MATHEMATICS DEPARTMENT
SCHEMES OF WORK

FORM THREE MATHEMATICS SCHEMES OF WORK

SUBJECT: MATHEMATICS

TERM 1 – 2025

GENERAL OBJECTIVES

By the end of the year the learner should be able to:

GENERAL OBJECTIVES

1) develop a positive attitude towards learning Mathematics;

2) perform mathematical operations and manipulations with confidence, speed and accuracy;

3) think and reason precisely, logically and critically in any given situation;

4) develop investigative skills in Mathematics;

5) identify, concretise, symbolise and use Mathematical relationships in everyday life;

6) comprehend, analyse, synthesise, evaluate and make generalizations so as to solve Mathematical problems;

7) collect, organise, represent, analyse, interpret data and make conclusions and predictions from its results;

8) apply mathematical knowledge and skills to familiar and unfamiliar situations;

9) appreciate the role, value and use of Mathematics in society;

10) develop a willingness to work collaboratively;

11) acquire knowledge and skills for further education and training;

12) communicate mathematical ideas.

REFERENCE
1. **KLB BOOK III**
2. **KLB TEACHERS' GUIDE**
3. **TEACHER'S PREPARED NOTES**

WK NO.		TOPIC / SUBTOPIC	LESSON OBJECTIVES	TEACHING / LEARNING ACTIVITIES	MATERIALS / RESOURCES	REFERE-NCES	REMARKS
1	1	QUADRATIC EXPRESSIONS AND EQUATIONS Perfect squares.	By the end of the lesson, the learner should be able to: Factorise quadratic expressions. Identify perfect squares.	Questioning to review quadratic expressions. Oral exercise; Written exercise.		KLB BK III Pg 1	
	2	Completing the square. (last term not given)	By the end of the lesson, the learner should be able to: Make quadratic expressions perfect squares when last term is not given.	Guided discovery; Supervised practice; Written exercise.		KLB BK III Pgs 2 - 3	
	3	Completing the square. (middle term not given)	By the end of the lesson, the learner should be able to: Make quadratic expressions perfect squares when middle term is not given.	Worked examples; Supervised practice; Written exercise. Exercise review.		KLB BK III Pgs 3 - 4	
	4	Quadratic equations. (1 as coefficient of x)	By the end of the lesson, the learner should be able to: Solve quadratic equations by completing the square.	Worked examples; Supervised practice; Written exercise; Exercise review.	Calculators.	KLB BK III Pgs 5 - 6	
	5	Quadratic equations. (coefficient greater than 1)	By the end of the lesson, the learner should be able to: Solve quadratic equations by completing the square.	Worked examples; Supervised practice; Written exercise; Exercise review.	Calculators.	KLB BK III Pgs 3 - 4	
	6	The quadratic formula.	By the end of the lesson, the learner should be able to: Derive and recall the quadratic formula.	Review completing the square; Guided derivation of formula.		KLB BK III Pgs 7 - 8	

	7	The quadratic formula.	By the end of the lesson, the learner should be able to: Use the quadratic formula to solve quadratic equations.	Questioning to identify coefficients; Worked examples; Supervised practice; Written exercise; Exercise review.		KLB BK III Pgs 7 - 8	
2	1	Formulating quadratic equations.	By the end of the lesson, the learner should be able to: Formulate quadratic equations from given situations.	Guided discovery; Worked examples.		KLB BK III Pgs 9-10	
	2	Solutions of formulated quadratic equations.	By the end of the lesson, the learner should be able to: Find solutions of formulated quadratic equations.	Supervised practice; Written exercise; Exercise review.		KLB BK III Pgs 10-12	
	3	Tables of quadratic functions.	By the end of the lesson, the learner should be able to: Fill in tables of quadratic functions.	Completing tables; Oral exercises; Written exercise.		KLB BK III Pgs 12-14	
	4,5	Graphs of quadratic functions.	By the end of the lesson, the learner should be able to: Draw graphs of quadratic functions.	Plotting graphs; Supervised practice; Written exercise.	Graph papers, geoboard.	KLB BK III Pgs 12-14	
	6,7	Graphical solutions of quadratic equations.	By the end of the lesson, the learner should be able to: Obtain solutions of quadratic equations from graphs.	Guided discovery; Oral and written exercises.	Graph papers, geoboard.	KLB BK III Pgs 15-19	

3	1,2	Graphical solutions of simultaneous equations.	By the end of the lesson, the learner should be able to: Solve two simultaneous equations graphically.	Review equations of a line, a quadratic function; Worked example; Written exercise.	Graph papers, geoboard.	KLB BK III Pgs 20-21	
	3	Further graphical solutions.	By the end of the lesson, the learner should be able to: Solve simultaneous equations graphically.	Guided discovery; Worked examples; Written exercises; Exercise review, Problem solving.	Graph papers, geoboard.	KLB BK III Pgs 21-23	
	4,5	APPROXIMATIONS AND ERRORS

Basic calculator operations. | By the end of the lesson, the learner should be able to:

Use a calculator to perform basic operations. | Displaying figures and signs on a calculator; Hands-on practice. Oral exercise; Written exercise. | Calculator. | KLB BK III Pgs 24-28 | |
	6,7	Roots and powers using a calculator.	By the end of the lesson, the learner should be able to: Find roots and powers of numbers using a calculator.	Displaying figures and signs on a calculator; Hands-on practice. Oral exercise; Written exercise.	Calculator.	KLB BK III Pgs 26-28	
4	1	Approximation by rounding off numbers.	By the end of the lesson, the learner should be able to: Round off numbers.	Oral and written exercises.		KLB BK III Pgs 29-31	
	2	Approximation by truncating.	By the end of the lesson, the learner should be able to: Truncate a figure to given number of dec. places.	Worked examples; Oral and written exercises.		KLB BK III Pgs 29-31	

	3,4	Accuracy and errors. Absolute error.	By the end of the lesson, the learner should be able to: Identify lower and upper limits of a measured value. Find absolute error of a measured value.	Exposition of new terms; Oral and written exercises.	Calculator.	KLB BK III Pgs 31-32	
	5,6	Relative and percentage error.	By the end of the lesson, the learner should be able to: Find relative and percentage errors of a measured value.	Exposition of new terms; Guided discovery; Oral and written exercises.	Calculator.	KLB BK III Pgs 32-33	
	7	Round off error.	By the end of the lesson, the learner should be able to: Find error introduced by rounding off a figure.	Q/A to review rounding off; Oral and written exercises.	Calculator.	KLB BK III Pgs 34-35	

Note that:

We have used various books including KLB, JKF, Tusome, Oxford, Longhorn, Moran Publishers, Mountain Top, NPPE, New Beginning (I.R.E), EAEP, Queenex, Kiswahili Mufti, Dadisi, Trendy, Inventor and many more.

FOR COMPLETE AND UPDATED SCHEMES OF WORK FOR ALL SUBJECTS F2-F4 CONTACT US ON

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OUR SCHEMES USES M.O.E RECCOMMENDED COURSE BOOKS. LANGUAGES ARE ALSO UPDATED WITH NEW SETBOOKS

WE ALSO HAVE:

- ✓ **UPTO DATE LESSON NOTES**
- ✓ **LESSON PLANS**
- ✓ **CUSTOMIZED RECORDS OF WORK**
- ✓ **TERMLY EXAMS**
- ✓ **TOPICAL EXAMS AND MANY MORE**

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