DOYEN PUBLISHERS
SCHEMES OF WORK TERM II 2025
GRADE 9 MATHEMATICS

WK	Lesson	Strand	Sub-strand	Lesson Learning Outcome	Learning Experiences	Key Inquiry Question	Learning Resources	Assessment	Reflection
1	1	Measurements.	Area.	By the end of the lesson, the learner should be able to: a) Identify the properties of regular polygons. b) Calculate the sum of the interior and exterior angles of each of the polygons. c) Acknowledge the properties of the different polygons.	In groups, learners are guided to; Identify the different types of polygons. Draw equilateral triangle,square,regular hexagon an regular pentagon on charts and note books. Discuss the properties of regular polygons. Collaborate in finding the sum of the interior and exterior angles of each of the drawn polygons using the appropriate formula. Share their findings in class for assessment.	How do you find the sum of interior and exterior angles of regular polygons?	Top Scholar Maths pg 87. Lesson notes. Charts.	Observation Oral questions. Oral discussion. Checklists.	
	2	Measurements.	Area.	By the end of the lesson,the learner should be able to: a) Identify the formula for calculating the area of a pentagon.	In groups,learners are guided to; Identify the formula for calculating the area of a pentagon. Observe the teacher as he/she illustrates how to	How do we work out the area of a pentagon?	Cut outs of pentagon. Top Scholar Maths pg 87-89.	Written Assessment. Assessment rubrics. Checklists. Oral questions.	

			b) Calculate the area of a pentagon in different situations. c) Acknowledge the formula for calculating the area of a pentagon.	calculate the area of a pentagon using cut outs of the pentagons. Collaborate in calculating the area of pentagons in different situations and share their findings.		Lesson notes. Teacher`s Guide. Rulers and manillas.	Illustrations.	
	3	Measurements.	Area.	By the end of the lesson, the learner should be able to: a) Identify the formula for calculating the area of a hexagon. b) Calculate the area of hexagons in different situations. c) Enjoy working out the area of hexagons.	In groups or pairs,learners are guided to; Prepare cut outs of regular hexagons. Identify the formula for finding the area of hexagons. Observe teacher as he/she illustrates how to find the area of hexagons using the cut outs. Collaborate in calculating the area of hexagons in different situations and share their findings.	How do you find the area of hexagons?	Top Scholar Maths pg 90-91. Cut outs of hexagon. Teacher`s guide. Calculators.	Observation. Written Assessment. Assessment rubrics. Checklists. Oral questions.	
	4	Measurements.	Area.	By the end of the lesson, the learner should be able to: a) Outline the steps of making models triangular and rectangular based prisms using manillas. b) Make models of triangular and	In groups,learners are guided to; Use digital devices to search and watch clips on making models triangular and rectangular based prisms using manillas. Sketch the nets of the solids.	How can you make models of prisms?	Manillas. Scissors. Pencils and rulers. Top Scholar Maths pg 92. Digital devices.	Observation. Oral questions. Portifolios. Checklists. Assessment rubrics.	

				rectangular based prisms using manillas. c) Enjoy making triangular and rectangular based prisms using manillas.	Collaborate in making models of the rectangular and triangular based prisms using manillas. Display their made models of prisms.		Video clips.	
	5	Measurements.	Area.	By the end of the lesson, the learner should be able to: a) Identify the steps for calculating the surface area of a rectangular based prism. b) Work out the surface area of a rectangular based prism. c) Enjoy working out surface area of rectangular prisms.	In groups,learners are guided to; Draw the net of a rectangular based prism in books. Discuss the steps for calculating surface area of rectangular prisms using the drawn prisms. Use the drawn nets to calculate the surface area of rectangular based prisms. Share their findings with peers for assessment and feedback.	How do you calculate the surface area of rectangular based prisms?	Drawn nets of rectangular prisms. Top Scholar Maths pg 92-93. Teacher`s Guide.	Assessment rubrics. Checklists. Written Assessment. Oral discussion. Illustrations. Peer Assessment. Oral questions.	
2	1	Measurements.	Area.	By the end of the lesson, the learner should be able to: a) Outline the steps of calculating the area of a triangular based prisms. b) Work out the surface area of triangular based prism. c) Enjoy working out the surface area of	In groups,learners are guided to; Individually,draw a net of the triangular based prism. Discuss the steps of calculating the surface area of triangular based prisms using the drawn nets. Use the models and drawn nets of the	How do we calculate the surface area of triangular prisms?	Top Scolar Maths pg 93-95. Models and drawn nets of triangular prism. Charts. Teacher`s Guide.	observations. Assessment rubrics. Written Assessment. Checklists. Oral questions. Peer Assessment.	

			triangular based prisms.	triangular prism to calculate surface area of triangular prisms in different situations. Share their findings with peers for assessment and feedback.		Chalkboard & chalks.	
2	Measurements.	Area.	By the end of the lesson,the learner should be able to: a) Identify the steps of calculating the surface area of triangular based pyramids. b) Work out the surface area of triangular based pyramids c) Acknowledge the steps of working out surface area of triangular based pyramids.	In groups,learners are guided to; Individually draw a net of a surface area of triangular based pyramids. Use digital devices to search and watch clips on finding the surface area of a triangular based pyramids. Identify the formula and steps of finding the surface area of triangular based pyramids. Apply the identified formulas and steps to work out surface area of triangular based pyramids using nets. Share their findings with peers for assessment & feedback.	How do you calculate the surface area of triangular based pyramids?	Top Scholar Maths pg 97-98. Video clip on calculating surface area of triangular pyramids. Digital devices. Nets of triangular based pyramids. Teacher`s Guide. Chalkboard & chalks.	Oral questions. Oral discussion. Assessment rubrics. Written Assessment. Checklists.	
3	Measurements.	Area.	By the end of the lesson, the learner should be able to: a) Identify the steps and formula of calculating the	In groups,pairs or individually,learners are guided to;	How do we find the surface area of square	Top Scholar Maths pg 95-96 & 98.	Assessment rubrics. Checklists. Peer Assessment.	

				surface area of square-based pyramids. b) Work out the surface area of square based pyramids using nets. c) Enjoy working out the surface area of square based pyramids.	Draw nets of square based pyramids on charts and books. Search and watch a clip on finding the surface area of a square based pyramids. Identify the steps and formula for calculating the surface area of square based pyramids. Use the identified formulas of area of plane figures and work out the surface area of square based pyramids. Share their findings with peers for assessment and feedback.	based pyramids?	Video clips. Digital devices. Teacher`s Guide. Nets of square based pyramids. Chalkboard & chalks.	Written Assessment. Oral questions and discussion.	
	4	Measurements.	Area.	By the end of the lesson, the learner should be able to: a) Identify the steps and formula of calculating surface area of rectangular based pyramids. b) Work out the surface area of rectangular based pyramids. c) Enjoy working out the surface area of rectangular based pyramids using their nets.	In groups,learners are guided to; Individually draw the nets of rectangular based pyramids in books and charts. Search and watch a clip on finding the surface area of rectangular based pyramids. Discuss the steps of finding the surface area of rectangular based pyramids as observed from the clips. Use the nets drawn and steps to work out the	How do we calculate the surface area of rectangular based pyramids?	Top Scholar Maths pg 97-98. Video clip. Digital devices. Drawn nets of rectangular based pyramids. Teacher`s Guide.	Written Assessment. Checklists. Oral questions and discussion. Assessment rubrics.	

					surface area of rectangular based pyramids. Share their findings with peers for assessment and feedback.				
	5	Measurements	Area	By the end of the lesson, the learner should be able to: a) Identify the formula for calculating the area of a sector and segment of a circle. b) Calculate the area of a sector and segment of a circle. c) Acknowledge the formulae for calculating the area of a sector and segment of a circle.	In groups,learners are guided to; Use manilla papers to draw a circle with a sector,chord and a segment and discuss the relationship. Make cut outs of a sector and a segment. Identify the formula and steps for calculating area of a sector and segment of a circle using relevant examples. Collaborate in working out the area of sectors and segment. Share their findings with peers for assessment and feedback.	How do we find the area of a sector and segment of a circle?	Top Scholar Maths pg 98-100. Teacher`s Guide. Chalkboard & chalks. Chart showing the sector and segment.	Assessment rubrics. Written Assessment. Illustrations. Peer Assessment. Checklists.	
3	1	Measurements.	Area.	By the end of the lesson, the learner should be able to: a) Identify the formula for calculating the surface area of a cone. b) Work out the surface area of a cone in real life situations.	In groups,learners are guided to; Draw a net of a cone on manilla papers. Use digital devices to search and watch a clip on calculating the surface area of a cone.	How do we find the surface area of cones?	Top Scholar Maths pg 101-102. Nets of cones. Manillas. Teacher`s Guide. Video clip.	Assessment rubric. Written Assessment. Oral questions. Peer assessment. Checklists.	

				c) Enjoy calculating the surface area of cones in real life situations.	Identify the formula and steps for calculating the surface area of a cone. Open the cone to form a net and determine surface area of the curved surface. Collaborate in working out the surface area of a closed and an open cone.		Digital devices.		
	2	Measurements.	Area.	By the end of the lesson,the learner should be able to: a) Identify the formula for calculating the surface area of a sphere. b) Calculate the surface area of a sphere in real life situations. c) Enjoy calculating the surface area of spheres in different situations.	In groups or pairs,learners are guided to, Identify the formula for calculating the surface area of a sphere. Observe the teacher as he/she illustrates how to calculate the surface area of a sphere using relevant examples. Use the identified formula to work out the surface area of different sizes of spherical balls. Share their findings in class for assessment and feedback.	How do you calculate the surface area of spheres?	Top Scholar Mathematics pg 102-103. Teacher`s Guide. Chalkboard & chalks.	Checklists. Assessment rubrics. Written Assessment. Oral questions.	
	3	Measurements.	Area.	By the end of the lesson,the learner should be able to: a) Identify the uses of area in real life situations. b) Use digital devices to search for	In groups or pairs,learners are guided to; Brainstorm and present the uses of area in real life situations.	Where is area applied in real life situations?	Top Scholar Maths. Digital devices. Lesson notes.	Oral questions. Oral discussion. Checklists. Assessment rubrics.	

			information on the uses of area in real life situations. c) Acknowledge the uses of area in real life situations.	Conduct a research online on the uses of area in real life situations and take notes. Discuss the uses of area in real life situations and make a class presentation.				
4	Measurements.	Volume of Solids.	By the end of the lesson, the learner should be able to: a) Identify the formula for calculating the volume of a triangular based prism. b) Work out the volume of triangular based prisms. c) Acknowledge the formula for calculating the volume of triangular based prisms.	In groups or pairs,learners are guided to; Identify containers and objects that resemble triangular prisms in the environment. Discuss the models of a prism. Identify the formula for calculating the volume of a triangular based prism. Use the formula to work out the volume of triangular-based prisms. Share their findings for assessment and feedback.	How do you determine the volume of a triangular based prism?	Top Scholar Maths pg 104-107. Containers and objects. Teacher`s Guide. Models of triangular prisms.	Observation schedule. Checklists. Assessment rubrics. Oral questions. Written Assessment.	
5	Measurements.	Volume of Solids.	By the end of the lesson,the learner should be able to: a) Identify the formula for calculating the volume of a rectangular based prism.	In groups ,learners are guided to; Identify the objects and containers that resemble the rectangular prisms. Identify the formula for calculating the volume	How do you find the volume of a rectangular based prism?	Top Scholar Maths pg 106-107. Teacher`s Guide.	Assessment rubric. Checklists. Oral questions. Written Assessment.	

								Chalkboard. Model of a rectangular based prism. Containers and objects	Peer Assessment.	
				b) Work out the volume of rectangular based prisms. c) Enjoy calculating the volume of rectangular based prisms.	of rectangular based prisms. Observe teacher as he/she illustrates how to calculate the volume of rectangular based prisms using the identified formula. In pairs or individually,learner to apply the formula in working out the volume of rectangular based prisms. Share their findings with peers for assessment and feedback.					
4	1	Measurements.	Volume of Solids.	By the end of the lesson, the learner should be able to: a) Identify the formula for calculating the volume of square based pyramids. b) Calculate the volume of a square based pyramid. c) Have fun working out the volume of square based pyramid.	In groups,learners are guided to; Draw a net of the square based pyramid on manillas. Use digital device to search and watch clips on how to calculate the volume of a square based pyramids. Identify the formula for calculating the volume of a square based pyramid. Use the identified formula to work out the volume of square based pyramids.	How do we calculate the volume of a square based pyramids?		Top Scholar Maths pg 107-108. Video clips. Digital devices. Teacher`s Guide. Manillas. Nets of square based pyramids. Calculators.	Assessment rubrics. Checklists. Written Assessment Oral questions.	

				Share their findings with peers for assessment and feedback.				
	2	Measurement.	Volume of solids.	By the end of the lesson,the learner should be able to: a) Identify the formula of calculating the volume of a rectangular based pyramids. b) Calculate the volume of a rectangular based pyramids. c) Acknowledge the formula and steps for calculating the volume of rectangular based pyramids.	In groups,learners are guided to; Identify the formula for calculating the volume of a rectangular based pyramid. Observe teacher as he/she illustrates how to apply the formula in working out the volume of a rectangular based pyramid. Individually or in pairs,learners to work out volume of rectangular based pyramids in different situations using the identified formula. Share their findings with peers for assessment and feedback.	How do we calculate the volume of a rectangular based pyramid?	Top Scholar Maths pg 109-110. Chalkboard & chalks. Teacher`s Guide.	Assessment rubrics. Checklists. Written Assessment. Oral questions.	
	3	Measurement.	Volume of solids.	By the end of the lesson,the learner should be able to: a) Identify the formula for calculating the volume of a triangular based pyramid. b) Calculate the volume of a triangular based pyramid.	In groups or pairs,learners are guided to; Identify the formula for calculating the volume of a triangular based pyramid. Observe teacher as he or she illustrates how to calculate the volume of a triangular based	How do we calculate the volume of triangular based pyramids?	Top Scholar Maths pg 109-110. Teacher`s Guide. Chalkboard & chalk. Model of a triangular	Assessment rubrics. Checklists. Oral questions. Written Assessment.	

				c) Enjoy working out the volume of triangular based pyramid.	pyramid using the identified formula. Use the formula to calculate the volume of triangular based pyramids using the learnt formula. Share their findings in class for assessment and feedback.		based pyramid.		
	4	Measurement.	Volume of Solids.	By the end of the lesson, the learner should be able to: a) Identify the formula for calculating the volume of a cone b) Work out the volume of a cone in real life situations. c) Acknowledge the formula for calculating the volume of a cone.	In groups or pairs,learners are guided to; Draw a net or model of a cone on manilla papers. Use digital device to search and watch a video on how to calculate the volume of a cone. Identify the formula for calculating the volume of a cone. Apply the formula in working out the volume of cones in different situations.	How do we find out the volume of cones?	Top Scholar Maths pg 110-112. Chalkboard & charts. Manillas papers & pencils. Digital devices. Video clips.	Assessment rubrics. Checklists. Written Assessment Oral questions. Peer Assessment.	
	5	Measurement.	Volume of Solids.	By the end of the lesson,the learner should be able to: a) Identify the formula and steps for calculating the volume of frustums.	In groups,learners are guided to; Model a frustrum using locally available materials. Use digital devices to search and watch a clip	How do we determine the volume of a frustum?	Top Scholar Maths pg 112-115 Video clip. Digital devices.	Assessment rubrics. Checklists. Written Assessment. Peer Assessment.	

				Specific Learning Outcomes	Learning Experiences	Key Inquiry Question	Learning Resources	Assessment	
				b) Determine the volume of a frustum in real life situations. c) Show interest to learn how to determine the volume of a frustrum.	on determining the volume of a frustum. Identify the formula for calculating the volume of a frustum. Collaborate in working out the volume of frustums using the learnt formula. Share their findings with peers for assessment and feedback.		Chalkboard & chalks. Models of frustums. Calculators.		
5	1	Measurement.	Volume of solids.	By the end of the lesson, the learner should be able to: a) Identify the formula for calculating the volume of a sphere. b) Calculate the volume of a sphere in real life situations. c) Acknowledge the formula for working out the volume of spheres.	In groups or pairs,learners are guided to; Use digital devices to search and watch a video clip on how to find the volume of a sphere. Identify the formula for calculating the volume of a sphere. Collaborate in calculating the volume of spheres using the learnt formula. Share their findings with peers for assessment and feedback.	How do we calculate the volume of spheres?	Top Scholar Maths pg 115-116. Video clip. Digital devices. Chalkboard & chalks. Calculators.	Assessment rubrics. Checklists. Oral questions. Written Asssessment.	
	2	Measurement.	Volume of solids.	By the end of the lesson,the learner should be able to: a) Identify the use of volume of solids in real life situations.	In groups,learners are guided to; Brainstorm and present on the use of volume of solids in real life situations.	How do we use the volume of solids in real life situations?	Top Scholar Maths. Digital devices.	Oral discussion. Checklists. Assessment rubrics.	

			b) Use digital devices to find out the use of volume of solids in real life situations. c) Promote use of volume and capacity of different containers in real life situations.	Use digital devices to search for information on the applications or use of volume of solids in real life situations. Discuss the use of volume of solids in real life situations and then make a class presentation.				Oral presentation.
	3	Measurements.	Mass,Volume,Weight and Density.	By the end of the lesson,the learner should be able to: a) Identify the instruments and tools used in weighing materials in the locality b) Convert units of mass from one form to another in different situations. c) Enjoy converting units of mass from one form to another.	In groups or pairs,learners are guided to; discuss the different instruments and tools used in weighing materials or objects and relate to consumer awareness and protection. Collect and weigh different materials or objects using at least one instrument or tool. study a conversion chart and discuss how to convert different units of mass from one form to another. Convert the given units of mass from one form to another in different situations and give feedback for assessment.	How do you weigh materials and objects? How do you convert the different units of mass from one form to another?	Top Scholar Maths pg 117-119. Conversion charts. Electronic balance. Different materials and objects for weighing. Lesson notes. Teacher's Guide.	Assessment rubrics. Checklists. Practical Activities. Written Assessment. Oral questions. Peer Assessment.
	4	Measurements.	Mass,Volume,Wei	By the end of the lesson, the learner should be able to:	In groups,learners are guided to;	What is the relationship	Top Scholar	Checklists.

			ght and Density.	a) Define the terms mass and weight and give their SI units. b) Relate mass and weight in real life situations. c) Acknowledge the relationship between mass and weight.	use a digital device to search for the definition of mass and weight and their SI units and note down in books. discuss the relationship between mass and weight. Use selected instruments and tools to measure the mass of objects in kg and in Newton. Find weight of objects given the mass and vice versa using a formula..	between mass and weight?	Maths pg 119-120. Weighing tools and instruments. Different objects and materials. Teacher's Guide. Lesson notes.	Assessment rubrics. Written Assessment. Oral questions. Practical activities.	
	5	Measurement.	Mass, Volume, Weight and Density.	By the end of the lesson,the learner should be able to: a) Explain how to determine mass, volume and density in different situations. b) Determine mass, volume and density in different situations. c) Enjoy carrying out activities relating mass, volume and density using different substances.	In groups,learners are guided to; discuss how to determine mass, volume and density in different situations. carry out activities relating mass and volume to density using containers or different substances and record their findings in a table. identify the formula for calculating the density after getting the mass and volume of a substance. calculate the density of different objects after getting their mass and	How do you determine mass, volume and density in different situations?	Top Scholar Maths pg 120-121. Calculators. objects;Coins,stones, padlock. Measuring cylinders. Electronic balance. Water. Recording table.	Practical Activities. Checklists. Assessment rubrics. Observation schedule.	

				volume and then share their findings.					
6	1	Measurement.	Mass, Volume, Weight and Density.	By the end of the lesson, the learner should be able to: a) Identify the formula for determining density of objects given mass and volume. b) Calculate the density of different objects given the mass and volume in different situations. c) Enjoy finding the density of objects given mass and volume.	In groups, learners are guided to; Identify the formula for finding the density of objects given mass and volume. practice finding the density given mass and volume using relevant examples. collaborate in working out the density of objects given the mass and volume using the formula learnt. share their findings in class for assessment and feedback.	How do you determine the density of objects given the mass and volume?	Top Scholar Maths pg 121-122. Calculators. Teacher's Guide. Chalkboard and chalks. Illustration chart.	Assessment rubrics. Written Assessment. Checklists. Oral questions. Peer and self Assessment.	
	2	Measurement.	Mass, Volume, Weight and Density.	By the end of the lesson, the learner should be able to: a) Identify the formula for determining mass of objects given volume and density. b) Calculate the mass of objects given volume and density. c) Enjoy calculating the mass of objects given volume and density.	In groups or pairs, learners are guided to; Identify the formula for determining the mass of objects given the volume and density. discuss how to determine mass given the volume and density using relevant examples. collaborate in using the learnt formula to find the mass of objects given volume and density.	How do we find mass given the volume and density?	Top Scholar Maths pg 122. Calculators. Teacher's Guide. Chalks and Chalkboard.	Assessment rubrics. Checklists. Written Assessment. Oral discussion.	

				share their findings for assessment and feedback.					
	3	Measurement.	Mass, Volume, Weight and Density.	By the end of the lesson,the learner should be able to: a) Identify the formula for determining volume given the mass and density. b) Calculate the volume given mass and density. c) Enjoy finding the volume given mass and density.	In groups or pairs,learners are guided to; identify the formula for determining volume given the mass and density. observe teacher as he/she illstrates how to find the volume given the mass and density. Use the learnt formula to find the volume of substances given the mass and density. share their findings for assessment and feedback.	How do you determine the volume of given mass and density?	Top Scholar Mathematics pg 123. Teacher's Guide. Calculators. Chalkboard and Chalks.	Assessment rubrics. Written Assessment. Checklists. Oral questions. Peer Assessment.	
	4	Measurement.	Mass, Volume, Weight and Density.	By the end of the lesson, the learner should be able to: a) Identify the uses of density in daily life. b) Apply density to real life situations. c) Recognize the use of density in daily life.	In groups,learners are guided to: brainstorm on the applications of density in real life situations. use digital devices to search online on the applications/uses of density in real life situations and take notes. discuss the applications of density in real life situations and present in class.	How can we apply density to real life situations?	Top Scholar Mathematics. Digital devices. Lesson notes Charts.	Assessment rubrics. Oral discussion. Oral presentation. Checklists.	

					collaborate in applying density to real life situations.				
	5	Measurement.	Time,Distance and Speed.	By the end of the lesson,the learner should be able to: a) Identify the activities that involves measuring distances and time. b) Conduct activities that involves measuring distances and time. c) Have fun engaging in activities involving measuring distances and time.	In groups,learners are guided to; brainstorm and present on the activities that involves measuring distances and time. engage in activities that will involve measuring distances and time e.g running track events to determine speed. record the distances covered and time taken in a table. determine the speed taken by each participant using a formula.	How do we observe speed in daily activities? Which day to day activities involve measuring distances and time?	Top Scholar Mathematics pg 124. Stopwatches. School Field. Recording tables. Calculators.	Practical Activities. Checklists. Portfolios. Peer Assessment.	
7	1	Measurement.	Time,Distance and Speed.	By the end of the lesson, the learner should be able to: a) Identify the formula for calculating speed in km/h in real life situations. b) Work out speed in km/h in real life situations. c) Appreciate the use of time and distance in real life situations.	In groups,learners are guided to; discuss and relate distance and time. identify the formula for formula working out speed in km/h. apply the formula to work out speed in km/h in real life situations. share their findings in class for assessment and feedback.	How do we find speed in km/h?	Top Scholar Maths pg 124-125. Calculators. Teacher's Guide. Charts.	Assessment rubrics. Checklists. Oral questions. Peer Assessment. Written Assessment.	

		Measurement.	Time, Distance and Speed.	By the end of the lesson, the learner should be able to; a) Identify the formula for calculating speed in m/s. b) Work out speed in m/s in real life situations. c) Enjoy working out speed in m/s in real life situations.	In groups, learners are guided to; identify the formula for calculating speed in m/s. Use the learnt formula in calculating speed in m/s in real life situations. share their findings in class for assessment and feedback.	How do you find speed in m/s?	Top Scholar Maths pg 125. Teacher's Guide. Chalkboard and Chalks. Chart. Calculators.	Written Assessment. Checklists. Assessment rubrics. Oral questions.	
3		Measurement.	Time, Distance and Speed.	By the end of the lesson, the learner should be able to: a) Identify the formula for working out the average speed in real life situations. b) Work out average speed in real life situations. c) Acknowledge the formula for finding average speed.	In groups, learners are guided to; discuss how to find the average speed in different situations. identify the formula for calculating average speed. observe the teacher as he/she illustrates how to find average speed using examples and note in exercise books. Work out the average speed in real life situations using the learnt formula.	How do we calculate the average speed?	Top Scholar Maths pg 126-128. Teacher's Guide. Chalkboard and chalks. Calculators.	Assessment rubrics. Checklists. Peer Assessment. Oral discussion. Written tests.	
4		Measurement.	Time, Distance and Speed.	By the end of the lesson, the learner should be able to: a) Identify the formula for determining velocity in real life situations. b) Determine velocity in real life situations.	In groups, learners are guided to; discuss the difference between velocity and speed. identify the formula for finding the velocity in different situations.	What is the difference between velocity and speed? How do determine velocity?	Top Scholar Maths pg 128-129. Calculators. Teacher's Guide.	Assessment rubrics. Checklists. Written Assessment. Oral questions.	

Note: The first data row is labeled "2" in the leftmost number column.

			c) Recognize the difference between speed and velocity.	Work out problems involving determining velocity in real life situations and share their findings with peers.		Chalkboard and chalks.	Oral discussion. Peer Assessment.	
	5	Measurement.	Money	By the end of the lesson,the learner should be able to: a) Identify the formula for calculating acceleration in real life situations. b) Work out acceleration in real life situations. c) Acknowledge the application of acceleration in real life situations.	In groups,learners are guided to; discuss the meaning of acceleration and give real life examples. identify the formula for finding acceleration in different situations. use digital devices to search and clips illustrating how to calculate acceleration using examples and note down. Work out problems involving finding acceleration in different situations. determine acceleration from track events in school.	How do we calculate acceleration in real life situations?	Top Scholar Maths pg 129-130. Calculators. Teacher's Guide. Charts. Digital device. Video clip.	Assessment rubrics. Checklists. Oral questions. Oral discussion. Written Assessment.	
8		**MID-TERM BREAK**						
9	1	Measurement.	Time, Distance and Speed.	By the end of the lesson, the learner should be able to: a) Explain the meaning of longitude. b) Use the globe to identify the longitudes of marked points.	In groups,learners are guided to; brainstorm and present the meaning of longitudes. use the globe to identify circles that pass through North and south poles.	How do you identify longitudes on a Globe?	Top Scholar Maths pg 131-134. Globes. Digital devices	Checklists. Assessment rubrics. Peer Assessment.	

				c) Enjoy using globes to identify longitudes of marked points.	use the globe to identify the longitudes of marked points.			
	2	Measurement.	Time, Distance and Speed.	By the end of the lesson,the learner should be able to: a) Identify points that have the same local time. b) Relate longitudes to time on the globe. c) Enjoy using longitudes to determine points with the same local time.	In groups or pairs,learners are guided to; use digital devices to search the longitude and local time of given towns and fill in a table. use drawn globes to identify points on the Earth's surface that have same local time. use other resources e.g maps to locate different places on the earth and discuss time differences. present their findings in class for assessment and.	How do you identify points with the same local time using longitudes?	Top Scholar Maths pg 133-134. Digital devices. Teacher's Guide. Globes.	Assessment rubrics. Oral questions. Peer Assessment.	
	3	Measurement.	Time, Distance and Speed.	By the end of the lesson,the learner should be able to: a) Explain how to determine local time of places on the earth along different longitudes. b) Determine local time of places on the earth along different longitudes. c) Enjoy determining local time of places on the earth along different longitudes.	In groups,learners are guided to: discuss how to determine local time of places on the earth along different longitudes. use digital devices to search and watch an illustration clip on determining local time of places on earth along different longitudes and take notes.	Why does local time vary in different places of the world?	Top Scholar Maths pg 135-137. Digital devices. Video clips. Lesson notes. Illustration charts. Chalks and Chalkboard.	Assessment rubrics. Written Assessment. Oral discussion. Checklists.	

				calculate the local time of different places along different longitudes. share their findings in class for assessment and feedback.		Teacher's Guide.		
4	Measurement.	Money.	By the end of the lesson, the learner should be able to: a) Identify currencies that are used in different countries. b) Use digital devices and print resources to search for the different currencies used in different countries. c) Acknowledge the currencies used in different countries of the world.	In groups, learners are guided to: brainstorm and present the currencies used in different countries. use digital devices to search for currencies used in different countries and compile a list. collaborate in using IT or newspapers and other print resources to obtain and compile a collage of currencies from different countries. display their collage in class for assessment and feedback.	What is currency? Which currencies do you know?	Top Scholar Maths pg 138. Digital devices. Magazines. Newspapers. pictures of different currencies.	Assessment rubrics. Oral questions. Checklists. Portfolios. Peer Assessment.	
5	Measurement.	Money.	By the end of the lesson, the learner should be able to: a) Explain how to convert foreign currencies to Kenyan currency using the exchange rates. b) Convert foreign currency to Kenyan currency in real life situations.	In groups or pairs, learners are guided to; use IT devices to search for exchange rates of some international currencies and draw on charts. discuss how to convert foreign currency to Kenyan currency.	Why do we change currencies from one form to another?	Top Scholar Maths pg 138-140. Digital devices. Exchange rates tables. Teacher's Guide.	Assessment rubrics. Checklists. Written Assessment. Oral discussion. Peer Assessment.	

				c) Enjoy converting currencies from one form to another in real life situations.	use exchange rates table to convert foreign currencies to Kenyan currency. share their findings in class for assessment.		Calculators.		
10	1	Measurement.	Money.	By the end of the lesson, the learner should be able to: a) Explain how to convert Kenyan currency to foreign currency. b) Convert Kenyan currency to foreign currency using the exchange rates table. c) Enjoy converting Kenyan currency to foreign currency.	In groups, learners are guided to; discuss how to convert Kenyan currency to foreign currency using exchange rates table. use the exchange rate table to convert Kenyan currency to foreign currency. share their findings in class for assessment and feedback.	How do we convert Kenyan currency to foreign currency?	Top Scholar Maths pg 141-142. Exchange rate tables. Charts. Digital devices. Calculators.	Assessment rubrics. Checklists. Oral questions. Written Assessment.	
	2	Measurements.	Money.	By the end of the lesson, the learner should be able to: a) Explain the meaning of Export duty charged on goods. b) Work out export duties charged on goods in real life situations. c) Develop interest in learning how to calculate export duties charged on goods in real life situations.	In groups, learners are guided to: use IT devices to search for the meaning of export duty and percentage of export duty of different goods and services in Kenya. discuss how to calculate the export duty of different goods and identify a formula. calculate the export duties charged on different goods in real life situations.	What is export duty? How do we determine the export duty of different goods in the country?	Top Scholar Maths pg 142-143. Calculators. Teacher's Guide . Digital devices. Lesson notes.	Assessment rubrics. Checklists. Oral discussion. Written Assessment.	

3	Measurements.	Money.	By the end of the lesson, the learner should be able to: a) Define the term import duty. b) Work out import duties charged on goods in real life situations. c) Acknowledge the benefits of import duties to a country.	In groups, learners are guided to; use digital devices to search for the meaning of import duty and take note. search the internet for the percentage of import duty of different goods and services and the examples of goods exempted from import duty in Kenya. discuss how to calculate the import duty charged on goods and services. calculate the import duties charged on goods and share their findings.	How do we calculate import duties charged on goods and services? What is import duty?	Top Scholar Maths pg 143-144. Calculators. Digital devices. Lesson notes. Teacher's Guide.	Assessment rubrics. Checklists. Written Assessment. Oral questions.	
4	Measurements.	Money.	By the end of the lesson, the learner should be able to: a) Explain the meaning of term excise duty. b) Work out excise duty charged on goods and services in real life situations. c) Acknowledge the goods and services that attract excise duty.	In groups, learners are guided to; use digital devices to search for the meaning of excise duty and note down. search for examples of goods that attract excise duty and percentage of exercise duty charged on them. discuss how to calculate excise duty on goods and services. calculate excise duty charged on goods and	What is excise duty? How do we calculate the excise duty on goods?	Top Scholar Maths pg 144-145. Calculators. Lesson notes. Digital devices.	Assessment rubrics. Written Assessment. Oral questions and discussion. Checklists.	

					share their findings for assessment.			
	5	Measurements.	Money.	By the end of the lesson,the learner should be able to: a) Explain the meaning of Value-Added Tax. b) Calculate value added duty tax charged on goods and services. c) Show interest in learning how to calculate VAT on goods and services.	In groups,learners are guided to: use digital devices to search for information on the meaning of value added tax and goods that attract VAT. use receipts from shopping to discuss and work out VAT on local goods and services. collaborate in calculating the VAT charged on goods and services and share their findings for assessment and feedback.	Why is VAT charged on goods and services? What is Value added tax?	Top Scholar Maths 145-147. Calculators. Teacher's Guide. Shopping receipts. Digital devices.	Assessment rubrics. Checklists. Oral questions. Oral discussion. Written Assessment.
11	1	Measurements.	Approximations and Errors.	By the end of the lesson, the learner should be able to: a) Identify arbitrary units used in estimating measurements. b) Approximate quantities in measurements in different situations. c) Enjoy estimating measurements using arbitrary units.	In groups or pairs,learners are guided to; mention arbitrary units used in estimating measurements. Carry out activities of measurements of different quantities such as length,area, volume, capacity and mass using arbitrary units. share their findings in class for comparison with other peers' finding.	How do we estimate measurements of different quantities?	Top Scholar Maths pg 148. Arbitrary units. Different objects: Teacher's desk, football field,Maths Textbook.	Peer Assessment. Checklists. Observation schedule. Oral questions. Practical Activities.

	2	Measurements.	Approximations and Errors.	By the end of the lesson,the learner should be able to: a) Explain how error is calculated using estimations and actual measurements of quantities. b) Determine errors using estimations and actual measurements of quantities. c) Appreciate approximations and errors in real life situations.	In groups,learners are guided to; discuss how error is calculated using estimations and actual measurements of quantities. estimate and measure different quantities using appropriate instruments. compare the estimates and the actual measurements. calculate the error in different quantities and share their findings with peers.	How do you determine errors in quantities?	Top Scholar Maths pg 149-150. Calculators. Measuring instruments. Teacher's Guide.	Assessment rubrics. Written Assessment. Oral questions. Checklists.	
	3	Measurements.	Approximations and Errors.	By the end of the lesson,the learner should be able to: a) Identify the formula for calculating percentage error. b) Determine percentage errors using actual measurements of quantities. c) Enjoy working out percentage errors of quantities.	In groups, learners, are guided to: use digital devices to search and watch video clips on calculating percentage error. identify the formula for determining percentage error from the video clips observed. work out the percentage error from the estimated and the actual measurements. share their findings in class for assessment and feedback.	How do you calculate percentage error of quantities?	Top Scholar Maths pg 150-151. Digital devices. Calculators. Digital devices. Video clip. Teacher's Guide.	Assessment rubrics. Checklists. Written Assessment Oral questions.	

	4	Measurements.	Mixed Exercise 3.	By the end of the lesson, the learner should be able to: a) Work out questions on the Mixed Exercise 3. b) Embrace teamwork as they work the problems in Mixed Exercise 3.	In groups or pairs,learners are guided to: collaborate in working out the problems in Mixed Exercise 3.		Top Scholar Maths pg 152-153. Calculators. Teacher's Guide.	Assessment rubrics. Written Assessment. Portfolios.
	5	Geometry.	Coordinates and Graphs.	By the end of the lesson,the learner should be able to: a) Explain the steps to follow when plotting out points on a Cartesian plane. b) Plot out points on a Cartesian plane. c) Enjoy plotting out points on a Cartesian plane.	In groups or pairs,learners are guided to: discuss the steps to follow in plotting out points on a Cartesian plane. individually,draw Cartesian planes on graph papers and then plot each of the given points. write down the coordinates of the plotted points in the graph and share to the class for assessment and feedback.	How do we plot out points on a Cartesian plane?	Top Scholar Maths pg Graph books. pencils. Rulers.	Assessment rubrics. Checklists. Written Assessment. Peer and Self Assessment.
12	1	Geometry.	Coordinates and Graphs.	By the end of the lesson, the learner should be able to: a) Explain how to draw a straight line graph given an equation. b) Draw a straight line graph given an equation.	In groups, learners are guided to; discuss how to draw straight lines graphs given an equation. generate a table of values from an equation of a straight line.	How do you draw a straight line graph given an equation?	Top Scholar Maths pg 155-156. Graph books. Pencils. Rulers.	Checklists. Peer Assessment. Written Assessment. Assessment rubrics.

			c) Enjoy generating values and drawing straight lines graph.	plot and join the points to form a straight lines on the Cartesian plane. share their work with peers for assessment and feedback.					
2	Geometry.	Coordinates and Graphs.	By the end of the lesson,the learner should be able to: a) Outline the steps for drawing parallel lines on a Cartesian plane. b) Draw parallel lines on the Cartesian plane. c) Enjoy drawing parallel lines on a Cartesian plane given equations.	In groups, learners are guided to: discuss the steps for drawing parallel lines on a Cartesian plane. generate table of values for each of the given equations. plot and join the lines to form straight lines on the Cartesian plane. use a set square to determine the distance between the two lines at two different positions.	How do we draw parallel lines on a Cartesian plane?	Graph books. Top Scholar Maths pg 157-158. Rulers. Pencils.	Assessment rubrics. Checklists. Written Assessment.		
3	Geometry.	Coordinates and Graphs.	By the end of the lesson,the learner should be able to: a) Define the term parallel lines. b) Relate the gradients of parallel lines. c) Acknowledge the relationship of the gradients to the parallel lines.	In groups,learners are guided to,; generate a table of values for the given equations and determine the gradient of the straight line. Work out the gradients of each of the lines and compare them to establish their relationship of parallelism.	What are parallel lines?	Top Scholar Maths pg 159-161. Rulers. Graphs Pencils	Assessment rubrics. Checklists. Peer Assessment. Written Assessment.		

4	Geometry.	Coordinates and Graphs.	By the end of the lesson, the learner should be able to: a) Outline the steps for drawing perpendicular lines on the Cartesian plane. b) Draw perpendicular lines on the Cartesian plane. c) Enjoy drawing perpendicular lines on the Cartesian plane.	In groups,learners are guided to; discuss the steps for drawing perpendicular lines on Cartesian plane. generate table of values for each of the given equations of perpendicular lines. plot and join the lines to form straight lines on the Cartesian plane. measure the angle at the point of intersection of the two lines and state whether the two lines are perpendicular.	How do we know lines are perpendicular on a Cartesian plane?	Top Scholar Maths pg 161-163. Rulers. Graphs books. Pencils.	Assessment rubrics. Written Assessment. Checklists. Peer Assessment.	
5	Geometry.	Coordinates and Graphs.	By the end of the lesson,the learner should be able to: a) Relate the gradients of perpendicular lines. b) Apply graphs of straight lines in real life situations. c) Acknowledge the application of straight lines in real life situations.	In groups,learners are guided to; generate a table of values for given linear equations and then draw a straight line using the table of values. work out the gradients of each of the lines and compare them to establish the relationship of perpendicular lines. discuss situations in real life that can be represented using straight line graphs. apply graphs of straight lines in real life situations.	How do we establish the relationship of perpendicular lines?	Top Scholar Maths pg 163-167. Graph books. pencils. Rulers	Assessment rubrics. Checklists. Peer Assessment. Oral discussion.	

13	REVISION OF WORK COVERED & END OF TERM ASSESSMENT
14	END OF TERM 2 BREAK