PRESIDENT'S OFFICE-
REGIONAL ADMINSTRATION AND LOCAL GOVERNMENT

SCHEME OF WORK

SCHOOL'S NAME: .....

TEACHER'S NAME: .....

CLASS: **FORM TWO**

SUBJECT: **BASIC MATHEMATICS**

TERMS: **I AND II**

YEAR: **2025**

COMPETENCE	OBJECTIVES	MONTH	WEEK	MAIN TOPIC	SUB TOPIC	PERIOD	TEACHING ACTIVITIES	LEARNING ACTIVITIES	T/L-MATERIALS	REFERENCE	ASSESSMENT	REMARKS
By the end of Form Two Course the student should have developed competence in finding the relationships among logarithms, exponents and radicals	By the end of Form Two Course the student should be able to derive and apply the laws of exponents and radicals in mathematics manipulations	**JANUARY**	**2**	**EXPONENTS & RADICAL**	**Exponents**	**6**	-To guide student to discuss the meaning and the laws of exponents as displayed on the prepared wall chart. -To guide students to discuss how to derive and use the laws of exponents. -To lead students in applying the laws of exponents in related computations.	-The students to discuss the displayed laws in order to understand them. -The students to derive and use the laws of exponents. -The students to apply laws of exponents in computations	-Wall charts -Mathematical table -Number chart	**TIE(2005):Secondary Basic Mathematics, Book Three.Educational Book Publishers LTD,Dar Es Salaam**	student to explain the meaning and the laws of exponents & how to derive and use the laws of exponents.	
			3 & 4		**Radical**	**6**	-To lead students to discuss the concept of radicals using exponents. -To guide the students to find the squire roots and cube roots of numbers by prime factorization method.	-The students to participate in the discussion to familiarizes the concepts. -The Students to find the squire roots and cube roots of numbers by prime factorization method	-Cube root tables -Squire root tables -Multiplication table -Calculators -mathematical table		students to explain the concept of radicals using exponents, to find the squire roots and cube roots of numbers by prime factorization method, to add, subtract, multiply, and divide radicals.	
							-To demonstrate how to add, subtract, multiply, and divide radicals.	-The students to solve problems related to operations on radicals				
							-To guide the students to rationalize the denominator and use this methods to simplify radicals to simplest.	-The students to rationalize the denominator and use this method to simplify radicals to simplest				
							-To lead students to read the square roots of numbers using mathematical tables and calculators.	-The students to read the square roots of numbers using mathematical tables and calculators.				
		FEBRUARY	**1**		**Transposition of formula**	6	-To demonstrate on how to rearrange the letter subject of the formula.	-The students to rearrange the letter subject of the formula	-Mathematical formula -text		students to rearrange the letter subject of the formula	
							To guide students to discuss on transposition of formula with roots and powers.	The students to transpose formula with roots and powers				

By the end of Form Two Course the student should have the ability to Ability to solve algebraic problems	By the end of Form Two Course the student should be able to factorize and solve problems.	**F E B R U A R Y**	2	**2. ALGEBRA**	**Binary operations**	2	To demonstrate how to perform binary operations	The students to perform the binary operations	Text on binary operations	TIE(2005):Secondary Basic Mathematics, Book Three.Educational Book Publishers LTD,Dar Es Salaam	The students to perform the binary operations
			2		**Brackets in Computation**	2	To lead students to discuss the rules governing basic operations applied to algebra known as "BODMAS" and perform the operations involving brackets.	-The students to discuss the rules governing basic operations applied to algebra known as "BODMAS" and perform the operations involving brackets.	Text on brackets		students to explain the rules governing basic operations applied to algebra known as "BODMAS" and perform the operations involving brackets
						2	To lead students to simplify the algebraic expressions.	-The students to simplify the algebraic expressions.			
			3		**Quadratic expressions**	6	To lead students to discuss how to multiply two linear factors to form Quadratic expressions	-The students to multiply two linear factors to form Quadratic expressions	-Coloured chalks -Manila papers -Marker pens		students to multiply two linear factors to form Quadratic expressions&re-arrange quadratic expressions in the general form
							To explain the general form of a quadratic expression $ax^2 + bx + c$ Where a,b,c are real numbers and a#c	-The students to re-arrange quadratic expressions in the general form			
			4		**Factoriza-tion**	6	To guide students on how to factorize linear expressions	-The students to factorize linear expressions			students to factorize linear expressions
							To guide students on how to factorize the quadratic expressions by inspection, splitting the middle term, difference of two squires, perfect squires.	-The students to work in groups on the four techniques of factorization and present in class.			
By the end of Form Two Course the student should have Ability to solve to solve quadratic equation	- By the end of Form Two Course the student should Students should be able to derive quadratic formula and apply it solve problems.	**M A R C H**	**1**	**QUADRATIC EQUATIONS**	**Solving equation**	6	To lead students to discuss the theorem of the factors of zero	The students to discuss the theorem of the factors of zero. -To find the solution of a quadratic equation using the theorem of the factors of zero.		TIE(2005):Secondary Basic Mathematics, Book Three.Educational Book	students to analyse the theorem of the factors of zero&find the solution of a quadratic equation using the theorem of the factors of zero.

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										Publishers LTD,Dar Es Salaam		
			2									
			2		**General solution of Quadratic Equation**							
By the end of Form Two Course the student should have the ability to find the relationships among logarithms, exponents and radicals	By the end of Form Two Course the student should be able to Derive and apply the laws of logarithms in mathematics manipulations	**MARCH**	4	**LOGARITHMS**	**Standard form**							
			3		**Law of logarithms**							
MIDTERM TEST												
MIDTERM BREAK 28TH MARCH – 08TH APRIL 2024												

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By the end of Form Two Course the student should have the ability to find the relationships among logarithms, exponents and radicals	By the end of Form Two Course the student should have the ability to Derive and apply the laws of logarithms in mathematics manipulations	**APRIL**	2	**LOGARITHMS**	**Law of logarithms**	3						
			2		**Tables of logarithm**	3						
By the end of Form Two Course the student should have the ability to prove apply congruency and similarity of figures.	By the end of Form Two Course the student should be able to prove and apply congruency and similarity of figures.		3	**CONGRUENCE**	**Congruence of Triangles**	6						
To identify similar polygons	By the end of the topic students should be able explore the properties of similar figures.		4	**SIMILARITY**	**Similar figures**	6						

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have to ability to do scale drawing and geometrical transformations	By the end of Form Two Course the student should have the ability to represent reflections, rotations, rotations, translations and enlargement geometrically	MAY	1	**GEOMETRICAL TRANSFORMATIONS**	**Reflection**	6						
			1		**Rotations**	6	To lead students to investigate the characteristics of a rotated object on a plane.	The students to state and write the properties of rotation in a plane.	Text book Objects diagrams		The students to state and write the properties of rotation in a plane	
							To guide students to draw rotations of points, line and polygons using mathematical sets.	The students to draw rotations of points line and polygons	Text book Objects diagrams			
			1		**Translation**	6	To lead to discuss translation by sliding real object, lines and figures on the plan without turning them.	-The students to state and write properties of translation	Text book Objects diagrams			
							The teacher to lead students to discuss how to draw projection lines and simple figures to show translation.	The students to draw translations points, lines and polygons.	Text book Objects diagrams		students to draw translations points, lines and polygons.	

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			2		**Enlargement**	**3**	-The teacher to lead student to discuss the relationship between similarities and hence develop scale of enlargement.	-The students to solve problems related to developing scale factor	-Mathematical set -Different figures/objects		students to solve problems related to developing scale factor, to write the properties of enlargement and construct enlargement figure	
			2			**3**	To lead student to discuss how to identify enlarge figures.	-The students to brainstorm and write the properties of enlargement				
							-The teacher to demonstrate to students how to construct enlargement of a given figure	The students to construct enlargement figure				
By the end of Form Two Course the student should have the ability to verify laws and prove theorems	By the end of Form Two Course the student should be able to apply the proven theorem in computations.	**LIII**	**3**	**PYTHAGORAS THEOREM**	**Proof of Pythagoras theorem**	**3**	Leading students to:-Investigate the illustration of Pythagoras theorem ad prove the Pythagoras theorem. Solve problems related to right angled triangle.	The students to prove the Pythagoras theorem	-Manila paper -Marker pens -text		students to prove the Pythagoras theorem	
			3		**Application of Pythagoras theorem**	**3**	Leading students in groups to:-Discuss how to solve real life problems by Pythagoras theorem	- The students to guide students to solve problems related to right angled triangle. The students to solve real life problem using Pythagoras theorem			explain how to solve real life problems by Pythagoras theorem	
TERMINAL EXAMINATIONS												
TERMINAL LEAVE 31TH MAY – 01TH JULY 2024												

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By the end of Form Two Course the student should have the ability to find the relationship between right triangles and trigonometric ratios	By the end of Form Two Course the student should be able to use the relationship of right triangle and trigonometric rations in computations.	**JULY**	4	**TRIGONOMETRY**	**Trigonometric ratios**	6						
		AUGUST	**1**		**Trigonometric ratios of special angles.**	6						
			2		**Trigonometric tables**	6						
			3		**Angles of elevation and depression**	6						

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By the end of Form Two Course the student should have the ability to ability set operations in solving problems	By the end of Form Two Course the student should be able to perform operations on sets and apply sets to solve problem.	**AUGUST**	4	**SETS**	**Description of a set**	6						
MIDTERM TEST												
MIDTERM BREAK 30TH AUGUST – 16TH SEPTEMBER 2024												
		SEPTEMBER	**4**	**SETS**	**Types of sets**	3	Leading students in groups of 4 to brainstorm about finite and infinite sets and hence establish their differences.	The students to brainstorm about finite and infinite sets and hence establish their differences.	-Playing cards -Teams of players -Real numbers -Dinner set -Playing cards -Teams players -Real numbers -Dinner sets		The students to brainstorm about finite and infinite sets and hence establish their differences., to define universal sets and empty sets and solve problems related to empty set and Universal	
							Guiding students to establish the concepts of universal set and empty set.	The students to define universal sets and empty sets and solve problems related to empty set and Universal				
							Guiding students to compare sets in order to determine equivalent of equal sets.	The students to compare finite and infinite sets				
							Guiding students to compare sets in order to determine equivalent of equal sets.	The students to compare equivalent and equal sets				

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			4		**Subsets**	3	Leading students in groups to define the term subset.	The students to give example of subsets in their surrounding			students to give example of subsets in their surrounding, to give example of subsets in their surrounding, to apply the formula to calculate the number of subsets for a set with n elements.	
							Guiding students to discuss how subsets of a set can be listed.	The students to do exercise on listing subsets of given sets.				
							Guiding students to discuss the meaning of proper and improper subsets using the listed subsets and use of the symbols	The students to do exercise of differentiate proper and improper subsets				
							Guiding students to discuss how to establish the number of a set with members as 2	The students to apply the formula to calculate the number of subsets for a set with n elements.				
		OCTOBER	1		**Operations with sets**	2	Leading students in groups of 4 to use real life examples to discuss the union of two sets and the use of the symbol	The students to do exercises involving the union of to set.				
								-The students to do exercise involving the compliment of sets				
							discuss how to find the compliment of a set given a universal set. To demonstrating how to derive formula n (AUB) =n (A) +n(B)-n(AnB)	The students to apply the formula to solve related problems	Written text		students to apply the formula to solve related problems	
			1		**Venn diagrams**	2	Leading students in groups of 4 to to emonstrate how to present sets using Venn diagrams	-The students to present sets by Venn diagram	-Venn diagrams -Real objects		students to solve problems involving at most two sets using Venn diagrams	
							To lead students to show hoe diagrams are used in solving simple problems involving operation with two sets.	-The students to solve problems involving at most two sets using Venn diagrams				
							-The teacher to guide students to solve word problems involving operations on sets, compliment of sets and Venn diagram	-The students to solve word problems involving operations on sets compliment of sets and Venn diagrams				

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By the end of Form Two Course students should have developed competence in managing use of knowledge of statistics to interpret and compute statistic data in real life situation	By the end of Form Two Course Students should be able to collect data and interpret them using pictograms, Line Graphs	**OCTOBER**	1	**STATISTICS**	**Pictograms**	2						
			2		**Bar chart**	2						
			2		**Line graphs**	2						
			2		**Pie chart**	2						
			3		**Frequency Distribution tables**	2						
					Frequency polygons	2						
			4		**Histograms**	2						
					Cumulative frequency curves	2	to demonstrate to students how to construct cumulative f. distribution tables form f. distribution tables	-The students to construct cumulative frequency distribution tables			students to construct cumulative frequency distribution tables	

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					Interpret a cumulative frequency curve	2	To lead students to reduce information from cumulative f. curve by using a cumulative f. distribution table and cumulative f. curve	-The students to interpret cumulative frequency distribution tables and cumulative frequency curve.	-Graph paper -Graphs from papers and Journals		students to interpret cumulative frequency distribution tables and cumulative frequency curve.	
REVISION AND PREPARATION												
FORM TWO NATIONAL ASSESSMENT												
ANNUAL HOLIDAYS												

KUPATA FULL SCHEME

TUTAFUTE

GMK ACADEMIC SOLUTION

UTACHANGIA SH. 2000

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