

PRIMARY SIX THIRD TERM MTC SCHEME OF WORK application of length, mass and capacity in daily life experiences.

E	ELO: The learner appreciates and recognizes the application of length, mass and capacity in daily life experiences.													
ĸ	P D	the Me	top IC	SUB Topic	CONTENT	COMPETENCES		IND. OF LIFESKILL S & VALUES	MTHDS/ TECHNI QUES	ACTIVIT Y	IMS	REF	R E M	
1	1 & 2	ME AS UR ES	M E A S U R E S	Length	Estimating, measuring and recording length in centimeters and millimeters Conversion of units. Example Change 3km to metres. 1km = 1000m 3km = 3x1000m = 3000m	LANGUAGE The learner; - describes the term length - reads statements correctly.	SUBJECT The learner; - measures the lengths of different objects. - records length of different objects. - relates units - converts kilometers to metres & vice- versa	Observati on Appreciat ion Accuracy	Explanat ion Demons tration	Estimati ng Measuri ng Recordi ng	Real object s Real object s Chalk board illustra tions	Mk maths book 6 page 313-314 P.6 curriculum page 175 and 176		
	S				Conversion of units. Example 100cm = 1m 1cm = <u>1m</u> 100 480cm = <u>1</u> x 480 100 = <u>48</u>	The learner; - reads statements correctly.	The learner; - relates units - converts metres to centimetres. - converts centimetres to metres.	Interpreta tion Problem solving	Illustrati on	Converti ng units from one unit to another	A chart showi ng metric units. Chalk board	Mk maths book 6 page 315-316 P.6 curriculum page 175 and 176		

		10 = 4.8m			Critical thinking			illustra tion		
4	Circle	Parts of a circle - relating diameter and radius. - diameter is twice the radius. Example 1. Find the radius of a circle whose diameter is 14cm. R = $\frac{D}{2}$ = $\frac{14cm}{2}$ = 7cm 2. Calculate the diameter of a circle whose radius is 3 ½ cm. D = 2r = $2xr$ = $2x3 \frac{1}{2}$ cm = $2 \times \frac{7}{2}$ = 7cm	The learner; - describes a circle - reads and spells new terms.	The learner; - names the parts of a circle. - relates diameter and radius - finds diameter and radius	Logical thinking Critical thinking Interpreta tion Problem solving	Demons tration Observa tion Explanat ion Discussi on	Naming parts of a circle Finding radius and diameter	A chart showi ng parts of a circle Findin g radius and diamet er	Mk maths book 6 page 327 P.6 curriculum page 175 and 176	
5		Finding pie (π) using diameter and circumference. - get a circular object and measure its circumference - measure its diameter - divide circumference by diameter to get pie (π) $\pi = C$ D C = π D	The learner; - reads statements correctly.	The learner; - describes diameter and circumference - identifies the symbol for pie () - finds pie using diameter and circumference	Accuracy Problem solving	Demons tration Observa tion	Finding pie	Circul ar object s Chalk board illustra tion	Mk primary maths book 6 2000 page 326 P.6 curriculum page 175 and 176	
6		Calculating circumference ofa circle.Formula used: $C = \pi D$ or	The learner; - reads and interprets	The learner; - finds circumference	Interpreta tion	Explanat ion	Finding circumfe rence	Chalk board illustra tion	Mk maths book 6 page 328	

		$2 \pi r$ Examples Find the circumference of a circle whose: 1) radius is 7cm $C = 2 \pi r$ $= 2 \times \frac{22}{7}$ 7 $= 2 \times 22$ = 44 cm	statements correctly.	when given diameter. - finds circumference when given the radius.	Critical thinking Observati	Guided discover y Illustrati on			P.6 curriculum page 175 and 176	
7	Area of shape	Square: - A square is a quadrilateral with all its sides and angles equal. Example Find the area of a square whose side is 6cm. A = 5x5	The learner; - describes a square - spells the term square - reads and interprets statements.	The learner; - draws a square and shows all the properties - finds the area of a square. - finds the side of a square when given area.	Logical thinking Interpreta tion Critical thinking	Explanat ion Guided discussi on	Finding area of a square	Chalk board illustra tion	Mk maths book 6 page 329 P.6 curriculum page 175 and 176	
		= $6 \text{ m} \times 6 \text{ m}$ = 36 cm^2 Finding one side of the square. Example The area of a square is 16 cm^2 . Find the length of each side of the square. $\begin{array}{r} 2 & 16 \\ \hline 2 & 8 \\ \hline 2 & 4 \\ \hline 2 & 2 \\ \hline A = S + S \\ p \text{ cmxpcm} = 16 \text{ cm}^2 \end{array}$			Accuracy Problem solving	Questio n and answer	Finding the length of a square when given area	Chalk board illustra tion	Mk maths book 6 page 330 P.6 curriculum page 175 and 176	

2 1		Area of shapes	Rectangle : is a quadrilateral with two opposite sides equal. Has all sides equal a b a = c $b = dexamplefind the area of the rectanglebelow12cmA = Lx w= 12cm x 5cm= 60cm2$	The learner; - reads and spells the term rectangle. - describes a rectangle. - names the sides of a rectangle. - reads and interprets statements.	The learner; - identifies equal sides of a rectangle. - finds the area of a rectangle. - finds the side of a rectangle when given area.	Interpreta tion Critical thinking Problem solving	Explanat ion Discussi on	Finding the area of a rectangl e	Chalk board illustra tion	Mk maths book 6 page 331 P.6 curriculum page 175 and 176	
			Finding the side of a rectangle when given area. Example The area of a rectangle is 56 cm^2 . Find the width if its length is 8 cm 56 cm^2 w 8 cm A = L x w $8 \text{ cm} x w = 56 \text{ cm}^2$ 8 w = 56 8 w = 56 8 w = 7 cm			Logical thinking	Questio n and area	Finding missing side of a rectangl e	Chalk board illustra tion	Mk maths book 6 page 332 P.6 curriculum page 175 and 176	

2	Perime ter of shapes	Perimeter of a square. Perimeter: Is the total distance around the figure. Example Find the perimeter of the figure below. P = add all sides = S+S+S+S = 5cm +5cm+5cm+5cm = 10cm +10cm = 20cm	The learner; - describes the term perimeter. - reads and interprets statements.	The learner; - finds the perimeter of a square. - finds the length of a square when given perimeter.	Logical thinking Problem solving	Explanat ion Discussi on Questio n and answer	Finding a perimete r of a square	Chalk board illustra tion	Mk maths book 5 page 157-158 P.6 curriculum page 175 and 176	
		Finding the side of a square when given perimeter. Example The perimeter of a square is 40m. Find the length of the side. S S P = add all sides S+S+S+S = P S+S+S+S = 40m 4S = 40 $\frac{4S}{4} = \frac{40}{4}$ S = 10m			Logical thinking Interpreta tion	Explanat ion Discussi on	Finding missing side of a square when given perimete r	Chalk board illustra tion	Mk maths book page 157-158 P.6 curriculum page 175 and 176	
3		Rectangle: Finding the missing side of a rectangle when given perimeter. Example	The learner; - reads and interprets statements	The learner; - finds the perimeter of a rectangle. - finds the missing side of a	Critical thinking Problem solving	Questio n and answer	Finding the missing side of a rectangl e	Chalk board illustra tions	Mk maths book 6 page 333 P.6 curriculum	

		The perimeter of a rectangle is		rectangle when					page 175	
		24cm Find its length if the width		given perimeter					and 176	
		is 5cm		given perimeter.						
		15 5011								
		L P = add all sides +w+ +w = P +5+ +5 = 24 + +5+5 = 24 2 +10 = 24 2 + 10-10 = 24-10 2 = 14			Interpreta tion					
		<u>21</u> = <u>14</u>								
		2 2								
		L = 7cm								
4	Perime	Finding sides, area and	The learner;	The learner;	Accuracy		Finding		mk maths	
	ter and	perimeter.	- identifies	- finds the		question	the	chalkb	book 6 page	
	area of	Example	equal sides of	unknown by		and	unknow	oard	334-335	
	а	1) ABCD is a rectangle	a rectangle.	comparing sides.		answer	n actual	illustra	P.6	
	rectan	· / · · = · = · · · · · · · · · · · · ·		- finds the actual	Problem		lenath	tions	curriculum	
	ale			length and width	solving		and	lionio	page 175	
	gie			- finds the area	Solving		width		and 176	
		Λ (2x 5) cm B		and porimotor of			width			
		A (2X-3)011 B		the restande			Aroo			
				line reclarigie.			Alea			
							Perimet			
		(x-1)cm					er			
		D (x+3) cm C								
		a) Find the value of x								
		$(2\sqrt{5}) = (\sqrt{2})$								
		(2x-3) = (x+3)								
		2x-3 - x+3 2x - 5 - x+3 + 5								
		2x - 0 + 0 = x + 0								
		$2x = x + \delta$								
		$2x - x = x - x + \delta$								
1 1 1	1 1	x = 8						I		

		b) Find the: i) length ii) width iii) area iv) perimeter								
5	Area	Finding area of shaded parts. Example. 1. Study the figure below and find the area of the shaded part. 9cm 6cm 4cm	The learner; - identifies the length and width of the inner and outer rectangles.	The learner; - finds the area of inner and outer shapes. - works out the area of the shaded part.	logical thinking interpreta tion	explanat ion guided discover y	finding the area of shaded part.	chalkb oard illustra tion	mk maths book 6 page 337 P.6 curriculum page 175 and 176	
		10cm Area of outer (bigger) = L x W = 10cm x 9cm <u>= 90cm²</u> Area of inner (smaller) = L x W			critical thinking problem	question				
		= 6cm x 4cm <u>= 24cm²</u> <i>Area of the shaded part.</i> 90cm ² <u>- 24cm²</u> <u>86cm²</u>			solving	answer				
6	Area	Finding area of shaded part involving missing measurements. example 1) Find the area of the shaded part. 2dm 2dm 2dm 2dm 12dm	The learner; - reads and interprets statements	The learner; - observes the two rectangles. - identifies the missing measurements. - finds the missing sides. - finds the area of different figures.	interpreta tion logical thinking	guided discover y explanat ion	finding: missing sides area of the	chalkb oard illustra tions	mk maths book 6 page 337 P.6 curriculum page 175 and 176	

	First find missing sides Length of the outer rectangle. = 8dm+2dm+2dm = 12dm width of the outer rectangle. = 5dm+2dm+2dm = 9dm area of the outer rectangle. = LxW = 12dmx9dm = 108dm ² Area of inner rectangle. = L x W = 8dm x 5dm = 40dm ² Area of the shaded part. = 108dm ²			observati on problem solving	illustrati on question and answer	shaded parts			
	$= 100 \text{dm}^2$ $- 40 \text{dm}^2$								
7	$68dm^2$ Finding area of a triangle.Example.Find the area of the trianglebelow.5m $5m$ $7m$ $6m$ $13m$ formula used:A = $\frac{1}{2} \times bxh$ = 1x13mx6m= 39m ² 2)	The learner; - identifies the base and height. - reads and interprets statements correctly.	The learner; - finds the area of given triangles.	logical thinking interpreta tion observati on	explanat ion guided discussi on	finding area of triangles	chalkb oard illustra tions	mk maths book 6 page 338 P.6 curriculum page 175 and 176	
	e schemes of w	o rk, visit www.u	ıganda.madpath.cc	om					

			6cm 10cm 			problem solving	question and answer				
3	1		Finding missing sides in a triangle when given area. Example. Find the base of a triangle whose area is 60cm ² and height is 12cm. - need for diagrammatic representation.	The learner; - reads and interprets statements.	The learner; - finds the missing sides of a triangle when given area	critical thinking	explanat ion	finding missing sides	chalkb oard illustra tion	mk maths book 6 page 339 P.6 curriculum page 175 and 176	
			A = 60cm2			interpreta tion					
			$A = \frac{1}{2} x b x h$ $\frac{1}{2} x b x h$ $\frac{1}{2} x b x h$ $\frac{1}{2} x b x 12 cm = 60 cm^{2}$ $\frac{6b}{6b} = \frac{60}{60}$			logical thinking	discussi on				
			 6 61 b = 10cm 2) Find the height of a triangle whose area is 30cm² and its base is 12cm. diagram: 			problem solving	question and answer				

2 Finding base or height by comparing area. The learner; - reads and interprets are heights of the same triangle. The learner; - identifies the two bases and two heights. Iogical thinking explanat to the same triangle base or height of the same triangle. measure for the unknow heights. are height of AC if BD=12cm, AD =10cm and BE = 8cm. - finds the measure for the unknow hase or height of a triangle. - finds the measure for the unknow hase or height of a triangle. or heights and 176 A = ½ x b x h ½xACxBE = ½xBCxAD ½xACx8cm=½ x12cmx10cm 4AC = 6x10 4AC = 6x10 4AC = 6x10 A = ½ x b x h measure ½x12cmx10cm 4AC = 6x10 measure ½ x12cmx10cm 4AC = 6x10 measure ½ x12cmx10cm 4AC = 6x10 measure 100 mand		h 30cm ² 12cm									
$A = \frac{1}{2} \times b \times h$ $\frac{1}{2} \times h$ $\frac{1}$	2	Finding base comparing a Example. 1) ABC is a f are heights o Find the leng BD=12cm, A 8cm.	e or height by area. triangle, AD and BE of the same triangle. gth of AC if AD =10cm and BE =	The learner; - reads and interprets statements.	The learner; - identifies the two bases and two heights. - finds the measure for the unknown base or height of a	logical thinking effective	explanat ion	finding measure ments of the unknow n bases or heights	chalkb oard illustra tions	mk maths book 6 pages 342- 343 P.6 curriculum page 175 and 176	
$A = \frac{1}{2} x b x h$ $\frac{1}{2} x b x h$ $\frac{1}{2} x b x h$ $\frac{1}{2} x b x h$ $\frac{1}{2} x A C x B E = \frac{1}{2} x B C x A D$ $\frac{1}{2} x A C x 8 c m = \frac{1}{2} x 12 c m x 10 c m$ $4 A C = 6 x 10$ $4 A C = \frac{6 x 10}{10}$ interpreta tion $4AC = \frac{6 x 10}{10}$ problemand		A 100 B D			triangle.	communi cation	discussi on				
$\frac{4AC}{4AC} = \frac{6x10}{6x10}$ problem and		A = ½ x b x ½xbxh = ½x ½xACxBE= ½xACxBE=	h .bxh ½xBCxAD =½ x12cmx10cm			interpreta tion	and the second				
4 4 AC = 3x5 = 15cm solving answer		$\frac{4AC}{4AC} = \frac{6x10}{4}$ $\frac{4AC}{4} = \frac{6x10}{4}$ $AC = 3x5$ $= 15cm$	<u>0</u>			problem solving	and answer				
3 Area of a trapezium. The learner; - describes a Trapeziums are of two types. The learner; - describes a trapezium The learner; - draws different types of trapezium. logical thinking explanat ion finding area of a trapeziu chalkb book 6 page (illustra trapezium) mk maths book 6 page (illustra trapezium) a a illustra trapezium 345 a a a a a b a a a a a a a a a a a a a book 6 page (curriculum) a a a a book 6 page (curriculum) b a a b b b a a a a a b b b a a a a b b b a a a a a a a a a a a a a a a a a a a a a a a a a	3	Area of a tra Example. Trapeziums	apezium. are of two types.	The learner; - describes a trapezium	The learner; - draws different types of trapezium. - identifies the height from other sides.	logical thinking	explanat ion	finding area of a trapeziu m	chalkb oard illustra tion	mk maths book 6 page 345 P.6 curriculum page 175 and 176	

	h			effective communi	guided discussi				
	b a h b formula is A = $\frac{1}{2}h(a+b)$ find the area of the trapezium below. 8cm 7cm 10cm A = $\frac{1}{2}h(a+b)$ = $\frac{1}{2}x$ 7cm (8cm+10cm) = $\frac{1}{2}x$ 7 x 18 = 7x9 = 63cm ²			interpreta tion problem solving	on question and answer				
4	Parallelogram: has two sides opposite sides equal. Area of a parallelogram. formula =base x height 6cm 10cm A = b x h = 10cm x 6cm =60cm ²	The learner; - describes a parallegram. - reads and interprets statements.	The learner; - finds the area of a trapezium. - draws a parallelogram. - finds the area of a parallelogram.	effective communi cation logical thinking	explanat ion discussi on	finding area of a parallelo gram	chalkb oard illustra tion	mk maths book 6 page 351 P.6 curriculum page 175 and 176	

5		finding total surface area. cuboid: length width height height A cuboid has 6 faces 2 faces of length and width 2 faces of length and height 2 faces of length and height and height 2 faces of length and height a	The learner; - describes a cuboid. - names the sides of a cuboid. - reads and interprets statements.	The learner; - draws a cuboid - identifies the different faces of cuboid. - builds the formular to find the T.S.A. - finds the T.S.A of cuboids.	problem solving critical thinking	illustrati on question and answer	Finding total surface area of a cuboid.	real object s chalkb oard illustra tions	mk maths book 6 page 349 P.6 curriculum page 175 and 176	
		Find the total surface area of 5 cm 5 cm T/S/A = 2lxw)+2(wxh)+2(lxh) =2(6x5)+2(5x4)+2(6x4) =2(30)+2(20)+2(24) = 2x30+2x20x2x24 = 60 + 40 + 48 = 100 + 48 = 148 \text{ cm}^2								
6		Finding total surface area of a cube. A cube has; - all edges equal - all its faces equal - has each fce in a square. example. Find the total surface area of: Area of one face =SxS = S ²	The learner; - describes a cube - reads and interprets statements	The learner; - differentiates between a cube and cuboid. - finds the total surface area of cubes.	critical thinking problem solving	guided discover y question and answer	finding total surface area of a cube	chalkb oard illustra tion	mk maths book 6 page 350 P.6 curriculum page 175 and 176	

	6 faces will have = $6xS^2$ = $6S^2$ Find the total surface area of a cube whose side is 4cm. T/S/A = $6S^2$ = 6×4^2 = $6 \times 4 \times 4$ = 24×4 = $96cm^2$								
Volum e and capac y	volume of cubes and cuboids. it example. Find the volume of the following figures. 1)			effective communi cation logical thinking	explanat ion illustrati on	finding volumes of cubes and cuboids	chalkb oard illustra tions	mk maths book 6 P.6 curriculum page 175 and 176	
	V = lxwxh = 5x5x5 =5mx5mx5m = 25m ² x5m = 125m ³			interpreta tion	observat ion				
	2) 11cm V = lxwxh = 11cmx5cmx4cm = 11cmx20cm ² = 220cm ³			problem solving	discussi on				
7 Volum e and capac y	Finding volume in litres. example. it	The learner; - describes the term volume.	The learner; - identifies the cube from cuboid.	critical thinking	question and answer	finding volume in litres	chalkb oard illustra tions	mk maths book 6 page 359	

			A rectangular tank is 30cm by 60cm by 90cm. Find its volume in litres. Sketch 90cm 60cm 30cm 1I = 1000cm ³ /cc V=lxwxh = <u>30cmx60cmx90cm</u>	- relates litres and cubic centimetres. - reads and interprets statements.	 identifies units used for volume. finds the volume of given figures. finds volume in litres 	effective communi cation	explanat ion discussi on		P.6 curriculum page 175 and 176	
4	1		1000cc = <u>30cmx6cmx90cm</u> 1000cmxcmx9cm = 3 x 6 x9 = 18 x9 = 162 litres finding missing sides. examples. 1) The rectangular prism below	The learner; - reads and interprets	The learner; - forms	problem solving		 chalkb oard illustra	mk maths book 6 page 359	
			has a volume of 180cm ³ . Find its height. 9cm V=lxwxh 9x4xh = 180c.c 36h = 180 36 = 180 36 = 36 h = 5cm 2) The rectangular tank holds 72 litres of water. Find its width. 15cm	statements correctly.	- solves for the unknown.	critical thinking	question and answer	tions	P.6 curriculum page 175 and 176	

					80cm								
	2			Weight /mass	Conversion of units examples. 1. Change 9kg to grams. 1kg = 1000gms 9kg = 9x1000gms = 9000gms 2. Express 480gms as kg 1000gm = 1kg 1 gm = <u>1</u> kg 1000 480gms = <u>1</u> x 480kg 1000 = <u>48</u> 100 = 0.48kg	The learner; - describes the term weight. - reads units used in weight.	The learner; - converts kg to grams. - convert grams to kg.	interpreta tion effective communi cation	explanat ion guided discussi on	converti ng of units	chalkb oard illustra tions	mk maths book 6 page 366 P.6 curriculum page 175 and 176	
	3				Addition and subtraction of kilograms and grams. Examples. work out: 1) kg gm 7 250 <u>+ 4 400</u> <u>11 650</u> 2) kg gms 8 700 <u>- 4 200</u> <u>4 500</u>	The learner; - reads and interprets statements correctly.	The learner; - solves problems involving addition and subtraction of kg and grams.	logical thinking problem solving	question and answer	adding and subtracti ng in kilogram and grams	chalkb oard illustra tions	mk. Maths book 6 P.6 curriculum page 175 and 176	
ELC): T	he lear	ner red	ognises a	and constructs various geometric	c figures and re	lates them to other	r fields.		·			
	4	GE OM ETR Y	GE OM ETR Y	Lines	Types of lines - parallel lines: Are lines which move in the same direction with	The learner; - reads and uses the	The learner; - describes parallel lines.	observati on	demonst ration	drawing parallel and	chalkb oard illustra tion	mk maths book 6 page 206	

		equal distance from one another. same distance parallel ines apart Transversal line: Is the line that crosses parallel lines as seen below. A B C D A B C D C C C C C C C C C C C C C	vocabulary correctly.	- differentiates parallel lines from transversal lines. - draws parallel and transversal lines.	interpreta tion accuracy	observat ion discussi on question & answer	transver sal lines		Functional primary maths book 6 page 229 P.6 curriculum page 175 and 176	
5	Constr uction of lines	constructing parallel lines. - constructing parallel lines at marked points.	The learner; - describes parallel lines - reads and interprets statements.	The learner; - constructs parallel lines. - constructs parallel lines at marked points.	Accuracy	practical approac h	construc ting parallel lines	ruler	mk maths book 6 page 274 P.6 curriculum page 178 and 179	
6	Constr uction	constructing perpendicular lines to line segment bisecting already drawn angles.	The learner; - describes perpendicular lines. - reads and interprets statements	The learner; - draws perpendicular lines - constructs lines to line segments. - bisects already drawn angles.	interpreta tion logical thinking	explanat ion demonst ration	construc ting perpendi cular lines bisectin g given angles	pair of compa sses	understandi ng mathematics book 6 page 221 P.6 curriculum page 178 and 179	

	7			constructing angles of 60º and 120º	The learner; - reads given statements correctly.	The learner; - constructs angles of 60 ⁰ and 120 ⁰ .			construc ting angles of 60 ⁰ and 120 ⁰		mk maths book 6 page 277-275 P.6 curriculum page 178 and 179	
5	1			constructing angles oof 15 ⁰ , 30 ⁰ and 150 ⁰	The learner; - reads statements correctly. - determines the instruments to be used.	The learner; - constructs angles of 15 ⁰ , 30 ⁰ , and 150 ⁰	problem solving	observat ion			mk maths book 7 page 223 P.6 curriculum page 178 and 179	
	2			constructing an angle of 90 ⁰ constructing angles of 45 ⁰ and 135 ⁰	The learner; - reads given statements correctly.	The learner; - constructs an angles of 900.	practical approach demonstr ation	practical approac h demonst ration	construc ting an angle of 90 ⁰ construc ting angles of 45 ⁰ and 135 ⁰	rulers pair of compa sses	mk maths book 6 page 279 mk maths book 6 page 223 P.6 curriculum page 178 and 179	
	თ	C	Constr uction	construction of triangles when given side, side, side. (S.S.S)	The learner; - describes a triangle - reads and interprets measurement	The learner; - constructs triangles using side, side, side. (S.S.S)			construc ting triangles using side, side, side accurate ly		mk maths book 6 page 288 P.6 curriculum page 178 and 179	
	4			constructing triangles when given side, angle, side (S.A.S)	The learner;	The learner;	observati on	observat ion	construc		mk maths book 6 page 289	

				- reads and interprets statements.	- constructs triangles using S.A.S			triangles using side, Angle, side	protra ctor	P.6 curriculum page 178 and 179	
5			constructing triangles when given side, Angle, Angle (S.A.A)	The learner; - reads and interprets statements	The learner; - constructs triangles using S.A.A	discussio n	discussi on	construc ting triangles using side, Angle,		mk maths book 6 page 289 P.6 curriculum pg 178 &179	
6			construction of regular polygons. polygons, hexagon and octagon.	The learner; - reads and interprets statements	The learner; - constructs regular hexagons and octagons when given length.	interpreta tion	practical approac h	construc ting regular polygon s	rulers	mk maths book 6 pages 261, 262 and 263 P.6 curriculum pg 178 &179	
7		Angles	angles formed on parallel lines and their properties. co-interior angles within parallel lines.	The learner; - identifies angles formed within parallel lines. - describes the terms co- interior and co-exterior angles.	The learner; - identifies co- interior angles. - applies the property of co- interior angles to solve for unknown angles.	drawing accuracy observati on	question and answer demonst ration observat ion	finding the size of the unknow n angles	pencil s a chart showi ng angles on paralle I lines pair of compa sses	P.6 curriculum page 178 and 179	

		k + 60 ⁰ = 180 ⁰ k + 60 ⁰ -60 ⁰ =180 ⁰ -60 ⁰ k = 120 ⁰						chalkb oard illustra tion		
6	1	Co-exterior angles. Angles not within the parallel lines. - co-exterior angles add up to 180° . $\angle m + \angle n = 180^{\circ}$	The learner; - describes co-exterior angles - reads and interprets statements correctly.	The learner; - identifies co- exterior angles. - uses the co- exterior angle properly to solve for the unknown angles.	observati on interpreta tion	explanat ion discussi on	finding the size of unknow n angles	chalkb oard illustra tions	mk maths book 6 page 267 P.6 curriculum page 178 and 179	
					logical thinking					
		Example Find the value of angle h 105^{0} h h + 105^{0}=180^{0} h+105^{0}=180^{0}-105^{0} h = 75^{0}	The language	The langest			fording			
	2	Alternate interior angles. Alternate interior angles are equal. $\begin{array}{r} \hline x & a \\ \hline b & y \\ \hline \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	I he learner; - reads the term alternate angles. - describes alternate angles. - reads and interprets statements.	I he learner; - studies diagrams and identifies alternate interior angles & exterior angles. - differentiates alternate interior angles from	observati on interpreta tion	ion	tinding the value of the unknow n angles	chalkb oard illustra tion	mk maths book 6 pages 270- 271	

		∠a = ∠b		alternate exterior						
				angles.						
		Example.				discussi			mk maths	
		Find angle p				on			book 7 page	
		p 70^{p}			accuracy				209-210 P.6 curriculum page 178 and 179	
		2p 70 (dit. int. 23)				demonst				
		Alternate exterior angles. Alternate exterior angles are				ration				
		pm/								
		m = cn			effective communi cation	observat ion				
		$z_{\rm n}$ $z_{\rm n}$								
		Example.				question				
		Find angle a			problem solving	and answer				
		a / ∠a = 86°								
	3	Corresponding angles. - corresponding angles are equal.	The learner; - describes correspondin g angles. - reads and	The learner; - identifies corresponding angles. - finds the	observati on	explanat ion	finding the value of the unknow	chalkb oard illustra tions	mk maths book 6 page 269-270	
		K S	Interprets	unknown angles		disquasi	n angles			
1		v b	correctly	nonerty of		on			mk maths	
1			correctly.	corresponding	interpreta				book 7 page	
				angles.	tion				211-212	
1		$\angle a = \angle b$ $\angle x = \angle y$							P.6	
		$\angle k = \angle I \angle s = \angle t$							curriculum	

		Example Find x 2x $x+50^{0}$ $2x = x+50^{0} (corr \angle s)2x-x = x-x+50^{0}x = 50^{0}$			demonstr ation	demonst ration			page 178 and 179	
4	Applic ation of angle relatio nships on paralle I lines	relating parallel lines angles. Example Find the value of x 100° 100° 110° 180° 110° 180° 110° 110° 180° 110° 110° 180° 110° 110° 180° 110°	The learner; - reads and interprets statements correctly.	The learner; - studies diagrams and relates parallel lines angles. - finds the unknown angels in given figures.	problem solving	observat ion question and answer	finding the values of the unknow n angles	chalkb oard illustra tions	mk maths book 6 page 272-273 mk maths book 7 page 213 P.6 curriculum page 178 and 179	
5		Types of angles - Acute angles - Right angle - Obtuse angle	The learner; - reads and interprets	The learner; - identifies different types of angles.	observati on	explanat ion	writing notes about	chalkb oard illustra tions	mk maths book 6 page 273 (old edition)	

	- Straight angle	statements	- describes the		discussi	types of		P.6	
	- Reflex angle	correctly.	types of angles		on	angles.		curriculum	
			and			naming		page 178	
			differentiates			given		and 179	
			them.			angles			
			- names given						
			angles.						
6	Complementary angles	The learner;	The learner;					mk maths	
	Angles which add up to 90 ⁰ .	 describes 	- solves	interpreta	observat		chalkb	book 6 page	
	Example	complementa	problems	tion	ion		oard	271-272 old	
	1) Find the complement of 40°.	ry angles.	involving finding			finding	illustra	edition	
	Let the comp be y	- reads and	the complement			comple	tion	P.6	
	$y + 40^{\circ} = 90^{\circ}$	interprets	of angles.			mentary		curriculum	
	y +400-400=900-400	statements.		logical		angles		page 1/8	
	$y = 50^{\circ}$			thinking				and 179	
	2) Find the value of a in the								
	figure.				question				
					and				
	200			problem	answer				
	300			problem					
				Solving					
	3 + 380 = 900								
	2+380-380-000-380			critical					
	a = 520			thinking					
7	Supplementary angles	The learner	The learner	unning		finding	chalkh	mk maths	
'	Angles which add up to 180°	- describes	- solves			the	oard	book 6 nage	
	Framples	supplementar	problems	logical		supplem	illustra	266-289	
	1) Which is the supplement of	v angles.	involvina findina	thinking		ents of	tion	P.6	
	320?	- reads and	the supplement		explanat	given		curriculum	
	Let the supp be t	interprets	of given angles.		ion	angles		page 178	
	t +32°=180°	statements.				5		and 179	
	t =32 ⁰ -32 ⁰ =180 ⁰ -32 ⁰								
	t = 148 [°]			observati					
				on					
	2) Calculate the value of y in								
	degrees.								

			$ \underbrace{102^{0} \text{ y}}_{y+102^{0}=180^{0}}_{y+102^{0}-102^{0}=180^{0}-102^{0}}_{y=78^{0}} $			interpreta tion	discussi on				
7	1		Angles at a point. Angles at a point add up to 360°. Example Find angle m. m 120° m+90°+120°=360° m+210° = 360° m+210°=360°-210° m = 150°	The learner; - describes angles at a point. - reads and interprets questions.	The learner; - calculates missing angles at a point.	problem solving	question and answer	finding missing angles	chalkb oard illustra tions	mk maths book 6 page 274-277 old edition P.6 curriculum page 178 and 179	
	2		A triangle is a three sided figure with three angles. Types of triangles. - Right angled triangle - Equilateral triangle - Scalene triangle - Isosceles triangle	The learner; - describes a triangles. - names different types of triangles.	The learner; - draws different types of triangles. - shows different properties on each type of triangle. - names given types of triangles.	effective communi cation	group work	drawing triangles naming triangles copying notes	cut outs hard paper s pair of scisso rs	mk maths book 6 page 353 old edition P.6 curriculum page 178 and 179	
	3		Angles in a triangle. Example. Find angle d in the figure.	The learner; - states the angles sum of a triangles.	The learner; - finds the missing angles in a triangle.	creative thinking	explanat ion	finding missing angles	chalkb oard illustra tions	mk maths book 6 page 287	

		d		- identifies the		discussi	in a		P.6	
				two equal base		on	triangle		curriculum	
		700 800		angles of an			· ·		page 178	
				isosceles					and 179	
		d+80 ⁰ +70 ⁰ =180 ⁰		triangle.						
		d+150 ⁰ =180 ⁰		- finds missing						
		d+150°-150°=180°-150°		angles in						
		$d = 30^{\circ}$		isosceles						
				triangles.						
		Angles of an isosceles triangle.			critical		drawing	chalkb	mk maths	
		Example			thinking		isoscele	oard	book 6 page	
		Find win:					S	illustra	288	
		W					triangles	tions	P.6	
							finding		curriculum	
		700 700			problem	problem	missing		page 178	
					solving	solving	angles		and 179	
		w+70 ⁰ +70 ⁰ =180 ⁰			5	J J	in			
		w+140 ⁰ =180 ⁰					isoscele			
		w+140°-140°=180°-140°					S			
		w = 40°					triangles			
4	triangl	Interior and exterior angles.	The learner;	The learner;	creative	guided	finding	chalkb	mk maths	
	es	a	- describes &	- relates interior	thinking	discover	the	oard	book 6 page	
			interior	and exterior		у	unknow	illustra	290. Old	
		/b c	angles.	angles.			n angles	tions	edition	
			- reads and	- identifies the	critical		using		P.6	
		∠a+∠b =∠c	interprets	interior and	thinking		the		curriculum	
			statements.	exterior angles.	, C		using		page 178	
		Example		- finds the			the		and 179	
		Find the value of angle a in the		unknown angles.			interior			
		figure.				explanat	and			
		, , , , , , , , , , , , , , , , , , ,				ion	exterior			
		a					angle			
							properly			
		<u>/70º 1059</u>								
		a+70 ⁰ =105 ⁰								
		a+70°-70°=105°-70°								

			a = 35 ⁰								
5			Exterior angles of a triangle a a b a c b c c c c c c c c	The learner; - states the sum of exterior angles of a triangle.	The learner; - finds the missing exterior angles of a triangle.	effective communi cation problem solving	discussi on question and answer	finding the missing angles	chalkb oard illustra tions	mk maths book 6 page 290 old edition P.6 curriculum page 178 and 179	
6		polygo ns	Definition of a polygon. - A polygon is a simple closed figure joined up by more than two line segments. Types of polygons Regular polygons. Have sides and angles equal. Irregular polygons; have neither sides nor angles equal	The learner; - describes a polygon. - describes regular and irregular polygons.	The learner; - differentiates regular and irregular polygons. - draws and names polygons. - finds missing angles in exterior angles.	explanati on guided discussio n	explanat ion discussi on	drawing and naming polygon s finding missing angles	chalkb oard illustra tions	mk maths book 7 page 227 P.6 curriculum page 178 and 179	
7			Parts of a polygon. - vertex - An angle - An edge - Centre and centre angles	The learner; - names parts of a polygon.	The learner; - draws and names the parts of a polygon.			answeri ng oral and written	A chart showi ng parts	mk maths book 7 page 243-246 P.6 curriculum	

				- calculating exterior angles. - finding number of sides. Example Find the number of sides of regular polygon whose exterior angle is 72°. No. of sides = $\frac{360^\circ}{\text{ext.}}$ = $\frac{360}{72}$ = 5 sides	- reads and spells the key terms.	 calculates the size of each exterior angle in a polygon. finds the number of sides. 	question and answer	question and answer	question s Drawing and naming parts of polygon	of a polygo n Chalk board illustra tions	page 178 and 179	
8	1		polygo ns	Centre angles - Angle sum of centre angles is 360°. - Finding centre angles of regular polygons when given number of sides. - Finding number of sides when given centre angles. side centre interior exterior angle angle	The learner; - states the angle sum of centre angles.	The learner; - finds the centre angles of polygons when given the number of sides. - finds number of sides of given polygons when given centre angles.	interpreta tion effective communi cation	explanat ion observat ion	finding: centre angles number of sides when given centre angles	chalkb oard illustra tions	mk maths book 6 page 348-349 old edition P.6 curriculum page 178 and 179	
				Exterior and interior angles of a regular polygon. 600 1200 1200 1200 600 1200 600 1200 600 1200 600	 identifies interior angles and exterior angles. reads and interprets statements. 	 differentiates interior angles from exterior angels. find interior angles when given exterior angles. 	critical thinking	discussi on	relating interior and exterior angles.	chalkb oard illustra tions	mk maths book 6 page 350 P.6 curriculum page 178 and 179	

			Finding interior angles. Example Find the interior angle of a polygon whose exterior angle is 108° . int. \angle + ext. = 180° int. + 108° = 180° int. + 108°-108°=180°-108° int. = 72°		- finds exterior angels when given interior angles.	problem solving	question and answer	finding missing angles			
2		Polygo ns	Sum of interior angles or interior angle sum of a polygon-using all methods. Example Find the interior angle sum of a polygon with 8 sides Method 1 No. of sides = 8 All ext. angles = 360° each ext. angle = $\frac{360^{\circ}}{8}$	The learner; - reads and interprets statements.	The learner; - applies different methods to find the interior angle sum of given polygons.	interpreta tion observati on	explanat ion	finding interior angel sum	chalkb oard illustra tion	mk maths book 6 page 351-352 P.6 curriculum page 178 and 179	
			= 45° Int. angle = $180^{\circ}-45^{\circ}$ = 135° Int. angle sum = $135^{\circ}x8$ = 1080°			effective communi cation	Guided discussi on				
			$\begin{array}{c cccc} \mbox{Method II & Method III} \\ 90^0(2n-4) & \mbox{OR} & 180^0(n-2) \\ 90^0(2xn-4) & 180^0(8-2) \\ 90^0(2x8-4) & 180^0(6) \\ 90^0(16-4) & 180^0x6 \\ 90^0 & (12) & 1080^0 \\ 90^0x12 \\ 1080^0 \end{array}$			logical thinking problem solving	observat ion question & answer				

		Method IV Uisng triangular method. 180°x6 1080° 2 3 4 5 6								
3	PITHA GORA S THEO REM	Properties of a right angled triangle. 9 squares +16 squares = 25 squares height hypotunese	The learner; - names the sides of a right angled triangle. - reads and spells the new terms.	The learner; - relates the sides of a right angles triangle. - finds the missing sides of a right angled triangle.	effective communi cation observati on logical thinking	explanat ion discussi on demonst ration	finding missing sides of right angled triangle.	a chart showi ng proper ties of a right angled triangl e	mk maths book 6 page 294 P.6 curriculum page 178 and 179	
		base a ² +b ² = c ²			problem solving	observat ion				
4		Pythagorous theorem in isosceles triangle. Example. Use the figure belwo to answer the questions that follow.	The learner; - reads and interprets statements.	The learner; - solves for the unknown. - works out the missing sides of the triangle using the	observati on	explanat ion	applying pythagor as theorem to answer question s in	chalkb oard illustra tion	mk maths book 6 page 299-300 P.6 curriculum page 178 and 179	

		12cm S 10cm Q a) Find the value of x. (2x+1)cm = 13cm 2x+1 = 13 2x+1-1 = 13-1 2x = 12 2x = 12 2x = 2 x = 6 b) Find SQ a2 +b2 = c2 a2 +12x + 12x + 13x + 169 a2 + 144 = 169 a2 +144 = 169 + 144 a2 = 25 5 5 a2 = 25 5 5	pythogoras thereom. - calculates the area and perimeter of given triangles.	interpreta tion accuracy critical thinking problem	discussi on question and answer	isoscele s triangles			
		SQ = 2x5 (5x5) = 10cm c) Find: i) area ii) perimeter		con					
5	Solid figures and nets of figures	A collective name for solid figures or space figures is POLYHEDRON.		observati on accuracy	demonst ration Observa tion	drawing solid figures and nets	real object s	mk maths book 6 page 301-306 P.6 curriculum page 178 and 179	
		face Vertex			Explanat		chalkb oard		

					Triangular prism triangular face rectangular face face			effective communi cation problem solving	Discussi on question and answer		illustra tion		
ELC	<i>6</i>	ne lear NU	ner ma INT	integer	Integers and relates them to real Integers on a numberline.	The learner;	The learner;	observati		plotting	chalkb	mk maths	
		ME RA	EG ERS	s on a numbe	i) Positive integers ii) Neutral integers	- describes integers	 plots integers on a number 	on	explanat ion	and naming	oard illustra	book 6 page 195	
		CY		r line	iii) Negative integers	- reads and	line.			integers	tions	P.6	
					-4 -3 -2 -1 0 1 2 3 4 5	term positive, neutral & negative integers.	inverse of given integers.	interpreta tion	discussi on	number line		page 181 and 182	
					integer integer neutral					finding			
					integer			logical thinking	illustrati	inverse			
					2) Opposite/inverse of integers (additive inverse)				on				
					 The sum of an integer and its inverse is zero (0). Example -2 ++2 = 0, so the opposite of -2 			effective communi cation	question and				
					is +2.				answer				
					What is the additive inverse of +8? Let the inverse be k			problem solving					

			k + +8 = 0 k + +8 = 0 k + 8 = 0 k + 8 - 8 = 0 - 8 k = -8 3) Find the inverse of -5, Let the inverse be a a + -5 = 0 a + -5 = 0 a - 5 = 0 a - 5 + 5 = 0 + 5 a = +5								
	7	Repres enting integer s using arrows	Naming arrows on number lines. Example Which integer is represented by each arrow? a b colored b -5 - 4 - 3 - 2 - 1 colored 1 colored 2 colored 4 colored 5 colo	The learner; - names arrows on a number line - reads and interprets statements.	The learner; - writes integers on number lines. - draws number lines to show given integers.	drawing accuracy interpreta tion	demonst ration observat ion illustrati on	naming arrows on given number lines. drawing number lines and showing integers on them.	chalkb oard illustra tion	mk maths book 6 page 196 P.6 curriculum page 181 and 182	
9	1	Compa ring integer s	Comparing integers using >, < or = (symbols) Examples Use <, > or to complete correctly. 1) -4 - +4	The learner; - reads and interprets statements correctly.	The learner; - draws number lines - plot given integers on number lines.	effective communi cation	discussi on	compari ng given integers	chalkb oard illustra tions	mk maths book 6 page 197 P.6 curriculum	

			-6 -5 -4 -3 -2 -1 0 1 2 3 4 5 Note: Any integer on the left of the other is smaller. so -4 $-+12$ 12 = +12		 compares integers using <, = accurately. 	problem solving	question and answer			page 181 and 182	
2	g in s	orderin 9 nteger 5.	Order of integers. - Integers are also arranged in either ascending or descending order. - Integers on the right are greater than those on the left. Example i) Arrange -2, 3, -3, 2, 0 in ascending order. -5 -4 -3 -2 -1 0 1 2 3 4 5 Order: -3, -2, 0, -5 in descending order. 2) Arrange 1, -2, 0, -5 in descending order. -7 -6 -5 -4 -3 -2 -1 0 1 2 3 order. 2, 1, -2, -5	The learner; - describes the terms ascending and descending. - reads and interprets statements.	The learner; - differentiates between ascending and descending. - identifies given integers on a number line. - plots given integers on a number line. - arranges integers in the given order.	interpreta tion effective communi cation accuracy	illustrati on explanat ion observat ion	ordering given integers	chalkb oard illustra tions	mk maths book 6 page 197 P.6 curriculum page 181 and 182	
3	C id in s	Dperat on on nteger	Addition of integers using a number line. Examples. Add: 1) +2 + +3 = +5 <u>+3</u>	The learner; - reads and interprets statements	The learner; - draws number lines. - uses the number lines to	drawing	discussi on	adding integers using number lines.	chalkb oard illustra tions	mk maths book 6 page 198 P.6 curriculum	

		$\begin{array}{r} +2 \\ -4 -3 -2 -1 \underbrace{0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6}_{+5} \\ 2) -3 + -2 = -5 \\ -2 \\ -3 \\ -6 -5 -4 -3 -2 -1 \ 0 \ 1 \ 2 \ 3}_{-5} \end{array}$		add integers correctly.	problem solving	question and answer			page 181 and 182	
4	Operat ion on integer s	Addition of integers. Examples. Work out: i) +5 ++2 +5 ++2 +x+ = + +5 +2 = 7 ii) -12 + -16 -12 + -16 +x- = - -12 - 16 = -28	The learner; - reads and interprets statements correctly.	The learner; - relates signs in the middle. - adds integers without using number lines.	critical thinking interpreta tion	explanat ion discussi on	adding integers without number lines	chalkb oard illustra tions	mk. Maths book 6 page 199 P.6 curriculum page 181 and 182	
5		Subtraction of integers using a number line. Examples Subtract: i) $+3 - 6 = -3$ -5 -4 -3 -2 -1 0 1 2 3 4 5 ii) $+4 - 7 = -3$ -7 +4	The learner; - reads and interprets statements.	The learner; - draws number lines. - uses the number lines to subtract integers correctly.	effective communi cation problem solving	discover y question and answer	subtracti ng integers using number lines	chalkb oard illustra tions	mk maths book 6 page 204 P.6 curriculum page 181 and 182	

			-4 -3 -2 -1 0 1 2 3 4 5 6 -3								
6	Or ion int s.	perat n on teger	Subtraction of integers. Examples Simplify: i) $7 - 5$ iii) $-7 - +5$ $7 - 5$ $-7 - 5 - x + = 2$ $= 2$ $-7 - 5 = -12$ ii) $+7 - +5$ iv) 42 $+7 - +5 - x + 42$ $+7 - 5$ $4 + 2$ $= 2$ $= 6$	The learner; - reads and interprets statements.	The learner; - relates given signs. - subtracts integers without using number lines.	interpreta tion critical thinking	explanat ion discussi on	subtracti ng integers without number lines	chalkb oard illustra tions	mk maths book 6 page 201 P.6 curriculum page 181 and 182	
			Multiplicaton integers on a number line. Example Work out: $+3x+2=+6$ (3 groups of 2) +2 $+2$ $+2-3$ -2 -1 0 1 2 3 4 5 6 +6			effective communi cation	discover y	multiplyi ng integers using number lines	chalkb oard illustra tions	mk maths book 6 page 112 (old edition) P.6 curriculum page 181 and 182	
7			Multiplication of integers. Examples Work out: i) -6 x +3 ii) -6 x -3 -6 x +3 -6 x -3 = -18 = +18	The learner; - reads and interprets statements.	The learner; - draws a number line. - uses the number line to multiply integers	problem solving	question and answer	multiplyi ng integers	chalkb oard illustra tions	mk. Maths book 6 page 112 (old edition)	
	Op ior int s	perat n on teger	$\frac{\text{Division of integers}}{\text{Examples}}$ Simplify: i) +10 ÷ +2 = +÷+ +10 ÷ +2 = +		correctly. - relates the signs.	observati on	explanat ion	dividing integers	chalkb oard illustra tions	mk maths book 6 page 113 (old edition)	

				= +5 ii) $-8 \div +2 - \div +$ $-8 \div +2 = -$ = -4 iii) $-48 \div -8 - \div -$ $-48 \div -8 = +$ = +6 Emphasis on: $+ \div + = + - \div - = +$ $+ \div - = \div + = -$		- multiplies without a number line. - divides integers correctly.	interpreta tion	discussi on			P.6 curriculum page 181 and 182	
1 0	1		Inequa lities	Sets on a number line. a) Interpreting sets of integers on number lines. Example. Write the set y shown below. $-2 -1 \ 0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8$ Set y ={-1, 0, +1, +2, +3,+4,+5,+6} b) Representing sets of integers on a number line. Example. Represent X={-2, -1, -1, 0, 1, 2, 3} on a number line. $-4 \ -3 \ -2 \ -1 \ 0 \ 1 \ 2 \ 3 \ 4$	The learner; - interprets sets of integers on number line.	The learner; - represents sets of integers on number lines.	effective communi cation	discover y question and answer	interpreti ng and represe nting sets of integers on number lines.	chalkb oard illustra tions	mk maths book 6 page 114 (old edition) P.6 curriculum page 181 and 182	
	2			Finding solution sets for the inequalities. Examples. Give the solution set for: i) x if $x > 2$ -3 -2 -1 0 1 2 3 4 5 6 7 $x = \{3, 4, 5, 6,\}$ ii) p if $p \ge 2$	The learner; - reads and interprets statements correctly.	The learner; - draws number lines. - finds the solution set.	observati on interpreta tion	explanat ion discussi on	finding solution s sets.	chalkb oard illustra tions	mk maths book 6 page 115 old edition. Mk book 6 page 399 New edition	

		-4 -3 -2 -1 0 1 2 3 4 5 p={2, 3, 4, 5, 6}			effective communi cation				P.6 curriculum page 181 and 182	
3		Solving inequalities and finding solution sets. Example. Solve and find the solution set for x > +5 a) solve x+3>5 x+3-3>5-3 x > 2 b) Solution set for x. $-3-2-1 \ 0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8$ $x = \{3, 4, 5\}$	The learner; - reads and interprets statements.	The learner; - solves the inequalities. - finds the solution set for the inequalities.	logical thinking problem solving	discover y question and answer	solving inequalit ies and finding solution sets.	chalkb oard illustra tions	mk maths book 6 page 115 old edition. Mk. Maths book 6 page 400 New edition. P.6 curriculum page 181 and 182	
4	Solvin g inequa lities and finding solutio n sets	Solving inequalities and finding solution sets. Examples Solve and write the solution set for. i) $2a > 8$ 2a > 8 2a > 8 2a > 4 ii) Solution set for a -2 -1 0 1 2 3 4 5 6 7 8 $a = \{5, 6, 7, 8, 9, 10\}$ 2) $3t + 2 < 8$ 3t + 2 - 2 < 8 - 2 3t < 6	The learner; - reads and interprets statements correctly.	The learner; - identifies the signs. - solves the inequalities - finds solution set for the inequalities		explanat ion discussi on illustrati ons observat ion	solving and finding solution s sets for inequalit ies	chalkb oard illustra tions	mk maths book 6 page 116 old edition. Mk maths book 6page 398 New edition P.6 curriculum page 181 and 182	

ELO	: Th	ne lear	mer fo	rms and s	3 3 t = 2 solution set for t -5 -4 -3 -2 -1 0 1 2 3 4 t = {1, 0, -1, -2, -3,} 3) -10 < 2x < 4 $-\frac{10}{2} < \frac{2x}{2} < \frac{4}{2}$ -5 < x < 2 olves algebraic problems.				question and answer				
	5	AL GE BR A	AL GE BR A	Algebr aic phrase	Writing Algebraic phrases.Examplesi) Add b to ab to a = a + bii) Multiply x and yX x y = xyExpressing phrasesi) 2 more than p= p + 2ii) 5 years younger than x.= $x - 5$ iii) square y = y x y= y^2	The learner; - reads and interprets statements.	The learner; - identifies the operations to be used. - writes algebraic expressions/phr ases. - identifies like terms. - collects and simplifies like terms.	critical thinking problem solving	explanat ion discussi on	forming Algebrai c expressi ons	chalkb oard illustra tions	mk maths book 6 page 377 P.6 curriculum page 184 and 185	
				Collect ing and simplif ying like terms.	Collecting like terms. Examples i) $x+y+2x+4y$ x+2x+y+4y 3x+5y ii) $4p+9r - p-6r$ 4p-p + 9r-6r 3p+3r			creative thinking effective communi cation	question and answer	collectin g and simplifyi ng like terms.	chalkb oard illustra tions	mk maths book 6 page 378 P.6 curriculum page 184 and 185	

				iii) 4n+3t-m+5n+6m-4t 4n+5n+3t-4t+6m-m 9n-t+5m								
	6		Remov ing bracke ts.	Removing brackets and simplifying. Example. i) 2 (2m+3) $2x2m + 3x2$ $4m + 6$ ii) 4 (p+1) - 5(p-3) $4xp+1x4-5xp-3x-5$ $4p+4-5p+15$ $4p-5p+4+15$ $-p + 19$ $= 19-p$	The learner; - reads and interprets statements.	The learner; - relates signs - removes brackets and simplifies correctly.	effective communi cation critical thinking	explanat ion discussi on	written activity involving removin g brackets and simplifyi ng equation s.	chalkb oard illustra tions	mk. Maths book 6 page 380 and page 382 P.6 curriculum page 184 and 185	
	7			Removing brackets involving fractions. Examples Remove the brackets and simplify: i) $\frac{1}{2}$ (8a + 4b) $\frac{1}{2}$ x 8a + 4b x $\frac{1}{2}$ 1x4a + 2b x 1 4a + 2b ii) $\frac{1}{2}$ (2x+2y) - $\frac{1}{4}$ (12x16y) $\frac{1}{2}$ x 2x+2yx $\frac{1}{4}$ - $\frac{1}{4}$ x 12x-16yx - $\frac{1}{4}$ 1xx+yx1-1x3x-4yx-1 x+y - 3x+4y x-3x+y+4y -2x + 5y 5y - 2x	The learner; - reads and interprets statements.	The learner; - removes brackets - simplifies fractions using the correct factors. - collects the like terms.	problem solving logical thinking	observat ion question and answer	simplifyi ng brackets involving fractions	chalkb oard illustra tions	mk maths book 6 page 381 P.6 curriculum page 184 and 185	
1 1	1		Subtra ction	Definition of subtraction. To substitute is to replace. Examples.	The learner;	The learner;	effective communi cation	explanat ion	answeri ng oral and	chalkb oard	mk maths book 6 page 376	

			Given that a=2 and b=6, evaluately, find the value of work out etc: i) b + a 6 + 2 = 8 ii) 2a + 3b 2xa + 3 x b 2x2 + 3x6 4 + 18 = 22	- describes the term substitution	- substitutes letters with figures/numbers.	interpreta tion	discussi on	written question s	illustra tions	P.6 curriculum page 184 and 185	
2		solvin g equati ons	Solving simple equations <u>unvolving addition and</u> <u>subtraction.</u> <u>Examples</u> Solve these equations i) $x + 4 = 12$ x+4-4 = 12-4 x = 8 ii) $b - 3 = 8$ b - 3+3=8+3 b = 11	The learner; - reads and interprets statements	The learner; - identifies the sign in an equation - solves equations correctly. - forms equations and solves them thereafter.	logical thinking problem solving	guided discover y question and answer	solving equation in written activity	chalkb oard illustra tions	mk maths book 6 page 385 and 386 P.6 curriculum page 184 and 185	
			Forming and solving equations. Examples i) Amanda had some pineapples, she bought 6 more pineapples and got 11 pineapples altogether. H ow many pineapples had she before? Let the pineapples be t. t + 6 = 11 t + 6 - 6 = 11 - 6 t = 5			interpreta tion effective communi cation	explanat ion guided discussi on	forming and solving equation	chalkb oard illustra tions	mk maths book 6 page 85 and 386 P.6 curriculum page 184 and 185	

		ii) Salama had some books in her bag. 4 of them were stolen and she remained with 16 books. How many books did she have at first? Let the number of books be y. y - 4 = 16 y - 4+4 = 16 + 4 y = 20			logical thinking					
3		Solving equations involving division. Examples. Solve: i) $2y = 8$ $\frac{2y}{2} = \frac{8}{2}$ ii) $m + 4m = 20$ 5m = 20 $\frac{5m}{5} = \frac{20}{5}$ m = 4	The learner; - reads and interpret statements.	The learner; - finds the unknown by dividing. - collects like terms - identifies the signs used. - removes brackets. - solves equations correctly.	problem solving	question and answer	solving for the unknow n	chalkb oard illustra tions	mk maths book 6 page 387 P.6 curriculum page 184 and 185	
	Solving equatio ns	Solving equations Examples Solve these equations i) $2x - 3 = 9$ 2x - 3 + 3 = 9 + 3 2x = 12 2x = 12 2x = 12 2x = 6 ii) $3(m+1) = 6$ 3xm+1x3 = 6 3m + 3 = 6 3m + 3 = 6 - 3 3m = 3 3m = 3			effective communi cation logical thinking	explanat ion discussi on	solving equation	chalkb oard illustra tions	mk maths book 6 page 383 P.6 curriculum page 184 and 185	

			3 3 m = 1								
4			Solving equations with the <u>unknown on both sides</u> . Example Solve: 4h - 3 = h + 6 4h - 3+3 = h + 6+3 4h = h+9 4h-h = h-h+9 3h = 9 3h = 9 3h = 3 3h = 3	The learner; - reads and interprets statements correctly.	The learner; - identifies the like terms. - solves given equations correctly. - removes brackets. - relates signs - collects like terms and solves equations.	problem solving critical thinking	guided discover y question and answer	solving equation	chalkb oard illustra tions	mk maths book 6 page 393 P.6 curriculum page 184 and 185	
		Solving equatio ns	Solving equations with unknown on both sides involving brackets. Example. Solve: 3 (y-2) = 2(y-1) 3xy - 2x3 = 2xy - 1x2 3y - 6 = 2y - 2 3y-6+6 = 2y-2+6 3y = 2y+4 3y-2y = 2y-2y+4 y = 4			logical thinking interpreta tion	explanat ion discussi on	solving equation	chalkb oard illustra tions	mk maths book 6 page 292 P.6 curriculum page 184 and 185	
5			Solving fractional equations. Examples Solve: i) $\underline{a} = 12$ $\underline{a} = 15$	The learner; - reads and interprets statements.	The learner; - changes the whole number to a fractions. - finds the LCM of the denominators. - forms equations and solves thereafter.	effective communi cation problem solving	guided discover y question and answer			mk maths book 6 page 389 P.6 curriculum page 184 and 185	

		$ \begin{array}{r} \frac{1}{4} d + 3 \cdot 3 = 15 \cdot 3 \\ \frac{1}{4} d = 12 \\ \frac{1}{4} d = \frac{12}{1} \\ 4 x \frac{1}{4} d = 12x4 \\ d = 48 \end{array} $								
	Solving equatio ns	Forming and solving fractional equationa from word problems. Example i) Find the number of oranges that can be divided among 5 boys so that each boy gets 6 oranges. Let the number of oranges be a $\frac{a}{5} = 6$ $\frac{a}{5} = \frac{6}{5}$ 5 = 1 5xa = 6x5 5 = a = 30			effective communi cation interpreta tion	explanat ion discussi on	forming and solving equation	chalkb oard illustra tions	mk maths book 6 page 389 P.6 curriculum page 184 and 185	
		$\begin{array}{r} \underline{Solving \ equations} \\ \underline{Example} \\ Solve: \\ i) \ 5(t+1)-3(t-1) = 14 \\ 5xt+1x5-3xt-1x-3 = 14 \\ 5t+5-3t+3 = 14 \\ 5t-3t+5+3 = 14 \\ 2t+8 = 14 \\ 2t+8-8 = 14 \\ 2t+8-8 = 14-8 \\ 2t = 6 \\ \underline{2t} = 6 \\ \underline{2t} = 6 \\ \underline{2t} = 2 \\ t = 3 \end{array}$			logical thinking problem solving	guided discover y question and answer	solving equation	chalkb oard illustra tions	mk maths book 6 page 292 P.6 curriculum page 184 and 185	
6	Solvin 9 equati ons	Forming and solving equations Examples	The learner; - reads and interprets statements.	The learner; - forms and solves equations correctly.	interpreta tion	explanat ion	Forming and solving equation	chalkb oard illustra tions	mk maths book 6 page 388 and 390	

	i) Anna is twice as old as Annet. Their total age is 18 years. How old is each? Annet Anna Total y 2xy 18			effective communi cation	discussi on			P.6 curriculum page 184 and 185	
	y +2y = 18 3y = 18 $\frac{3y}{3} = \frac{18}{3}$ y = 6 Annet is y = 6yrs			logical thinking	guided discover y				
	Anna is $2y = 2xy$ = $2x6$ = $12yrs$			problem solving	question				
	ii) A boy is 2 years older than his sister. Their total age is 20 years. How old is the sister? Sister Boy Total m m+2 20				and answer				
	m+m+2 = 20 2m +2 = 20 2m+2-2 = 20-2 2m = 18 2m = 18								
	$\frac{2111}{2}$ $\frac{-10}{2}$ m = 9 The sister is m = 9years.								
7 Indices	Products of powers with the same base. Example Simplify: i) m ² xm ² = mxmxmxmxm = m ⁵	The learner; - describes the term indices - reads and interprets	The learner; - applies the index rule to find products of powers with the same base.	interpreta tion	explanat ion	multiplyi ng powers with the same base	chalkb oard illustra tions	mk maths book 6 page 383	
	OR: m ² x m ³ = m ²⁺³	statements.	- divides powers of the same	logical thinking				P.6 curriculum	

	= m^5 ii) 4y2 x 3y4 = 4xyxyx3xyxyxyxy = 4x3xyxyxyxyxyy = 12y6 OR: 4y2x3y4=4x3xy^{2+4} = 12xy^6 = 12y^6	base using long division and index rule.		guided discussi on			page 184 and 185	
7	Dividing powers of the same base. Examples. Simplify: i) $p7 \div p5$ = $pxpxpxpxpxp$ pxpxpxpxp = $pxp = p^2$ OR: $p7 \div p5 = p^{7.5}$ $= p^2$ ii) 12t4 ÷ 3t2 12xtxtxtt 3xtxt = $4xtxt = 4t^2$		effective communi cation Problem solving	Questio n and answer	Dividing powers with the same base.	chalkb oard illustra tions	mk maths book 6 page 384 P.6 curriculum page 184 and 185	