P.5 MATHEMATICAL SCHEME OF WORK FOR SECOND TERM

E.L.O: The learner is able to solve problems solving fractions and relating them to real life situations

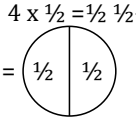
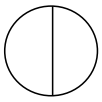
WK	PD	THEME	TOPIC	SUBTOPIC	CONTENT	COMPETENCES		INDICATORS OF LIFE SKILLS AND VALUES	METHODS / TECHNIQUES USED	ACTIVITY	REFERENCE	REM
						SUBJECT COMP	LANG COMP					
1	1	NUMERACY	FRACTION	ADDITION OF FRACTIONS WITH THE SAME DENOMINATORS	Example 1. Add: $\frac{4}{8} + \frac{3}{8} = \frac{4+3}{8}$ 2. $3\,{}^{2}/_{5} + 4\,{}^{1}/_{5}$ $3\,{}^{2}/_{5} + 4{}^{1}/_{5} = 3 + 4 + ({}^{2}/_{5} + {}^{1}/_{5})$ $= 7 + \frac{2+1}{5}$ $= 7 + \frac{3}{5}$ $= 7\,{}^{3}/_{5}$	Learner: -adds fractions with the same denominations -identifies whole numbers from the given	-reads and solves problems involving addition of fractions with the same denominators	Recognition Identification Problem solving	Exposition Guided discussion question and answer	Recognition Identifying Adding correctly	New Mk PriMt cBk 5 Page 122 P.5 curriculum	

						mixed fractions Adds mixed numbers with different denominators		effective communication			page 92	
	2			ADDITION OF FRACTIONS WITH DIFFERENT FRACTIONS	Example 1. add $\frac{1}{2} + \frac{1}{3} = \frac{3 \times 1 + 2 \times 1}{6}$ $= \frac{3 + 2}{6}$ $= \frac{5}{6}$ 2. add $3^1/_3 + 4^1/_5$ $3^1/_3 + 4^1/_5 = 3 + 4 + {}^1/_3 + {}^1/_5$ $= 7 + \frac{5x1 + 3 \times 1}{15}$ $= 7 + \frac{5 + 3}{15}$ $= 7 + \frac{8}{15}$ $= 7\ {}^8/_{15}$	-finds the LCM -adds fractions with different denominators	-reads and solves problems involving addition of fractions with different denominations	Recognition Sharing Problem solving Identification	Guided discussion Explanation Question and answer	Adding mixed fractions with different denominators	New Mk PriMt cBk 5 page 122	
	3			ADDITION OF WHOLE NUMBERS AND VULG	Example Add: 1. $5 + {}^3/_4$ $= 5 + {}^3/_4$ $= 5\ ¾$ 2. $4\ {}^1/_5 + 6 = 4 + 6 + {}^1/_5$ $= 10 + {}^1/_5$ $= 10^1/_5$	-identifies whole numbers from mixed numbers -adds wholes to fractions	-reads given numbers correctly	Identification Problem solving	Guided discussion	Adding whole numbers and vulgar fractions	New PriMt cBk 5 Page 124 P.5 curriculu	

				AR FRAC TIONS	3. 42 + 8½ = 42 + 8 ½ = 42 + 8½ = 50 +½ = 50½ 4. $1^1/_3 + ½$ $= 1^1/_3 + ½$ = 1 + $^1/_3$ + ½ = 1 + $\frac{2x1 + 3x1}{6}$ 1+ $\frac{2+3}{6}$ =1+ $\frac{5}{6}$ =$1\ ^5/_6$	-writes mixed numbers correctly					m page 92	
	4			WOR D PROB LEMS INVOL VING ADDI TON OF FRAC TIONS	Example A math teacher spent $^1/_3$ of an hour giving examples, ½ of an hour giving an exercise, $^1/_3$ of an hour marking the exercise. How long was his lesson? Duration = $\frac{1}{3} + \frac{1}{2} + \frac{1}{3}$ $= \frac{1+1}{3} + \frac{1}{2}$ $= \frac{2}{3} + \frac{1}{2}$ $\frac{= 2 \times 2 + 3 \times 1}{6}$ $= \frac{4+3}{6} = \frac{7}{6}$ $= 1\ ^1/_6$ 2. John filled ½ of the tank with water in the morning and $^2/_5$ in the	-solves word problems involving addition of fractions	-reads and interprets given statements correctly	Interpret ation Logical thinking Problem solving	Guided discussion Exposition Market stall		New PriMt cBk 5 Pg 125 P.5 curri culu m page 92	

					afternoon. What fraction of the tank was filled? $= \frac{1}{2} + \frac{2}{5} = \frac{5x1 + 2x2}{10}$ $= \frac{5 + 4}{10} = \frac{9}{10}$							
	5			SUBTRACTIONS OF FRACTIONS WITH THE SAME DENOMINATORS	Example 1. Subtract: $\frac{4}{5} - \frac{1}{5}$ $\frac{4}{5} - \frac{5}{5} = \frac{4 - 1}{5}$ $= \frac{3}{5}$ 2. $7^5/_8 - 3^2/_8$ $7^5/_8 - 3^2/_8 = (7 - 3) + \frac{5}{8} - \frac{2}{8}$ $4 + \frac{5-2}{8}$ $4 + \frac{3}{8}$ $= 4\ ^3/_8$	-subtracts fractions with the same denominators -identifies whole numbers from mixed numbers then subtracts correctly	-reads and interprets statements correctly	Recognition Problem solving Identification	Guided discussion Guided discovery Think pair and share	Identifying Solving problems		
	6			SUBTRACTION OF FRACTIONS WITH DIFFERENT DENOMINATORS	Example 1. subtract $\frac{1}{2} - \frac{1}{3}$ $\frac{1}{2} - \frac{1}{3} = \frac{3 \times 1 - 2 \times 1}{6}$ $\frac{3 - 2}{6}$ $= \frac{1}{6}$	-subtract fractions with different denominators correctly	-reads and solves problems involving subtraction of fractions with different denominations	Problem solving Sharing Critical thinking	Guided discussion Guided discovery	Subtracting fractions with different denominators	New PriMt cBk 5 Page 126	
	7			Subtraction of	Workout: $5 - \frac{1}{2}$ $5 - \frac{1}{2} = (4 + 1) - \frac{1}{2}$ $= 4 + 1 - \frac{1}{2}$	-subtracts fractions from wholes	-reads and interprets	Logical thinking	Exposition	Subtracting	New PriMt cBk 5	

				whole numbers and vulgar fractions	= 4 + $^{2}/_{2}$ - ½ = 4 + $\frac{2-1}{2}$ = 4 +½ =4½ 3- ¼ 3- ¼ = 2 +1 - ¼ =2+ $^{4}/_{4}$ - ¼		statements correctly	Problem solving	Guided discussion		page 126	
2	1			WORD PROBLEMS INVOLVING SUBTRACTION OF FRACTIONS	EXAMPLES: OCHILLI was given ¾ of a sugar cane. He gave 1/6 of it to his friend. What fraction of sugarcane remained? $\frac{3}{4} - \frac{1}{6} = \frac{3 \times 3 = 2 \times 1}{12}$ $= \frac{7}{12}$ 2. There were 5 loaves of bread in the box. A mother used $3^{2}/_{5}$ of them. What fraction remained? 5- $3^{2}/_{5}$ = 4+ 1 - $3^{2}/_{5}$ = 4-3+1+1- $^{2}/_{5}$ =1+$\frac{5-2}{5}$ =1+ $\frac{3}{5}$ =1 $^{3}/_{5}$	-solves word problems involving subtraction of fractions	-reads and interprets statements correctly	Interpretation Logical thinking Problem solving	Exposition Guided discussion	Interpreting Problem solving	Mk PriMt cBk 5 page 127 P.5 curriculum page 92	
	2			ADDITION AND SUBTRACTIONS (USE	Example ½ + $^{1}/_{3}$- ¼ ½ +$^{1}/_{3}$- ¼ = $(\frac{1}{2} + \frac{1}{3}) = \frac{1}{4}$ $\frac{3+2}{6} - \frac{1}{4}$ $\frac{5}{6} - \frac{1}{4}$	-identifies the given operations -applies the knowledge of BODMAS to	-reads and solves problems involving addition and subtraction	Critical thinking Problem solving	Explanation Guided discovery	Identification Guided discovery	Mk PriMt cBk 5 Page 128	

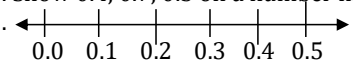
				BODMAS)	6 4 = 2x5 – 3x1 12 =10- 3 12 = 7 12	workout given operation -re-arranges then solves the problems					P.5 curriculum page 92	
	3			MULTIPLICATION OF WHOLES AND FRACTIONS	Example Multiply: 4 x ½ 4 x ½ 2x1 = 2 Work out: 2 x ¼ 2 x ¼ = ½ Workout 4 x ½ using repeated addition 4 x ½ =½ ½+½+½ =  +  2 of ¼ 2 x ¼ 2 x 1 2 x 1 1 4 1 x4 = 2 wholes = $^2/_4$	-multiplies wholes with / by fractions -solves problems with "of" -uses repeated addition	-reads and solves problems involving multiplications	Critical thinking Problem solving	Demonstration Exposition Think pair and share	Multiplying fractions by natural numbers	Mk PriMtcBk 5 Page 130.	
	4			MULTIPLICATION OF FRACTIONS BY NATURAL NUMB	Example 1. 2 x 15 3 2 x 15 3 2 x 5 =10 2. Simplify 2¼ of 16 2x ¼ = 4 x 2 + 1 = 8 + 1 = 9 4 4 4	-multiplies fractions by natural numbers -solves problems with "of"	-reads and solves problems involving multiplication of fractions by natural numbers	Critical thinking Problem solving	Demonstration Exposition	Multiplying fractions by natural numbers	Mk PriMtcBk 5 Page 130 P.5 curriculum	

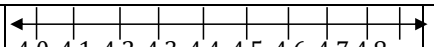
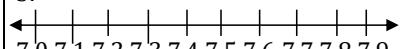
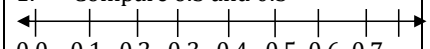
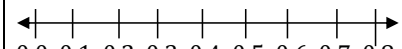
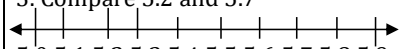
				ERS AND USE OF OF	9 of 16 4 9 x 16 4 9x4 =36						page 92	
	5			MORE ABOUT MULTIPLICATION OF FRACTIONS BY FRACTIONS	EXAMPLE 1. 3 X ¼ 3X¼= 3 X1 4 = ¾ 2. ¼ X 3 ¼ X 3 = 1 X 3 4 = 3 4	-uses commutative property to simplify given fractions	-reads and interprets statements correctly	Association Creative thinking Problem solving	Explanation Guided discussion	Multiplying fractions using commutative property	Mk PriMt cBk 5 Page 130	
	6			MULTIPLICATION OF FRACTIONS BY FRACTIONS	Example 1. 1 x 2 3 5 1 x 2 = 1 x 2 3 5 3 x 5 = 2 15	-multiplies fractions correctly -reduces where possible	-reads and solves problems involving multiplication	Critical thinking Problem solving	Exposition Guided discovery	Multiplying fractions Reducing fractions	Mk PriMt cBk 5 Page 131 P.5 curriculum page 92	
	7			APPLICATIO	Examples: 1. What is ¼ of an hour?	-applies fractions to	-reads and interprets	Critical thinking	Exposition	Simplifying	Mk PriMt	

				N OF FRACTIONS	¼ of 60 minutes ¼ of 60 ¼ x 60 1 x 15 = 15 minutes What is ½ of a kg = 1000grams ½ of k = ½ of 1000 grams = ½ x 1000 grams = 1 x 500 grams = 500 grams	simplify given numbers	statements correctly	Problem solving	Question and answer	numbers by applying fractions	cBk 5 Page 131	
3	1			WORD PROBLEMS INVOLVING MULTIPLICATION OF FRACTIONS.	Examples. A school has 1000 pupils. $^1/_5$of them went for a trip. How many pupils went for a trip? $^1/_5$ x 1000 pupils = 1 x 200 = 200 pupils 200pupils went for a trip. 2. A Mathematics lesson takes $^2/_3$ of 1 hour. How long is the Mathematics paper in minutes? $^2/_3$ of an hour $^2/_3$ x 60 minutes = 2 x20 =40 minutes	-solves word problems involving multiplication	-reads and interprets statements correctly	Interpretation Critical thinking Problem solving	Exposition Question and answer	Reads and interprets questions Multiplying correctly	Mk PriMt cBk 5 Page 132 P.5 curriculum page 92	
	2			RECIPROCALS OF FRACTIONS MULTIPLICATIVE	When a fraction number is multiplied by its reciprocal, the result is 1 **<u>Example</u>** Find the reciprocal of i) ¾ let the reciprocal of ¾ be p ¾ x p = 1	-describes the term reciprocal -finds the reciprocal of given fractions	-reads and pronounces the term reciprocal correctly -spells the new term accurately	Sharing Logical thinking Problem solving	Guided discussion Question and answer Problem solving	Finding the reciprocal	Mk PriMt cBk 5 Page 133 P.5 curri	

				INVERSE	4x¾ x p = 1 x4 3 p = 4 3 3 P = 4/3 ii) 5/2 Let the reciprocal of 5/2 be y 5/2 x y= 1 2 x 5/2 y = 1 x 2 5y = 2 5 5 =y = 2/5							culum page 92	
	3			DIVISION OF WHOLE NUMBERS BY FRACTIONS USING RECIPROCAL METHOD	Example 1. 2 ÷ ½ 2 ÷ ½ 2÷½ = 2 x 2 1 = 4 1 = 4 2. 1½ ÷ 1/3 = 3 x 3 2 1 = 9 2 = 4½ 3. 8 ÷ ¼ 8 ÷ ¼ = 8 x 4 1 8 x 4 1 32 = 32	-divides whole numbers by fractions using the reciprocal method	-reads and interprets statements	Sharing Logical thinking Problem solving	Explanation Guided discussion	Dividing whole numbers by fractions	Mk PriMtcBk 5 Pg134 P.5 curriculum page 92	

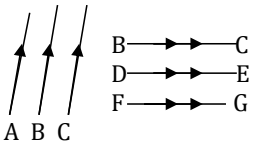
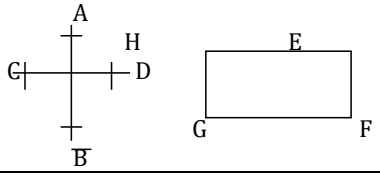
					1							
	4			Division of fractions using LCM method	Example 1. divide $15 \div {}^{3}/_{4}$ $15 \div \frac{3}{4} = \frac{15}{1} \div \frac{3}{4} \times 4$ $= 4 \times 15 \div 3$ $= 60 \div 3$ $= 20$ 2. Divide $4 \div \frac{1}{3}$ $4 \div \frac{1}{3} = 3 \times \frac{4}{1} \div \frac{1}{3} \times 3$ $= 12 \div 1$ $= 12$ 3. Divide $20 \div \frac{4}{5}$ $20 \div \frac{4}{5} = \frac{5}{1} \times 20 \div \frac{4}{5} \times 5$ $= 100 \div 4$ $= 25$	-divides whole numbers by fractions using the LCD method	-reads and solves problems involving division using the LCD method	Effective communication Sharing Logical thinking	Guided discovery Guided discussion	dividing fractions using LCD method	Mk PriMtc BK 5 Page 135 P.5 curriculum page 92	
	5			WORD PROBLEMS INVOLVING DIVISION OF WHOLE NUMBERS BY FRACTIONS	Example A shopkeeper divided 4 bars of soap into pieces and was ${}^{1}/_{6}$ of a bar. How many pieces did he make? Soln $4 \div {}^{1}/_{6} = 4 \times {}^{6}/_{1}$ $= \frac{4 \times 6}{1} = \frac{24}{1}$ = 24 pieces of soap 2. How many ¼ loaves of bread can be got from 2 loaves? $2 \div \frac{1}{4}$ $2 \div \frac{1}{4} = 2 \times \frac{4}{1}$ $= \frac{8}{}$	-solves word problems involving division of whole numbers by fractions	-reads and interprets statements correctly	Interprets questions Critical thinking Problem solving	Guided discussion Exposition	Reading and interpreting questions Answers correctly.	Mk PriMtcBk 5 pg 136	

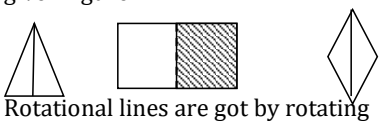
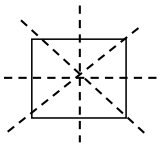
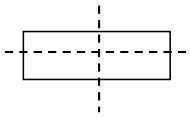
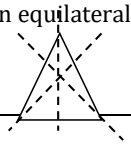
					1 = 8 quarter loaves of bread							
	6			DIVISION OF A FRACTION BY A WHOLE NUMBER	Examples: ½ ÷ 4 ½ ÷ 4 = ½ x 4x2 1 1 ÷ 1 = 1 x 1 8 8 = 1 8 1 ÷ 8 = 1 x 1 3 3 8 = 1 24 **OR** 1 ÷ 8 = 1 ÷ 8 3 3 1 =3 X 1÷8 X 3 3 3 = 1÷ 24 = 1 X 1 24 = 1 24	-divides a fraction by a whole number -finds the LCD	-reads and solves problems involving division.	Logical thinking Sharing Problem solving	Guided discussion Exposition	Dividing a fraction by a whole	Mk PriMtcBk 5 Page 138 P.5 curriculum page 92	
E.L.O:THE LEARNER IS ABLE TO SOLVE PROBLEMS INVOLVING DECIMALS RELATED TO REAL LIFE SITUATIONS												
	7			DECIMAL FRACTIONS ON A NUMB	EXAMPLES: 1. Show 0.4, 0.7, 0.5 on a number line 1.  2. 4.3, 4.5, 4.8	-draws a number line -represents given decimals on a number line	-reads decimals correctly	Identification Logical thinking	Exposition Question and answer Demonstration	Drawing a number line and representing	Mk PriMtcBk 5 page 144	

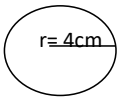
				ER LINE	 4.0, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7 4.8 3.  7.0 7.1 7.2 7.3 7.4 7.5 7.6 7.7 7.8 7.9			Problem solving		decimals on it.	P.5 curriculum page 94	
4	1	NUMERACY		COMPARING DECIMALS USING >, <	When comparing decimals using a numberline, a number on the left hand side is less than a number on the right hand side. Example 1. Compare o.3 and 0.5  0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.3 < 0.5 or 0.5 > 0.3 2. Compare 0.6 and 0.4  0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.6> 0.4 3. Compare 5.2 and 5.7  5.0 5.1 5.2 5.3 5.4 5.5 5.6 5.7 5.8 5.9 5.2<5.7	-draws a numberline -represents given decimals on a number line - compares given sets of decimals	-reads decimals correctly	Responsibility Problem solving Logical thinking	Question and answer Demonstration	Comparing a given set of decimals using > and <	Mk PriMtcBk 5 Page 144 P.5 curriculum page 94	
	2			ORDERING DECIMALS	Example 1. Arrange 0.2, 0.22, 1.2 in ascending order LCM= 100 0.2 = $\frac{2}{10}$ x 100 = 2 x 10 = 20 0.22 = $\frac{22}{100}$ x 100 = 22x1 = 22 1.2 = $\frac{12}{10}$ x 100 = 12 x 10 = 120	-changes each decimal to a fraction - finds the LCM - finds the value for each fraction.	-reads and arranges decimals in either ascending or descending order	Sharing Logical thinking Problem solving	Exposition Question and answer	Arranging decimals in ascending and descending order	Mk PriMtcBk 5 Page 145 - 146 P.5 curriculu	

					Ascending order: 1.2, 0.22, 0.2 2. Arrange 0.5, 5.55, 0.55 in descending order 0.5, 5.55, 0.55 in descending order. LCM =100 0.5 = 5 x 100 = 5 x 10 = 50 10 5.55 = 555 x 100 = 555 x 1 = 555 100 0.55 = 55 x 100 = 55 x 1 = 55 100 Descending order: 5.55, 0.55 0.5	- arranges in the required order					m page 94	
	3			ADDITION OF DECIMALS	Example 1. 23. 345 + 17. 323 23.345 +17. 323 40. 668 2. 0.825 + 0.76 0.825 + 0.76 0 1.585 3. 4. 96 + 1.7 4. 96 + 1.7 0 6. 66	-arranges decimals in their right place value -adds decimals correctly	reads and solves problems involving addition of decimals	Responsibility Creative thinking Problem solving	Guided discussion Question and answer Market stall	Adding decimals correctly	Mk PriMtcBk 5 Pg 147 P.5 curriculum page 94	
	4			SUBTRACTION OF DECIMALS	1. Subtract: 26. 763 - 13. 221 2 6. 7 6 3 - 13. 2 2 1 13. 5 4 2 2. 97.4 – 13. 69 97.4 - 13. 69 83. 71	-arranges decimals in their right place value -subtracts decimals correctly	reads and solves problems involving subtraction of decimals	Responsibility Logical thinking Problem solving	Exposition Brain storming Question and answer	Subtracting decimal fraction	Mk PriMtcBk 5 Page 147	

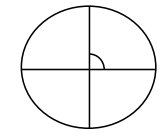
	5			ADDITION AND SUBTRACTION OF DECIMALS (MIXED FRACTION)	EXAMPLE 13. 75 – 27 + 91.25 (BODMAS) 13. 75 +91. 25 105.00 105.00 – 27.00 105. 00 -27. 00 78. 00 =78.00	-applies BODMAS to add and subtract decimals -re-arranges decimals then adds and subtracts	-reads and solves problems involving mixed operation on decimals	Identification Effective communication Problem solving	Exposition Demonstration Question and answer Market store	Adding and subtracting decimals using BODMAS	Mk PriMtcBk 5 page 148	
E.L.O: THE LEARNER IS ABLE TO RECOGNISE AND CONSTRUCT VARIOUS GEOMETRIC FIGURES AND RELATE THEM TO OTHER FIELDS SUCH AS ARCHITECTURAL DRAWINGS.												
	6	GEOMETRY		MEASURING DRAWN LINES	Measure the lines below A B $\overline{AB}$ = 7.2cm 2. X Y XY = 5.8cm 3. F G $\overline{FG}$= 4.5cm	-recognises units on the rulers - measures the length of already drawn lines	-reads units on rulers correctly	Responsibility Identification Recognition Creative thinking	Demonstration Exposition Guided discussion	Measures the length of drawn lines	Mk PriMcBk 5 Page 152 P.5 curriculum page 96	

	7			DRAWING LINES OF GIVEN MEASUREMENTS	EXAMPLE 1. Draw a line of length 3.7cm 3. Draw a line that measures 7.1cm	-measures given length from rulers using pair of dividers/ compasses. -draws lines of given length	-reads units on rulers correctly	Recognition Identification Appreciation		Demonstration Explanation Guided discovery	Mk PriMtcBk 5 Page 152	
5	1			Lines	Types of lines Line segment Ray Lie Parallel lines Perpendicular lines Intersecting lines Lines of symmetry Skew lines	-describes what a line is -identifies and explains the different types of lines - draws illustrations for each type of line	-reads and pronounces the different types of lines correctly	Sharing Effective communication Identification	Demonstration Illustration Exposition	Defining and describing each type of line	Mk PriMtcbk 5 Page 175 P.5 curriculum page 96	
	2			DRAWING PARALLEL LINES		-identifies parallel lines from given sets of lines - construct parallel lines using a pair of compasses	-reads and names labeled parallel lines.	Responsibility Sharing Effective communication	Demonstration Illustration Exposition	Drawing and identifying parallel lines	Mk PriMtcBk page 176	
	3			DRAWING PERPENDICULAR LINES		-identifies perpendicular lines -draws perpendicular lines	-recognizes perpendicular lines	Logical thinking Responsibility	Demonstration Illustration	Drawing perpendicular lines	Mk PriMtcBk 5 Page 180 - 181	

					AB CD HE *II* GF HE I GH / HE I EF			Identification					
	4			FOLDING LINES OF SYMMETRY AND ROTATIONAL LINES	Folding lines are got by folding a given figure  Rotational lines are got by rotating A B C D E F G O HK	-defines a line of symmetry -determines lines of symmetry in polygons	-counts and mentions the lines of symmetry in polygons	Observation Creative thinking Responsibility Appreciation	Demonstration Illustration Gallery walk	Drawing lines of symmetry	Mk PriMtcBk page 185 P.5 curriculum page 96	
	5			DRAWING LINES OF SYMMETRY	Aline of symmetry divides a figure into two equal parts which must overlap completely. A square has 4 lines of symmetry  A rectangle has 2 lines of symmetry  An equilateral triangle symmentry. 	-describes folding lines of symmetry and rotational lines -drawing lines of folding symmetry and rotational lines	-counts and mentions the lines of folding symmetry and rotational lines	Observation Appreciation Critical thinking Sharing	Demonstration Illustration	Identification and drawing lines of folding symmetry and rotational lines	New MK PriMtcBk 5 page 185	

					An equilateral triangle has 3 lines of symmetry							
	6			CONSTRUCTING CIRCLES OF GIVEN RADIUS	Draw a circle whose radius is 4cm 	-measures the required radius -draws a circle of a given radius	-reads the given length correctly	Identification Responsibility Problem solving	Demonstration Guided discovery	Measuring and drawing circles of given radius	New Mk PriMt cBk 5 Page 186	
	7			CONSTRUCTING IN HEXAGON IN CIRCLES	Example Draw a regular hexagon whose sides are 3cm each	-measures the length of the radius -draws circle of the measured radius -constructs a regular hexagon in a circle	-reads the given length correctly	Accuracy Responsibility Appreciation	Demonstration Guided discussion	Drawing several regular hexagon	New Mk priMt cBk 5 Page 188 P.5 curriculum page 96	
6	1			CONSTRUCTING	EXAMPLE triangle 1.Draw an equilateral of length 4cm	-measures the length of the radius	-describes what equilateral triangles are.	Accuracy Sharing	Demonstration	Drawing equilat	New Mk PriMt	

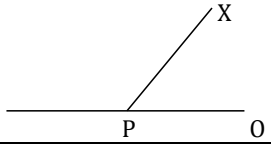
				EQUILATERAL TRIANGLES IN CIRCLES		-draws a circle of the given radius - constructs an equilateral triangle -measures the length of each side of a triangle		Appreciation Problem solving	Guided discovery	eral triangles	cBk 5 Page 187	
	2			CONSTRUCTION OF ANGLES OF 60^0 AND 30^0 USING A PAIR OF COMPASSES	Example 1. Construct an angle of 60^0	-constructs an angle of 60^0 -bisects $60^0$to construct 30^0 -labels the constructes angles	-spells, reads and describes the term "bisect"	Responsibility Sharing Observation	Demonstration Guided discovery Gallery walk	Constructing an angle of 60^0 and 30^0	New Mk PriMt cBk 5 Page P.5 curriculum page 96	
	3			CONSTRUCTION OF ANGLES OF 90^0 AND 45^0	1. Construct an angle of 90^0 2. Construct an angle of 45^0	-constructs an angle of 90^0 -bisects 90^0 to construct 45^0 Labels the constructed angles	-reads, spells and pronounces the term "bisect" correctly	Sharing Observation Accuracy Problem solving	Demonstration Exposition Illustration	Constructing angles of 90^0 and 45^0	New Mk MtcBk 5 Page	

	4			ROTATION AND REVOLUTION IN DEGREES AND TURNS	An angle is the amount of turning Comparing turns with degrees  ¼ turn = 90^0 ½ turn = 180^0  ¾ turns = 270^0 1 revolution = 360^0	-defines an angles -relates and compares turns with angles/degrees	-reads and writes English sentences about the relationship between turns and degrees/ angles	Observation Accuracy Sharing Problem solving	Demonstration Illustration Exposition	Comparing and relating turns with angles	New Mk PriMt cBk 5 Page 189 P.5 curriculum page 96	
	5			USING COMPASS DIRECTION TO FIND ANGLES TURNED	USING COMPASS DIRECTION -Angles of rotation. -Smaller angles and bigger angles.	-uses compass to find the angle turned -uses compass to find new direction	-reads cardinal and secondary points of a compass	Interpretation Logical thinking Problem	Demonstration Exposition	Finding angles turned using compass direction	New Mk PriMt cBk 5 Page 189 - 191 191 - 192		

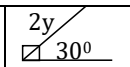
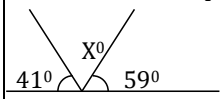
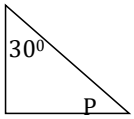
<table>
<tr>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td>TYPES OF ANGLES</td>
<td>Recognises different types of angles correctly

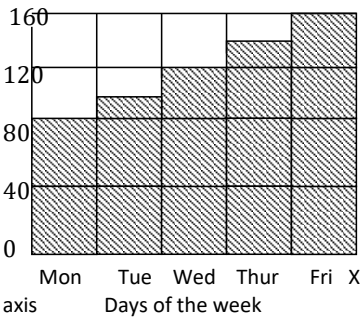
States the type of angle given correctly Types of angles
<table>
<tr><th>Angle(size)</th><th>type</th></tr>
<tr><td>Angle less than 90^0</td><td>Acute angle</td></tr>
<tr><td>Angle of 90^0</td><td>Right angle (complementary)</td></tr>
<tr><td>Angle > 90^0< 180^0</td><td>Obtuse angle</td></tr>
<tr><td>Angle of 180^0</td><td>Straight line angle (supplementary)</td></tr>
<tr><td>Angle > 180^0< 360^0</td><td>Reflex angle</td></tr>
</table>
</td>
<td>-recognises different types of angles
-states the type of angle given correctly</td>
<td>-reads and names different types of angles</td>
<td>solving</td>
<td>A compass in a mathematical set</td>
<td>Describing given angles by type</td>
<td>New Mk Primary Mathematical pupils Book five 2008 edition page 193

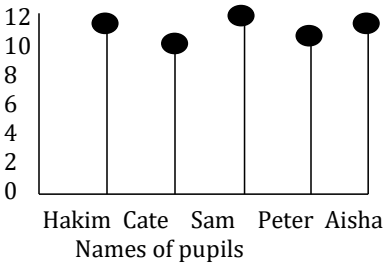
P.5 curriculum page 96</td>
<td></td>
</tr>
</table>

					Centre / revolution 360^0 | An angle at a point							
	7			MEASUREING DRAWN ANGLES USING A COMPASS	MEASURING ANGLES USING A PROTRACTOR A protractor has two scales i) the outer scale ii) the inner scale the outer scale is used when measuring starting from the left hand side the inner scale is used when measuring starting from the right hand side we start from 0 example measure angle XPO  	-studies the scales on the protractor -measures angles using protractors	-labels angels	Observation Identification Logical thinking Problem solving Creative thinking	Exposition Demonstration	Measuring angles using a protractor	New PriMtcBk 5 Page 194 P.5 curriculum page 96	
7	1			Drawing given angles using a protractor	Drawing angles Step 1 Draw a marketing line and mark a point on it. Step II Place a protractor properly. STEP III Follow the right scale and puta point STEP IV	-draws angles using a protractor - labels drawn angles	-reads drawn angles correctly	Observation Logical thinking Problem solving	Demonstration Exposition	Drawing angles using protractor	New PriMtcBk 5 Page 197 P.5 curriculum	

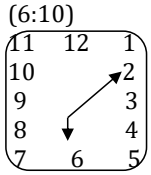
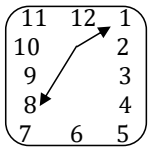
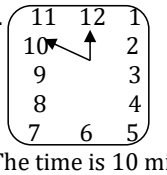
					Draw a line from the point to the marked point.						page 96	
	2			Complementary angles	Complementary angles are angles that add up to 90^0. Finding complement of angles given Example Find the complement of 35^0 Let the complement be y. $Y + 35^0 = 90^0$ $Y + 35^0 - 35^0 = 90^0 - 35^0$ $Y = 55^0$ What is the complement of 60^0 $W + 60^0 = 90^0$ $W + 60^0 - 60^0 = 90^0 - 60^0$ $W = 30^0$	-describes complementary angles -calculates the complement of given angles	-reads and interprets statements involving complementary angles.	Responsibility Observation Critical thinking Problem solving	Guided discussion Guided discovery	Finding the complement of given angles	New Mk PriMtc BK 5 Page 197 P.5 curriculum page 96	
	3			SUPPLEMENTARY ANGLES	Supplementary angles are angles that add up to 180^0 <u>FINDING THE SUPPLEMENT OF GIVEN ANGLES</u> Example 1. Find the suppliment of 60^0 Let the suppliment be z $Z + 60^0 = 180^0$ $Z + 60^0 - 60^0 = 180^0 - 60^0$ $Z = 120^0$ What is the suppliment of 135^0 Let the suppliment be G $G + 135^0 = 180^0$ $G + 135^0 - 135^0 = 180^0 - 135^0$ $G = 45^0$	-describes supplimentary angles -finds the suppliment of given angles	-reads and solves problems involving supplementary angles	Logical thinking Calculates the supplement of given angles	Guided discussion Guided discovery	Finding the supplement of angles	New PriMtcBk 5 page 197	
	4			Angles	Solving for unknown angles Example Find the size of the angles represented by: $2y + 30^0 = 90^0$	-identifies the type of angle given -identifies the angle sum	-reads and solves for the unknown angles in degrees	Critical thinking Problem solving	Question and answer Guided discussion	Finding the value of the unkno	New PriMtcBk 5 Page	

					 $2y + 30^0 - 30^0 = 90^0 - 30^0$ $\frac{2y}{2} = \frac{60^0}{2}$ $Y = 30^0$  $X^0 + 41^0 + 59^0 = 180^0$ $X^0 + 100^0 = 180^0 - 100^0$ $X^0 = 80^0$  $P + 30^0 + 90^0 = 180^0$ $P + 120^0 = 180^0$ $P + 120^0 - 120^0 = 180^0 - 120^0$ $P = 60^0$ Insert in a period about triangles (isosceles)	- find the value of the unknown angles in degrees			Think pair and share	wn angles	200-201	
E.L.O THE LEARNER IS ABLE TO INTERPRET AND SOLVE PROBLEMS INVOLVING GRAPHS													

	5	INTERPRETATION	DATA HANDLING	TYPES OF GRAPHS	**TYPES OF GRAPHS** Bar graph/ column graph Line graph Pictograph **BAR GRAPH'S FEATURES** On a bar graph, data is given in bars / columns. It has two axes ie x-axis(horizontal) and Y axis (Vertical) A bar graph has a constant interval on both axes	-describes the types of graphs -describes the features of a bar graph -analysis both axes and finds the interval on both axes	-reads scales on the horizontal and vertical axes	Interpretation Observation Analysis Problem solving	Exposition Guided discussion Problem solving	Describing the types of graphs and features of bar graphs	New MK PriMTc Bk5 Page 221 P.5 curriculum page 97-98	
	6	OF GRAPHS AND DATA	OF GRAPHS AND DATA	BAR GRAPH	**INTERPRETING DATA ON A BAR GRAPH** **EXAMPLE:** **Study the bar graph and answer questions**  1. What was the attendance on Tuesday? 2. How many pupils attended on Tuesday and Thursday?	-studies the graph and interprets it. -finds the interval on both axes -answers questions about it correctly	-reads interprets and answer questions about the graph	interpretation logical thinking problem solving	exposition question and answer	Interpreting and answering questions	New Pri Mk PriBk 5 Page 222 – 223 P.5 curriculum page 97-98	

	7			Representing data on a bar graph	The table below shows the average rainfall at Rocky Hill Academy. Questions 1. Represent the above information on a bar graph. 2. Answer all questions above the bar graph	-reads and interpretes given information -determines the scale - representes it on a bar graph	-reads and solves problems about the bar graph	Interpretation Critical thinking Analysis Accuracy Problem solving	Exposition Question and answer Illustration	Interpreting information n on a bar graph	New Mk PriMcBk 5 Page 225 P.5 curriculum page 97-98	
8	1			Line graph	Example 1. The grah below represents to the age of 5 pupils in a P.5 class.  a) How old is the youngest child? b) Find the sum age of Cate, Peter and Aisha	-interprets data on a line graph -answers questions about a line graph correctly	-reads and solves problems about a line graph	Interpretation Logical thinking Problem solving	Guided discussion Question and answer Exposition	Interpreting data on a line graph	New Mk PriMtcBk 5 Page 229 P.5 curriculum page 97-98	

					c) Calculate the total age of all children.							
	2			PICTOGRAPHS	Example The pictograph below shows green papers imported from S. Africa . **<u>study it and answer questions.</u>** Mon 🖋🖋🖋🖋 Tue 🖋 🖋 Wed 🖋🖋🖋🖋🖋 Thur 🖋 Fri 🖋🖋🖋🖋🖋 🖋🖋 🖋 represents 50 green papers a) What is the scale of this graph? b) Find the Total number of green papers imported that week	-interprets the scale -finds the number of apples imported each day. -answers questions correctly	-reads and describes the scale	Interpretation Critical thinking Problem solving	Exposition Illustration Question and answer	Interpreting the scale and answering questions	New Mk PriMtcBk 5 Page 217 P.5 curriculum page 97-98	
	3			Table graphs	Example The table below shows Joy's performance in a test Subject: ENG | MTC | SCI | SST SCORE: 80% | 90% | 85% | 75 % 1. Calculate the range in marks 2. How Many more Maths than in English?	-answers questions about the table graph	-reads and interprets information on a table graph	Interpretation Creative thinking Problem solving	Exposition Guided discovery	Interpreting Data on a table graph	Mk PriMtcBk 5 Page 218 P.5 curriculum page 98	
E.L.O THE LEANER IS ABLE TO APPRECIATE AND APPLY THE KNOWLEDGE OF TIME IN REAL LIFE SITUATIONS.												
	4		TIME	TELLING TIME IN HOUR	**<u>EXAMPLE</u>** Tell the time on the clock faces below. the time is 8 o'clock (8:00) 11 12 1	-describes when past is used. -tells time using past	-tells time verbally.	Demonstration Exposition	Demonstration	telling time in hours and using minutes past	new mkprimtcbk 5 page 250	

				S AND MINUTES PAST	10 2 9 3 8 4 7 6 5 The time is 10 minutes past 6 o.clock (6:10)  11 12 1 10 2 9 3 8 4 7 6 5	Expresses time in digital form		Brain storming	Exposition Brain storming Demonstration		P.5 curriculum page 98	
	5				**TELLING TIME USING MINUTES "TO"** EXAMPLE 1.  11 12 1 10 2 9 3 8 4 7 6 5 The time is 20 minutes to 1 O'clock (12:40) 2.  11 12 1 10 2 9 3 8 4 7 6 5 The time is 10 minutes to 12 o'clock (11:50)	-describes when to use it -tells time using to Writes time in digital form	-tells time verbally	Responsibility Logical thinking Problem solving	Demonstration Exposition Brain storming	Telling time using minutes to	PriMtcBk 5 Page 251 P.5 curriculum page 98	

	6			Finding duration	**Example** The bus started its journey to Mbale at 10:00am and reached its destination at 11:30am. How long did the journey take? 11:30a.m - 10:00am 1:30 min 1 hr 30 min	-finds duratiom	-reads and interprets the statements	Interpretation Logical thinking Problem solving	Discussion Demonstration Exposition	Finding duration	New MK PriMtc BK 5 Page 252 P.5 curriculum page 99	
	7			CANGING HOURS TO MINUTES	**Examples:** 1. Change 4 hours to minutes. 1 hr = 60min 4 hrs = 4 x60 = 240min 2. Change $3^1/_3$ $3^1/_3 = 3 \times 3 = \frac{9+1}{3} = \frac{10}{3}$ 1 hr = 60 min $\frac{10}{2}$ hrs = $\frac{10}{3}$ x 60 min 10 x 20 = 200 min	-identifies the relationship between hours and minutes - changes hours to minutes	Converts hours into minutes Changes mixed fractions to improper fraction	Logical thinking Sharing Accuracy Problem solving	Exposition Discussion	Changing hours to minutes	New Mk PriMtcBk 4 Page 163 P.5 curriculum page 99	
9	1			Changing minutes to hours	1. Change 480 minutes to hours 60min = 1 hour 480 min = $\frac{480}{60}$ = 8 hrs 2. 300 min 1 hr = 60 min 1 min = $\frac{1}{60}$ hr	-identifies the relationship between hours and minutes - changes minutes to hours	-reads and solves problems involving conversion of minutes to hours	Critical thinking Sharing Accuracy Problem solving	Discussion Exposition	Changing minutes to hrs	New Mk PriBk 4 Page 163 P.5 curriculum page 99	

					300min = 1 x 300hrs 60 1 x5 = 5 hrs			Decision making	Guided discovery			
	2			ADDITION OF TIME IN HOURS AND MINUTES	EXAMPLE Add Hrs Min 5 35 4 20 9hrs 55 min 2. Add Hrs min 3 55 + 6 40 10 hrs 35min	-adds hours and minutes -divided minutes by an hour	-reads time correctly	Creative thinking Problem solving	Discussion Guided discovery	Adding hours and minutes	New Mk PriMtcBk 4 page 165 P.5 curriculum page 99	
	3			SUBTRACTION OF TIME IN HOURS AND MINUTES	EXAMPLE S 1. Subtract hrs min 7 53 - 4 2 3 hrs 32 min 2. Subtract Hrs min 53 40 12 13 41 hrs 27 min Hrs Min	-subtracts correctly -regroup and subtracts correctly	-reads given statements correctly	Recognition Logical thinking Problem solving	Guided solving Question and answer	Subtracting Hrs and minutes by regrouping	New Mk PriBk 5 pg 166 P.5 curriculum page 99	

					80 53 -26 27 54 hrs 26 min				Exp ositi on			
	4 a n d 5				Examples Workout Hrs min 8 25 25 85 -3 40 + 6040 4 hrs 40 min 8545 Subtract: Hrs Min 23 18 - 11 35 11 hrs 43 min	-subtracts hours and minutes -re-groups and subtracts time correctly	-reads and interprets statementscorrectly	Recognit ion Logical thinking Accuracy Problem solving	Guid ed disc ussi on Exp ositi on Ques tion and ans wer thin k pair and shar e	Regrouping and subtracting time in hours and minutes	New Mk PriMtcB k 5 Page 166 P.5 curricul um page 99	
	6			More subtra ction of time	Example 1. Bamwine took 3 hrs 25 min to move from home to town. If he walked for 1 hr 35 min and took a taxi for the rest of the journey, how much time did he spend in the taxi? Total time 3 hrs 25min Time walked 1 hr 35 min Time spent in taxi	-reads and interprets question -answers correctly	-reads and interprets questions	Interpret ation Logical thinking Problem solving	Guid ed disc ussi on Exp ositi on	Interpretin g Question and answering correctly	New Mk PriMTc BK 5 Page 169 P.5 curricul um page 99	

					Hr min 3 25 -1 35 1 hr 50 min				Question and answer			
	7		MEASURING DISTANCE	DISTANCE	EXAMPLE Find the distance a driver covers in 2hrs and a speed of 90km Distance = speed x time = 90 km/hr x 2hrs = 180km A bus moved from Kampala to Arua at a speed of 120km per hour for 5 hours. What distance did it cover? Distance = Speed x Time = 120 km/hr x 5 hrs =600 km	-identifies the given data -calculates the distance covered -identifies correct distance	-reads and solves problems involving speed and time Answers correctly	Problem solving Accuracy	Guided discovery Illustration	Calculating distance covered	New Mk PriMtcBk 5 Page 254 - 255	
10	1		ETIME SPEED		Example 1. A school truck travelled for 2½hours at an average speed of 60km per hour. What distance did it cover? D = S X T D = 60 X 5/2 D = 30 X 5 D= 150 KM 1. a car travelled for 4½ hours at an average speed of 84km every hour. How long was the journey	-identifies the given data - calculates the time taken - identifies correct units for time	-reads and solves problems involving distance and speed Answers correctly	Interpretation logical thinking problem solving	Guided discussion Question and answer	Interpreting questions and answering correctly	New Mk PriMtcBk 5 Page 255 P.5 curriculum page 99	

					D = S X T D = 84 X $\frac{9}{2}$ D = 42 X9 D = 378km							
	2 And 3			Finding Time from distance and speed	Example 1. Calculate the time taken by a car travelling at 60 k.p.h to cover a distance of 480km Time = distance ÷ speed = 480km x hrs 60km = $\frac{480}{60}$ km x hrs =8 x hrs = 8 hrs 2. A taxi travelled at a speed of 70 km every hour to cover a distance of 245 km. How long did it take? Time = distance ÷ speed = 245 km ÷ 70km/hr = 245 x $\frac{hr}{70}$ = $\frac{245}{}$ x hr	-calculates the speed -identifies correct units for speed.	-reads and interprets questions	Logical thinking Interpretation Question and answer Decision making	Guided discovery Guided discussion	Interpreting and answering questions	New Mk PriMtc BK 5 Page 256 P.5 curriculum page 99	

					70 = 7hrs or 3½ 2							
	4			FINDING SPEED FROM DISTANCE AND TIME	EXAMPLE What was the average speed of a cyclist who travelled and completed a distance of 250 km in 3 hours Speed= distance ÷ time = 150 km ÷ 3 hrs 150 3 = 50km/hr		Reads and interprets the question. Finds the speed from distance and time	Logical thinking Decision making Problem solving	Exposition Question and answer	Finding speed from distance and time	New Mk PriMtcBk 5 page 257 P.5 curriculum page 99	

	5 and 6			Speed	<u>Example</u> A taxi driver covered a journey of 320km in 30 min. At what speed was he driving? Speed = Distance ÷ Time But time = 30 min =½ S = 320km ÷ ½ hr S = $\frac{320}{1} \times \frac{2}{1\text{ hr}}$ S = 640km/hr A cyclist covered a distance of 60km in 2½hrs. At what speed was he cycling? Speed = distance Time Time = 2½ hrs = $\frac{5}{2}$hrs S = $60 \div \frac{5}{2}$ S = $\frac{60 \times 2}{5}$ S = 12 x2 S= 24 km/hr		Interprets questions Answers given questions correctly	Interpretation Logical thinking Problem solving Decision making	Guided discussion Exposition	Finding speed	New Mk Pri Mtc Bk 5 Page 258 P.5 curriculum page 99	