number of eggs collected?..... Etc.	Day	Mon.	Tue	Wed.	Thur.	Fri	Eggs	20	25	15	30	25	Discovery Discussion Observation	Learner's participation in class discussion Learners will do Exercise A3 in Lesson notes.	Chalkboard illustration	Mk 2000 (new) Bk. 5 Page220 – 221	
Day	Mon.	Tue	Wed.	Thur.	Fri																				
Eggs	20	25	15	30	25																				
2	7 & 8	Graphs	Bar graphs	Drawing bar graphs	Drawing and problem solving.	The learner: 1. Names the features of a bar graph. 2. Solves problems related to the bar graph.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	BAR GRAPH: Features of a bar graph Title Vertical axis Horizontal axis (Refer to the graph in notes pg.4) Interpretation of a bar graph Example: (Refer to the graph in notes pg.4) On which day were more eggs collected? etc	Discovery Guided discussion	Interpreting a bar graph by identifying features of a bar graph. Learners will do exercise A4	Chalkboard illustration. A chart showing a bar graph.	New Mk 2000 Bk. 5 Pg 221 – 223													

2	9 & 10	Graphs	Bar graphs	Drawing bar graphs	Drawing and problem solving	The learner: 1. Represents the information on the bar graph. 2. Draws a bar graph using a scale. 3. Solves problems related to the bar graph	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	DRAWING A BAR GRAPH FROM TABLES. <u>Example:</u> The table below shows types of food liked by pupils in a P.5 class. <table><tr><td>Ppls</td><td>10</td><td>15</td><td>5</td><td>20</td><td>25</td><td>10</td></tr><tr><td>Food</td><td>I</td><td>M</td><td>P</td><td>C</td><td>Mt</td><td>Y</td></tr></table> I – Irish, M – Millet, P – Potatoes, C – Cassava, Mt – Matooke, Y – Yams. <u>Graph</u> (Refer to the graph in notes pg.5) Which type of food do most pupils prefer? Which food is least liked by pupils?	Ppls	10	15	5	20	25	10	Food	I	M	P	C	Mt	Y	Class discussion	Drawing a bar graph Learners will do exercise A5 in the lesson notes	Chalkboard illustration	Mk 2000 (new) Bk. 5 Pg 224–226	
Ppls	10	15	5	20	25	10																					
Food	I	M	P	C	Mt	Y																					
3	1 & 2	Graphs	Bar graphs	Recording information from a bar graph to a table	Recording information and problem solving.	The learner : 1. Records the information from the bar graph to the table. 2. Solves problems related to the graph given.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	RECORDING INFORMATION FROM A BAR GRAPH TO A TABLE <u>Example</u> Study the graph below and answer the questions that follow (Refer to the graph and table in notes pg.6) What is the graph about? What is shown on the horizontal axis? What is the scale on the vertical axis	Discovery Discussion	Recording information from a bar graph to a table Learners will do exercise A6 in the lesson notes	Chalkboard illustration	Mk 2000 (new) Bk. 5 Pg 227 - 228															

	3 & 4	Graphs	Bar line graph	Drawing bar line graphs	Recording information and problem solving	The learner: 1. Interprets bar line graph. 2. Solves problems related to the bar graph.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	BAR LINE GRAPH Instead of bars, we can use lines to form bar line graphs. <u>Example</u> The graphs below show the age and weight of five pupils; A: Age of pupils Refer to the graph and table in notes pg.9) B: Weight of pupils; Refer to the graph and table in notes pg.9) A: Name the pupils with same age. How old is the youngest pupil? How old is Aisha? Who is 10 years old? Etc. B: How heavy is Ronald? Name the pupils with same weight. How much heavier is Hakim than Ronald? Etc.	Guided discussion Discovery	Interpreting bar line graphs given. Learners will do exercise A7 in the lesson notes	Chalkboard illustration Chart of a bar line graph	Mk 2000 (new) Bk. 5 Pg 229–230													
3	5 & 6	GRAPHS	Bar line graphs	Drawing bar line graph	Critical thinking and problem solving	The learner: 1. Draws bar line graphs using the information in the table. 2. Solves problems related to the bar graph.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	DRAWING BAR LINE GRAPHS USING INFORMATION IN TABLES <u>Example:</u> A driver recorded the amount of fuel he used through out the week <table><tr><th>Day</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th></tr><tr><th>Amount</th><td>10</td><td>20</td><td>25</td><td>15</td><td>5</td></tr></table> <u>Bar line graph</u> Refer to the graph in notes pg.11) Which day did he use least amount of fuel? etc	Day	M	T	W	T	F	Amount	10	20	25	15	5	Demonstration Guided discussion	Drawing bar line graphs Solving problems related to bar line graphs. Learners will do exercise A8 in the lesson notes	Chalkboard illustration	Mk 2000 (new) Bk. 5 Page 230	
Day	M	T	W	T	F																				
Amount	10	20	25	15	5																				

3	7 & 8	MEASURERS	TEMPERATURE	READING TEMPERATURE	Effective communication and problem solving	The learner: 1. Defines temperature. 2. Names the instruments used to measure temperature. 3. Names the units for measuring temperature. 4. Solves problems related to temperature by subtraction.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	MEASURING TEMPERATURE Definition of temperature; An instrument used to measure temperature Units used to measure temperature (°C and °F) Solving problems related to temperature by subtracting. <u>Example</u> The temperature of food at the time of serving was 95°C. After leaving it on the plate for 10 minutes, its temperature was 48°C What was the fall in temperature? Temp. at serving = 95°C After 10 minutes = 48°C Fall in temperature = 95°C – 48°C = 47°C	Discussion Observation	-Solving some numbers related to temperature. - Discussing work on page 233 of new Mk Bk. 5. -Learners will do exercise B1 in the lesson notes	Chalkboard illustration New Mk text books	Mk 2000 (new) Bk. 5 Pg 233–234	
3	9	Measures	Temperature	Reading maximum and minimum temperature.	Effective communication and problem solving.	The learner: 1. Reads the maximum and minimum temperature. 2. Solves problems related to maximum and minimum temperature.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	READING MAXIMUM AND MINIMUM TEMPERATURE <u>Example:</u> Study the maximum and minimum thermometer below; Refer to the thermometer in notes pg.13) Maximum Temp. = 40°C Minimum Temp. = -20°C Difference between max. & Min. temp. = 40°C – (-20°C) = 40 + 20 = 60°C	Discussion Oral questioning and answer.	-Drawing thermometers and reading temperature on them. -Learners will do exercise B2 in the lesson notes	Chalkboard illustration	New Mk 2000 Bk. 5 Pg 235 - 226	

3	10	Measures	TEMPERATURE	MAXIMUM AND MINIMUM TEMPERATURE	Critical thinking and problem solving	<p>The learner:</p> <p>1. Draws a bar graph to represent the maximum and minimum temperature.</p> <p>3. Interprets the temperature graph.</p> <p>4. Solves simple problems related to the temperature graphs.</p>	<p>The learner:</p> <p>1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation.</p> <p>2. Spells the vocabularies correctly.</p>	<p><u>DRAWING AND INTERPRETING A BAR GRAPH TO REPRESENT MAXIMUM AND MINIMUM TEMP.</u></p> <p><u>Example</u> Draw a bar graph to represent the maximum and minimum temp. below</p> <table><tr><td>Time</td><td>10pm</td><td>11pm</td><td>12midnight</td></tr><tr><td>Max.</td><td>5</td><td>10</td><td>10</td></tr><tr><td>Min.</td><td>10</td><td>20</td><td>15</td></tr></table> <p>Refer to the graph in notes pg.14)</p>	Time	10pm	11pm	12midnight	Max.	5	10	10	Min.	10	20	15	Guided discussion	-Drawing bar graphs from given rates of temperature. -Learners will do exercise B3 in the lesson notes.	Chart of an illustrated drawing of a bar graph .	Mk 2000 (new) Bk. 5 Page 236	
Time	10pm	11pm	12midnight																						
Max.	5	10	10																						
Min.	10	20	15																						
4	1 & 2	MEASURES	MONEY	BUYING AND SELLING (Profit)	Critical thinking and problem solving	<p>The learner:</p> <p>1. Applies formula for finding profit.</p> <p>2. Calculates profit for a given business transaction.</p>	<p>The learner:</p> <p>1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation.</p> <p>2. Spells the vocabularies correctly.</p>	<p><u>BUYING AND SELLING.</u></p> <p><u>PROFIT</u></p> <p>PROFIT = Selling price – Buying Price Or</p> <p>P = SP – CP (BP)</p> <p><u>Example</u> John bought a bucket for 2000/= and sold it at 2,400/=. Find his profit.</p> <p>Cost price = 2,000/=</p> <p>Selling price = 2,400/=</p> <p>Profit = SP – CP = 2,400 – 2,000 = 400/=</p> <p>Profit = 400/=</p>	Guided discussion Use of examples	Learners will do exercise B4 in the lesson notes	Coins of 500, 200, 100, 50.	Mk 2000 (new) Bk. 5 Page 245													

4	3 & 4	MEASURES	MONEY	BUYING AND SELLING (LOSS)	Critical thinking and problem solving	The learner: 1. Applies the formula of finding loss. 2. Calculates loss in a given transaction.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	LOSS Loss = Cost price – Selling Price Or = CP – SP <u>Example</u> The cost of a radio is sh. 100,000. If it is sold at sh 80,000, Find the loss made? Loss = cost price – selling price = PC – SP = 100,000 – 80,000 = 20,000 Loss = sh. 20,000.	Guided discussion	Tr./ Pupils participation in the lesson. Learners will do exercise B5 in the lesson notes	Chalk board illustration	Mk 2000 (new) Bk. 5 Page 245	
4	5 & 6	MESURES	MONEY	FINDING COST PRICE	Critical thinking and problem solving.	The learner: 1. Applies the formula for finding the cost price when profit and selling price are given. 2. Calculates cost price in a given business transaction.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	FINDING COST PRICE WHEN PROFIT AND SP ARE GIVEN <u>Example</u> Kitanda sold a cow at sh. 225,000 and made a profit of sh. 35,000. What was his cost price? Cost price = SP – Profit = 225,000 – 35,000 = 190,000 <u>Cost price = sh. 190,000</u>	Guided discussion	Learners will do exercise B6 & B7 in the lesson notes	Chalk board illustration	Mk 2000 (new) Bk. 5 Page 246	
4	7 & 8	MESURES	MONEY	FINDING SELLING PRICE WHEN PROFIT OR LOSS IS GIVEN	Critical thinking and problem solving.	The learner: 1. Applies the formula of finding selling price when profit and loss are given. 2. Calculates selling price in a given business transaction.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	SELLING PRICE WHEN PROFIT/LOSS IS GIVEN. <u>Example</u> A trader bought a shirt at sh. 7,500. She sold it and made a profit of sh. 3,500. What was her selling price? SP = Buying price + Profit = 7,500 + 3,500 = 11,000 <u>She sold it at sh. 11,000</u>	Guided discussion	Learners will do exercise B8 & B9 in the lesson notes	Chalk board illustration	Mk 2000 (new) Bk. 5 Page 247	

4	9	MEASURES	SIMPLE RATES	SIMPLE RATE I	Critical thinking and problem solving.	The learner: Finds the simple rates and proportions in a given business transaction.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	<u>SIMPLE RATES I</u> <u>Example</u> A book costs sh.500. What is the cost of 3 similar books? 1 book = sh500 3books= (3 x 500) Sh. = sh. 1,500 3 books = sh. 1,500	Discussion Demonstration of shopping.	Learner/Tr. participation in the lesson. Learners will do exercise B10 in the lesson notes	Chalk board illustration	New Mktc pg 238	
4	10	MEASURES	SIMPLE RATES	SIMPLE RATE II.	Critical thinking and problem solving.	The learner: Finds the simple rates and proportions in a given business transaction.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation.	<u>SIMPLE RATES II</u> <u>Example</u> 6 Pens cost sh. 900, What is the cost of 1 pen? 6 pens = sh. 900 1 pen = $\frac{900}{6}$ = sh. 150 <u>1 pen = Sh 150</u>	Discussion Demonstration of shopping.	Learner/Tr. participation in the lesson. Learners will do exercise B11 in the lesson notes	Chalk board illustration	New Mktc pg 238	
5	1 & 2	MEASURES	SIMPLE RATES	SIMPLE RATES III	Critical thing and problem solving.	The learner: Finds the simple rates and problem solving in a given business transaction.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation.	<u>SIMPLE RATES III</u> <u>Example</u> 5 books cost sh. 1000. Find the cost of 12 similar books. 5 books = 1,000 1 book = $\frac{1,000}{5}$ = 200 12 bk. = 12 x 200 = <u>2,400</u>	Discussion Demonstration of shopping.	Learner/Tr. participation in the lesson. Learners will do exercise B12 in the lesson notes	Chalk board illustration	New Mktc pg 238	

5	3 & 4	MEASURES	BILLS	SHOPPING BILLS	Critical thinking and problem solving	The learner: 1. Draws a bill table to represent the transaction. 2. Uses appropriate working methods to complete the bill table.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	<u>SHOPPING BILLS (TABLES)</u> Example Brenda bought the following items from a shop; 2 loaves of bread at sh 600 @ 4 sodas for sh. 500 @ 2 kg of sugar at sh. 1,000 @ A bag of maize flour at sh. 9,000 a) What was his expenditure? <table><tr><th>ITEM</th><th>QTY</th><th>M'THD</th><th>AMNT</th></tr><tr><td>Bread</td><td>2</td><td>2 x 600</td><td>1,200</td></tr><tr><td>Soda</td><td>4</td><td>4 x 500</td><td>2,000</td></tr><tr><td>Sugar</td><td>2</td><td>2 x 1000</td><td>2,000</td></tr><tr><td>Flour</td><td>1bg</td><td>1 x 9,000</td><td>9,000</td></tr><tr><td>Total</td><td></td><td></td><td>14,200</td></tr></table> b) If she went with sh. 15,000, how much did she remain with as her balance? Balance = 15,000 -14,200 <u>800</u>	ITEM	QTY	M'THD	AMNT	Bread	2	2 x 600	1,200	Soda	4	4 x 500	2,000	Sugar	2	2 x 1000	2,000	Flour	1bg	1 x 9,000	9,000	Total			14,200	Discussion Discovery	Drawing and completing bill tables Learners will do exercise B14 in the lesson notes	Chalk board illustration.	New Mk Mtc pg 243
ITEM	QTY	M'THD	AMNT																																	
Bread	2	2 x 600	1,200																																	
Soda	4	4 x 500	2,000																																	
Sugar	2	2 x 1000	2,000																																	
Flour	1bg	1 x 9,000	9,000																																	
Total			14,200																																	
5	5 & 6	MEASURES	TRANSPORT CHARGES (BILLS)	WORD PROBLEMS	Critical thinking and problem solving	The learner: Computes transport charges in relation to daily real life situation.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	<u>TRANSPORT CHARGES (WORD)</u> Example I A Taxi driver charges sh. 2,000 for trip from Kampala to Jinja per person. How much will 7 people pay? 1 person = 2,000/= 7 people = 7 x 2,000 = <u>14,000/=</u> Example II Kagoda travelled from Kampala to Jinja and then back to Kampala. How much will he pay if the return fare is sh. 2,000? Going = 2,000 Back = 2,000 Total = 4,000 He will use sh. <u>4,000</u>	Guided discussion	Tr./learner Participation in lesson -Learners will do exercise B 15 in the lesson notes	Chalk board illustration.	New Mk Mtc pg 243																								

5	7 & 8	MEASURES	BILLS	TRANSPORT CHARGES (TABLES)	Problem solving.	The learner: 1. Interprets transport charges using a table. 2. Solves problems related to the table.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	TRANSPORT CHARGES (TABLE) <u>Example</u> The table below shows transport charges by bus between different towns in Uganda. Use it to answer the questions that follow: <table><tr><th>TOWN</th><th>CHARGES</th></tr><tr><td>KAMPALA – KASESE</td><td>3,500</td></tr><tr><td>KASESE – TORORO</td><td>5,500</td></tr><tr><td>KAMPALA – LUGAZI</td><td>1,500</td></tr><tr><td>MUTUKULA – K'LA</td><td>3,000</td></tr></table> a) How much will 3 people pay from Kampala to Kasese? 1person = 3,500 3people = 3 x 3,500 = 10,500 <u>3 People will pay sh. 10,500</u>	TOWN	CHARGES	KAMPALA – KASESE	3,500	KASESE – TORORO	5,500	KAMPALA – LUGAZI	1,500	MUTUKULA – K'LA	3,000	Discovery Discussion	-Learners participation in lesson	Chalk board illustration.	Mk (new) Bk. 5 pg. 243.	
TOWN	CHARGES																						
KAMPALA – KASESE	3,500																						
KASESE – TORORO	5,500																						
KAMPALA – LUGAZI	1,500																						
MUTUKULA – K'LA	3,000																						
5	9 & 10	MEASURES	BILLS	TRANSPORT CHARGES (GRAPHS)	Problem solving	The learner: 1. Interprets the cost charges from the graph in relation to the distance. 2. Solves problems in relation to the cost and distance on the graph.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	TRANSPORT CHARGES (GRAPH) <u>Example</u> The Graph below shows bus transport charges along Mukono – Kampala road: <u>(Refer to the graph in the lesson notes pg 27)</u> a) How much will one pay for a distance of 15Km? b) What distance will require me to pay sh. 400? c) What is the difference in the cost of a journey of 15Km and 5Km?	Discovery Discussion	Interpreting a transport graph Learners will do exercise B16 in the lesson notes	Chalk board illustration	Mk (new) Bk. 5 pg. 244											

6	1 & 2	MEASURES	TIME	UNITS OF TIME	Critical thinking and problem solving.	The learner: 1. Mentions the units of time. 2. Converts hours to minutes. Converts minutes to hours.	The learner: The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	UNITS OF TIME 1 Hour - 60 minutes 1 Minute - 60 seconds 1 Hour - 3,600 seconds <u>Converting from one unit to another.</u> <u>Example I</u> Convert 2 hours to minutes 1 hour = 60 minutes 2 hours = 2 x 60 = 120 <u>2 Hours = 120 minutes</u> <u>Example II</u> Convert 240 minutes to hours 1 minute = 1/60 hours 240 minutes = 1/60 x 240 = 4 240 minutes = 4 hours.	Discussion	Learner/ Tr. Participation in the lesson. Learners will do exercise B 17 in the lesson notes	Chalk board illustration.	•(old) Mk 2000 Pupils Bk.5 pg. 226 – 7. •(new) Pupils Bk5 pg. 250 –3; •(new) Understanding	
6	3 & 4	MEASURES	TIME	TELLING TIME USING AM AND PM	Critical thinking and problem solving.	The learner: 1. Tells time using Am and PM. 2. Reads time using quarter past or to. 3. Draws a clock face showing time.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	TELLING TIME USING AM. AND PM <u>Example</u> <u>(Refer to clock faces on page 40 of the lesson notes)</u> It is 2 O'clock in the morning or 2.00 am. <u>Telling time using ½, ¼, “Past” or “To”</u>	Guided discussion	Reading time from a clock face Learners will do exercise B18 in the lesson notes	Clock face Chalk board illustration	Mk MTh (new) Bk. 5 pg. 250 – 3 (old) 226-7.	
6	5	MEASURES	TIME	ADDITION OF TIME	Problem solving	The learner: Adds time using finite system.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	ADDITION OF TIME <u>Example</u> Workout: Hours Min 10 50 + 2 30 <u>13 20</u> { $\frac{80}{60}$ = 1 r 20 } = <u>13 Hours 20 Minutes.</u>	Guided discussion	Tr./ Learner participation in the discussion Learners will do exercise B19 in the lesson notes	Chalk board illustration	Understanding MTh Pupils Bk. 5 Pg. 228-240	

6	6	MEASURES	TIME	SUBTRACTION ON TIME	Problem solving	The learner: 1. Subtracts time. 2. Regroups correctly in finite system when borrowing.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	SUBTRACTION OF TIME <u>Example</u> <div style="margin-left: 40px;"> Hrs. M 9 40 30+60 2 45 7 45 (90-45=45) </div> <u>7 Hours 45Minutes</u>	Guided discussion	Learners' participation in discussion Learners will do exercise B20 in the lesson notes	Chalk board illustration	Understanding MTh Pupils Bk. 5 Pg 240	
6	7	MEASURES	TIME	FINDING DURATION INVOLVING AM AND PM; PM AND AM.	Critical thinking and problem solving	The learner: 1. Finds the duration involving AM and PM. 2. Solves problems of duration by subtraction.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	FINDING DURATION INVOLVING "AM" AND "AM"; "PM" AND "PM" <u>Example</u> Luyiga started walking from her home at 7.15 am and reached the town at 9.15 am. How long did it take her? <div style="margin-left: 40px;"> <div style="display: flex; justify-content: space-between; width: 100%;"> Hours Minutes </div> Reached 9 : 15 am Stared - 7 : 05 am 2 : 10 <u>It took her 2Hours 10 Minutes</u> </div>	Guided discussion	Finding the duration by subtracting Learners will do exercise B21 in the lesson notes	Chalk board illustration	(New) Mk Bk. 5 pg. 252	

6	8	MEASURES	TIME	FINDING DURATION INVOLVING AM AND PM .	Problem solving.	The learner: 1. Finds duration of activities involved the Am and PM. 2. Subtracts and add to find time duration.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	FINDING DURATION INVOLVING “AM AND “PM” Example The bus started its journey to Mbale at 9 : 00 am and reached its destination at 1 : 30 p.m. How long did the journey take? Subtract 12 : 00 noon - 9 : 00 am 3 Hours Next add 3 Hours 00min + 1 Hour 30 min 4 Hours 30 min	Guided discussion	Finding the duration involving am /p.m. Learners will do exercise B22 in the lesson notes	Chalk board illustration	(New Mk) Bk. 5 page 252	
6	9 & 10	MEASURES	TIME	TIME TABLE	Problem solving	The learner: 1. Interprets the distance on the timetable. 2. Solves problems related to the timetable. 3. Comprehends the distance timetable and solve the given problems.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	TIME TABLES Example The table below is a distance timetable for a bus travelling from Masindi to Kitgum. Use it to answer questions that follow. (Refer to table on page 35 of the lesson notes) a) At what time did the bus reach Kamudni? b) What time did the bus leave Lira?	Guided discussion Discovery	Drawing and interpreting tables Learners will do exercise B23 in the lesson notes	Chalk board illustration	(new) Mk Bk. 5 pg. 253	
7	1 & 2	MEASURES	TIME	12 HOUR CLOCK SYSTEM UNITS	Critical thinking. and problem	The learner: 1. Reads time in the 12-hour clock system. 2. Uses pm and am correctly.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	12 Hour clock system Units <ul style="list-style-type: none"> • Morning am (anti meridian) • Afternoon p.m. (Post meridian) • The use of “to” and “past” • A new day begins at midnight • A day has 24 hours 	Guided discussion	Reading time in 12 hour time. Learners will do exercise B24 in the lesson notes	Chalk board illustration Clock face	Understanding MTh Pupils Bk. 5 Pg 250	

7	3 & 4	MEASURES	TIME	24 HOUR CLOCK	Critical thinking and problem solving	The learner: 1. Reads time in the 24-hour system. 2. Uses hours correctly.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	<table><tr><th colspan="2">24 Hour Clock</th></tr><tr><th colspan="2">i) Units used “Hours”</th></tr><tr><th>12 Hr Clock</th><th>24 Hr Clock</th></tr><tr><td>12:00am (midnight)</td><td>0000Hrs</td></tr><tr><td>1:00 am</td><td>0100 Hrs</td></tr><tr><td>2:00 am</td><td>0200 Hrs</td></tr><tr><td>3:00 am</td><td>0300 Hrs</td></tr><tr><td>4:00 am</td><td>0400 Hrs</td></tr><tr><td>5:00 am</td><td>0500 Hrs</td></tr><tr><td>6:00 am</td><td>0600 Hrs</td></tr><tr><td>7:00 am</td><td>0700 Hrs</td></tr><tr><td>8:00 am</td><td>0800 Hrs</td></tr><tr><td>9:00 am</td><td>0900 Hrs</td></tr><tr><td>10:00 am</td><td>1000 Hrs</td></tr><tr><td>11:00 am</td><td>1100 Hrs</td></tr><tr><td>12:00 p.m. (mid day)</td><td>1200 Hrs</td></tr><tr><td>1:00 p.m.</td><td>1300 Hrs etc.</td></tr></table>	24 Hour Clock		i) Units used “Hours”		12 Hr Clock	24 Hr Clock	12:00am (midnight)	0000Hrs	1:00 am	0100 Hrs	2:00 am	0200 Hrs	3:00 am	0300 Hrs	4:00 am	0400 Hrs	5:00 am	0500 Hrs	6:00 am	0600 Hrs	7:00 am	0700 Hrs	8:00 am	0800 Hrs	9:00 am	0900 Hrs	10:00 am	1000 Hrs	11:00 am	1100 Hrs	12:00 p.m. (mid day)	1200 Hrs	1:00 p.m.	1300 Hrs etc.	Guided discussion	Learners participation in lesson	Chalk board illustration Clock face	Understanding MTh Pupils Bk. 5 Pg 250-1	
24 Hour Clock																																															
i) Units used “Hours”																																															
12 Hr Clock	24 Hr Clock																																														
12:00am (midnight)	0000Hrs																																														
1:00 am	0100 Hrs																																														
2:00 am	0200 Hrs																																														
3:00 am	0300 Hrs																																														
4:00 am	0400 Hrs																																														
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9:00 am	0900 Hrs																																														
10:00 am	1000 Hrs																																														
11:00 am	1100 Hrs																																														
12:00 p.m. (mid day)	1200 Hrs																																														
1:00 p.m.	1300 Hrs etc.																																														
7	5	MEASURES	TIME	12 HOUR CLOCK TO 24 HOUR CLOCK TIME	Problem solving	The learner: 1. Converts 12-hour clock time to 24-hour clock time. 2. Writes 24-hour clock time using hours without using points.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	CONVERTING 12 HR TIME TO 24 HR TIME Example What is 1.00pm in 24hour time? 1.00 +12.00 <u>1300 hours</u> <u>So 1.00pm = 1300hours</u>	Guided discussion Observation.	Learners participation in lesson Learners will do exercise B25 in the lesson notes	Chalk board illustration Clock face	Understanding MTh Pupils Bk. 5 Pg 182																																			

7	6	MEASURES	TIME	24 HOUR CLOCK TO 12 HOUR CLOCK TIME	Problem solving	The leaner: 1. Converts 24 hours to 12 hours. 2. Writes 12 hours in am or pm.	The leaner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	CONVERTING 12 HR TIME TO 24 HR TIME Example Change 1545hours to 12 hour time 15.45 -12.00 <u>3.45pm</u> <u>So 1545hours = 3.45pm.</u>	Guided discussion Observation.	Learners participation in lesson Learners will do exercise B26 in the lesson notes	Chalk board illustration Clock face	Understanding MTh Pupils Bk. 5 Pg 183	
7	7 & 8	MEASURES	RATES OF CHARGES	DISTANCE TIME AND SPEED	Problem solving	The leaner: 1. Finds the distance. 2. Calculates the speed.	The leaner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	<u>DISTANCE, TIME AND SPEED</u> <u>DISTANCE:</u> Distance = Speed x Time Example: Find the distance covered by a driver for 2 hours at a speed of 60 km/hr Distance = Speed x Time = 60km/hr x 2 hrs = 60 km x 2 = 120km He covered 120 km.	Guided discussion	Learner / Tr. participation in the lesson. Learners will do exercise B27 in the lesson notes Learners will do exercise B28 in the lesson notes	Chalk board illustration	(new) Mk Bk. 5 Pg. 254 – 258	

7	9	MEASURES	SPEED	SPEED AND SPEED	Problem solving.	The learner: 1. Finds the distance. 2. Calculates the speed.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	SPEED Speed = $\frac{\text{Distance}}{\text{Time}}$ Example: At what speed does a cyclist travel if he completes a distance of 150km in 3 hrs? Speed = $\frac{\text{Distance}}{\text{Time}}$ $\frac{150\text{km}}{3\text{hrs}}$ $= 50\text{km/hr}$	Guided discussion	Learner / Tr. participation in the lesson. Learners will do exercise B27 in the lesson notes	Chalk board illustration	(new) Mk Bk. 5 Pg. 254 – 258	
7	10	MEASURES	TIME	TIME	Critical thinking and problem solving	The learner: Calculates the time taken by a moving object to cover a given distance..	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	TIME Time = $\frac{\text{Distance}}{\text{Speed}}$ Example: Calculate the time taken by a car travelling at 60km/hr to cover a journey of 480 km. Time = $\frac{\text{Distance}}{\text{Speed}}$ $\frac{480\text{ km}}{60\text{km/hr}}$ $= 8$ $= 8\text{hr}$ $= 8\text{hrs}$	Guided discussion	Learner / Tr. participation in the lesson. Learners will do exercise B29 in the lesson notes	Chalk board illustration	(new) Mk Bk. 5 Pg. 254 – 258	
8	1	MEASURES	CAPACITY	MEASURES IN LITERS AND MILLILITRES	Critical thinking and problem solving.	The learner: 1. Uses ml or cc as the same units for measuring liquids. 2. Compares cc to ml.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	MEASURING IN LITRES AND MILLILITRES. ii) Comparing soda bottles 300ml 300cc 500ml 500cc iii) Comparing milk packets 1litre and 1000 ml (Refer to diagrams in the lesson notes Pg.55)	Guided discussion	Learner / Tr. participation in the lesson. Comparing cc to ml Learners will do exercise B30 in the lesson notes	Chalk board illustration Empty soda bottles tins bottles.	(New) Mk 5 pg. 260-new) Mk Bk. 5 pg. 259 –64.3	

8	2 & 3	MEASURES	CAPACITY	CHANGING LITRES TO ML	Critical thinking and problem solving.	The learner: 1. Changes litres to ml. 2. Converts litres to ml with fractions or decimals.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	<u>CHANGING LITRES TO ML.</u> <u>Example</u> Change 7 litres to ml 1litre = 1000ml 7litres = 7 x 1000 = <u>7000 ml</u>	Guided class discussion	Learner / Tr. Participation in class -Learners will do exercise B31 in the lesson	Chalk board illustration	(New) Mk 5 pg. 263	
8	4 & 5	MEASURES.	CAPACITY	ML TO LITRES	Critical thinking and problem solving.	The learner: 1. Expresses ml to litres. 2. Reduces fractions by cancelling then with the LDC.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	<u>EXPRESSING MILLILITRES AS LITRES</u> <u>Example</u> Change 4200 ml to litres 1000ml = 1Litre 1ml = $\frac{1}{1000}$ litre 4200ml = $\frac{1}{1000} \times 4200$ = $\frac{42}{100}$ litres = <u>4.2 litres</u>	Guided discussion	Learners participation in lesson -Learners will do exercise B32 in the lesson	Chalk board illustration.	(New) Mk 5 pg. 263	

8	6, 7 & 8	MEASURES	CAPACITY	COMPARING METRIC UNITS	Critical thinking and problem solving.	The learner: 1. States the meaning of the given metric names. 2. Names the basic units for weight, length and capacity. 3. Recites the standard ordering of given measures. 4. Compares units with standard units.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	COMPARING METRIC UNITS Meaning of metric names <ul style="list-style-type: none"> Place value b) Meaning Kilo 1000m Hecto 100m Deca 10m Deci $\frac{1}{10}$m Centi $\frac{1}{100}$m milli $\frac{1}{1000}$m <p>Basic measure units for:</p> <ul style="list-style-type: none"> Weight – Gram Length – Metre Capacity – Litres <p><u>Ordering Weight, length, capacity</u></p> <p>Km Hm Dm M dm Cm Mm</p> <p>Kg Hg Dg G dg Cg Mg</p> <p>Kl Hl Dl L dl Cl Ml</p> <p>Comparing Units with standard units</p> <p>1Km – 1000m 1Kg – 1000g</p> <p>1Hm – 100m 1Hg – 100g</p> <p>1Dm – 10m 1Dg – 10g</p> <p>1M - 1m 1G – 1g</p> <p>1dm - 0.1m 1dg – 0.1g</p> <p>1Cm - 0.01 1Cg – 0.01g</p> <p>1Mm - 0.001 1Mg – 0.001g</p> <p>1Kltr - 1000ltr</p> <p>1Hltr - 100ltr</p> <p>1Dltr - 10ltr</p> <p>1ltr - 1ltr</p> <p>1dltr - 0.1ltr</p> <p>1Cltr - 0.01ltr</p> <p>1Mltr - 0.001ltr</p>	Guided discussion Discovery	Comparing metric units -Learners will do exercise B33 in the lesson	Chalk board illustration	(new) Mk Bk. 5 pg. 261	
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8	9 & 10	MEASURES	MASS	CHANGING KG TO GMS	Critical thinking and problem solving.	The learner: 1. Converts KG to grams. 2. Performs calculations involving fractions.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	CHANGING KG TO GMS <u>Example</u> Express 5kg to grams $1\text{kg} = 1000\text{gm}$ $5\text{kg} = 5 \times 1000\text{gms}$ <u>= 5000gms</u>	Guided discussion	Learner/Teacher participation in the lesson. -Learners will do exercise B34 in the lesson	Chalk board illustration	(new) Mk bk. 5 pg. 262	
9	1	MEASURES	MASS	GMS TO KMS	Problem solving.	The learner: 1. Expresses grams to Kg. 2. Expresses grams to Kg using fractions.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	EXPRESSING GRAMS TO KG <u>Example</u> Express 4000g in Kg $1000\text{g} = 1\text{kg}$ $1\text{g} = \frac{1}{1000}\text{kg}$ $4000\text{g} = \frac{1}{1000} \times 4000$ <u>4000 g = 4kg</u>	Guided class discussion	Learners participation in class -Learners will do exercise B35 in the lesson	Chalk board illustration	(New) Mk Bk. 5 Pg. 262	
9	2 3	GEOMETRY	LINES	LINES	Critical and creative thinking	The learner: 1. Defines a line. 2. Defines a line segment. 3. Names the types of lines. 4. Draws each type. 5. Identify the types of lines.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	<u>LINES</u> 5. Definition of a line. 6. Definition of a line segment. 7. Naming the types of lines. 8. Describing each type of line. 9. Drawing each type of line. 10. Identifying the types of lines.	Guided discussion	Learners' participation in the lesson.	M, Chalkboard illustration Desks Walls	A new Mk Math page 175-176	

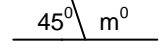
9	4	GEOMETRY	LINES	INTERSECTING LINES	Problem solving.	The learner: <ol style="list-style-type: none"> 1. Defines intersecting lines. 2. Forms intersecting lines. 3. Identifies points of intersection of a given line . 4. Names the points of intersection. 	The learner: <ol style="list-style-type: none"> 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly. 	<u>INTERSECTING LINES</u> <ol style="list-style-type: none"> 5. Definition of intersecting lines. 6. Forming intersecting lines using straight objects. 7. Identifying points of intersection. 8. Naming the points of intersection. 	Guided discussion .	Drawing intersecting lines. Learners will do Exercise C1	Pencils, Rubber Bands, Chalk board illustration	A new Mk Math page 179	
9	5	GEOMETRY	LINES	PARALLEL LINES.	Critical thinking and problem solving.	The learner: <ol style="list-style-type: none"> 1. Defines a parallel line. 2. Draws the symbol for parallel lines. 3. Draws parallel lines. 4. Identifies parallel lines from a set of a given lines. 	The learner: <ol style="list-style-type: none"> 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly. 	<u>PARALLEL LINES</u> <ul style="list-style-type: none"> • Definition of parallel lines. • The symbol for parallel lines. • Drawing parallel lines. • Identifying parallel lines. 	-Guided discussion . observation	Drawing parallel lines. Identifying parallel lines from immediate surroundings.	Objects in and out of the classrooms eg desks ,	A new Mk Math page 175-176	
9	6 & 7	GEOMETRY	LINES	PERPENDICULAR LINES.	Critical thinking and problem solving	The learner: <ol style="list-style-type: none"> 3. Describe perpendicular lines. 4. Draw a symbol for perpendicular lines. 5. Name some shapes with perpendicular lines. 	The learner: <ol style="list-style-type: none"> 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly. 	<u>PERPENDICULAR LINES</u> <ol style="list-style-type: none"> 1) Description of perpendicular lines. 2) The symbol for perpendicular lines. 3) Identifying perpendicular lines. 4) Identifying perpendicular lines. 5) Naming some shapes with perpendicular lines. 	-Guided discussion . - observation	Learners will do Exercise C 3	Objects in and out of the classrooms eg desks , walls, books , sets, rulers, etc.	A new Mk Math page 180-185	

9	8 & 9	GEOMETRY	LINES	LINES OF SYMETRY	Critical thinking and problem solving.	The leaner: <ol style="list-style-type: none"> 1. Defines folding lines of symmetry. 2. Identifies symmetric and non-symmetric shapes. 3. Uses the given shapes to find out the number of folding symmetry. 	The leaner: <ol style="list-style-type: none"> 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly. 	<u>LINES OF SYMETRY</u> <ol style="list-style-type: none"> 4. Definition of line of symmetry. 5. Meaning of symmetric and non-symmetric figures. 6. Figures and lines of symmetry. 7. The number of folding symmetry in different shapes. 	-Practical lesson - Discussion	Learners will do Exercise C4	Pairs of scissors, sheets of rectangular paper.	A new Mk Math page 184-185	
9	10	GEOMETRY	LINES	CIRCLES	Problem solving.	The leaner: <ol style="list-style-type: none"> 1. Defines a circle. 2. Names parts of the circle. 3. Identifies the types of a circle. 	The leaner: <ol style="list-style-type: none"> 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly. 	<u>A CIRCLE</u> <ol style="list-style-type: none"> 3. Definition of a circle. 4. Naming parts of a circle. 5. Identifying the parts of a circle. 	-Guided discussion	Learners will write some information about the Circle in their notes.	Chalk board illustration	A new Mk Math page 186	
10	1 & 2	GEOMETRY	FINDING RADIUS WHEN DIMETER IS GIVEN	RADIUS WHEN DIAMETER IS GIVEN.	Critical thinking and problem solving.	The leaner: <ol style="list-style-type: none"> 1. Defines radius. 2. Identifies radius on a circle. 3. Calculates the radius of a circle when diameter is given. 	The leaner: <ol style="list-style-type: none"> 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly. 	<u>FINDING RADIUS WHEN DIAMETER IS GIVEN</u> Definition of radius. <u>Example</u> Calculating the radius of a circle when diameter given is 8cm. $\text{Radius} = \frac{\text{Diameter}}{2}$ $= \frac{8\text{cm}}{2}$ $\text{Radius} = 4\text{cm}$	-Guided discussion - observation	Learners will do Exercise C5	Chalk board illustration	Understanding mtc pg 184	

10	3	GEOMETRY	FIND DIAMETER WHEN RADIUS IS GIVEN		Problem solving.	The learner: 1. States the relationship between the radius and the diameter. 2. Calculates the radius of a circle when diameter is given. 3. Applies the right units for the answer.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	FINDING DIAMETER WHEN RADIUS IS GIVEN 3. Definition of diameter. 4. Identifying diameter from a circle. 5. The relationship between the diameter and the radius. <u>Example</u> Calculating the diameter of a circle when radius given is 13cm. Diameter = $2r$ $= 2 \times r$ $= 2 \times 13\text{cm}$ <u>Diameter = 26cm</u>	-Guided discussion - observation	Learners will do Exercise C6	Chalk board illustration	Understanding mtc pg 185	
10	4 & 5	GEOMETRY	CIRCLES	CONSTRUCTING CIRCLES	Drawing	The learner: 1. Constructs a circle when radius is given. 2. Constructs a circle when diameter is given.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	CONSTRUCTING A CIRCLE 6. Constructing a circle when radius is given. 7. Constructing a circle when diameter is given.	Demonstration Observation	Learners will do Exercise C7& C8	- ruler - pair of compasses chalk board illustration	A new Mk Math page 186	
10	6	GEOMETRY	EQUILATERALS	CONSTRUCTING EQUILATERALS	Drawing	The learner: 1. Constructs an equilateral triangle using a ruler and a pair of compasses. 2. Constructs an equilateral triangle in a circle.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	CONSTRUCTING EQUILATERAL TRIANGLE 4. Constructing equilateral triangles using a ruler and pair of compasses only. 5. Constructing an equilateral triangle in a circle.	Demonstration Observation	Learners will do Exercise C9 & C10	- ruler - pair of compasses - chalk board illustration	A new Mk Math page 186-189	

10	7 & 8	GEOMETRY	HEXAGON	A REGULAR HEXAGON	Critical thinking and problem solving	The learner: 1. Constructs a regular hexagon in a circle. 2. Carries out accurate measurement.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	A REGULAR HEXAGON IN A CIRCLE Constructing a regular hexagon in a circle	Demonstration Observation	Learners will do Exercise C11	- ruler - pair of compasses chalk board illustration	A new Mk Math page 188	
10	9	GEOMETRY	ANGLES	TYPES OF ANGLES	Critical thinking and problem solving.	The learner: 1. Defines an angle. 2. Describes the relation and revolution. 3. Relates angles made to each turn.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	ANGLES. 3. Definition of an angle. 4. Description of a rotation and revolution. 5. Demonstration of rotation and revolution.	Demonstration Observation	Learners will do Exercise C12	Chalk board illustration. Body movements	A new Mk Math page 189-190	
10	10	GEOMETRY	COMPASS	DIRECTION	Critical thinking and problem solving.	The learner: 1. Names parts of a compass. 2. Estimate angles between two given directions. 3. Establishes small and big angles between two given directions.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	COMPASS DIRECTION 3. Naming parts of a compass. 4. Estimating angles between two given directions. 5. Establishing smaller and bigger angles between two given directions.	Demonstration Observation	Learners will do Exercise C13	-Chart showing compass direction.	A new Mk Math page 191-192	

11	1	GEOMETRY	COMPASS DIRECTION	TURNS	Critical thinking and problem solving.	The learner: 1. Finds angles made on a compass direction on making a turn. 2. Finds direction made on a compass from an angle of turn.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	<u>CLOCKWISE AND ANTICLOCKWISE TURNS</u> 1. Finding angles made on a compass direction on making a turn. 2. Finding directions made on a compass direction from an angle of turn.	Demonstration Observation	Learners will do Exercise C14	Chalk board illustration. Body movements	A new Mk Math page 192	
11	2	GEOMETRY	ANGLES	TYPES OF ANGLES	Problem solving.	The learner: 1. Names types of angles. 2. Describes each type of angles. 3. Draw each type of angles.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	<u>TYPES OF ANGLES</u> 4. Naming types of angles. 5. Describing each type of angle. 6. Drawing each type of angle. 7. Identifying each type of angle.	Demonstration Observation	Learners will do Exercise C15	Chalk board illustration	A new Mk Math page 193	
11	3	GEOMETRY	ANGLES	MEASURING ANGLES USING A SCALE	Problem solving.	The learner: 1. Names the two types of scales. 2. States when each scale is used.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	<u>MEASURING ANGLES USING A PROTRACTOR.</u> 4. The inner and outer scale of a protractor. 5. When the outer scale is used. 6. When the inner scale is used. 7. Using a protractor to measure given angles.	- Discussion - Observation	Learners will do Exercise C16	- Protractor - Pencil	A new Mk Math page 194-196	

11	4	GEOMETRY	ANGLES	CONSTRUCTING ANGLES	Problem solving	The learner: 1. Constructs angles using a protractor. 2. Labels and name the constructed angles.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	CONSTRUCTING ANGLES. Constructing angles using a protractor.	Discussion - Observation	Learners will do Exercise C17	- Protractor - Ruler - Pencil	A new Mk Math page 197	
11	5	GEOMETRY	ANGLES	MEASURING ANGLES	Problem solving.	The learner: 1. Measures angles on a straight line using a protractor. 2. Uses inner and outer scale of a protractor to measure angles on both sides of a straight line	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	MEASURING ANGLES 5. Measuring angles on a straight line using a protractor. 6. Use of the inner and outer scales.	- Discussion - Observation	Learners will do Exercise C18	Protractor	A new Mk Math page 198	
11	6	GEOMETRY	ANGLES	FINDING ANGLES MARKED BY LETTERS	Critical thinking and problem solving.	The learner: 1. Finds the value of the unknown angles. 2. Collects like terms.	The learner: 1. Reads the involved vocabularies in the lesson correctly in correct intonation and pronunciation. 2. Spells the vocabularies correctly.	FINDING ANGLES MARKED BY LETTERS Example  $m + 45^\circ = 180^\circ \text{ (supl. Angles)}$ $m + 45^\circ - 45^\circ = 180^\circ - 45^\circ$ $\underline{m = 135^\circ}$	Discussion Observation	Learners will do Exercise C19	Chalk board illustration	A new Mk Math page 200	