**GRADE 9 RATIONALIZED MATHEMATICS SCHEME OF WORK TERM 1**

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| **Week** | **Lesson** | **Strand** | **Sub-strand** | **Lesson Learning Outcome** | **Learning Experiences** | **Key Inquiry Question** | **Learning Resources** | **Assessment** | **Reflection** |
| 1 | 1 | Numbers | Integers | By the end of the lesson, the learner should be able to:   1. Explain the basic rules on the addition and subtraction operations of integers. 2. Perform addition and subtraction on integers in different situations. 3. Have fun performing addition and subtraction on integers in different situations. | In groups or pairs,learners are guided to:  discuss the rules on addition and subtraction of integers.  create a set of cards with different positive and negative integers.  work out addition and subtraction operations on integers using cards and charts.  play games involving numbers and operations by picking integers and performing addition and subtraction operations. | How do we carry out operations of integers in real life situations? | Mathematics Learner's Book.  Lesson notes.  cards.  Teacher's Guide. | Written questions.  Assessment rubrics.  Checklists.  Oral questions. |  |
| 2 | Numbers | Integers | By the end of the lesson,the learner should be able to:   1. Explain the basic rules of multiplication on integers. 2. Perform multiplication operations on integers in different situations. 3. Have fun multiplying integers in different situations. | In groups or pairs,learners are guided to:  identify and discuss the basic rules of multiplication on integers.  work out multiplication on integers applying the identified basic rules.  create multiplication charts and work out problems using the charts and cards. | What are the basic rules of multiplication on integers? | Mathematics Learner's Textbook.  Teacher's Guide.  Lesson notes.  Charts and cards. | Assessment rubrics.  Checklists.  Oral questions  Written questions. |  |
| 3 | Numbers | Integers | By the end of the lesson, the learner should be able to:   1. Explain the basic rules on division of integers. 2. Work out division operations on integers in different situations. 3. Enjoy working out division operations on integers in different situations.   . | In groups or pairs or individually,learners are guided to:  discuss the basic rules on division of integers.  create a division chart for integers noting patterns.  work out division on integers using number cards and charts.  share their answers with peers for assessment. | What are the basic rules of division on integers? | Teacher's Guide.  Mathematics Learner's Textbook.  Division charts.  Number cards. | Observation.  Oral questions.  Peer assessment.  Written questions.  Checklists.  Assessment rubrics. |  |
| 4 | Numbers | Integer. | By the end of the lesson, the learner should be able to:   1. Identify the order of operations used in solving combined operations. 2. Work out combined operations on integers by following the order of operations. 3. Appreciate the order of operations in solving combined operations. | In groups or pairs,learners are guided to:  identify and explain the order of operations used in solving combined operations(BODMAS)  work out combined operations of integers in the correct order.  share their answers with peers. | Why is order of operations important in solving combined operations? | Teacher's Guide.  Mathematics Learner's Book.  Lesson notes. | Assessment rubrics.  Checklists.  Written questions.  Peer Assessment.  Oral questions. |  |
| 5 | Numbers | Integers | By the end of the lesson, the learner should be able to:   1. Identify real life activities that uses integers. 2. Use integers to model and solve real life problems. 3. Appreciate the use of integers in real life situations. | In groups or pairs,learners are guided to:  brainstorm and present on real life situations that uses integers.  use integers to solve real life problems like financial profits and losses etc  carry out activities such reading temperature changes in a thermometer and discuss with peers how to record it.  consider temperatures below zero points and cases of use of integers in real life. | How do we apply integers in daily activities? | Digital resources.  Thermometers.  Mathematics Learner's Book. | Observation.  Oral questions.  Checklists  Illustrations.  Assessment rubrics. |  |
| 2 | 1 | Numbers | Integers | By the end of the lesson, the learner should be able to:   1. Identify creative games that involve integers. 2. Play creative games that involves integers. 3. Enjoy playing the creative games involving integers. | In groups or pairs,learners are guided to;  identify creative games that involves integers.  play creative games that involves integers (card games,counter games,integer football)  share their experiences on the games involving integers. | How do we carry out operations of integers in real life situations? | Cards.  Counters.  Digital resources.  Mathematics Learner's Textbook.  Steps.  Up and down stairs. | observations.  Activity journals.  Assessment rubrics.  Checklists  Class activities. |  |
| 2 | Numbers | Cubes and Cube Roots. | By the end of the lesson,the learner should be able to:   1. Explain the concept of cube and cube roots by use of stacks. 2. Demonstrate the concept of cube and cube roots by stacking of cubes. 3. Apply cubes in real in real life situations. | In groups or pairs,learners are guided to:  explain the meaning of cube and cube roots of numbers.  use stacks of cubes to demonstrate the concept of cube and cube roots.  collaborate in demonstrating stacking of cubes. | What is the difference between cube and cube root of numbers? | Mathematics Learner's Textbook.  Stacks of cubes.  Lesson notes. | Assessment rubrics.  Checklists.  Oral questions.  Demonstrations. |  |
| 3 | Numbers | Cubes and Cube Roots. | By the end of the lesson, the learner should be able to:   1. Identify the formula for finding cube of numbers. 2. Work out cubes of numbers by multiplication in real life situations. 3. Enjoy working out cubes of numbers by multiplication. | In groups or pairs,learners are guided to;  discuss the volume of a cube, determine both cube and cube root and relate the two.  identify the formula for finding cube of numbers.  illustrate the steps for finding the cube of numbers.  work out cubes of numbers by multiplication and share their findings with peers. | How do we work out the cubes of numbers? | Mathematics Learner's Textbook.  Teacher's Guide.  Chart. | Peer Assessment  Written questions.  Illustrations.  Oral questions.  Checklists.  Assessment rubrics. |  |
| 4 | Numbers | Cubes and Cube Roots. | By the end of the lesson, the learner should be able to:   1. Outline the steps for determining cubes of numbers from the mathematical tables. 2. Determine cubes of numbers from the mathematical tables in different situations. 3. Enjoy working out cubes of numbers using mathematical tables. | In groups or pairs and individually,learners are guided to:  discuss and illustrate the steps for determining cubes of numbers from mathematical tables.  use mathematical tables to read the cube of numbers and share their findings with peers. | How do you determine cubes of numbers from mathematical tables? | Mathematical tables.  Lesson notes.  Mathematics Learner's Textbook. | Written Questions.  Oral questions.  Peer Assessment.  Assessment rubrics.  Checklists. |  |
| 5 | Numbers | Cubes and Cube Roots. | By the end of the lesson, the learner should be able to:   1. Outline the steps for determining cube roots of numbers by factor method. 2. Determine cube roots of numbers by factor method in different situations. 3. Appreciate factor method in working out cube root of numbers. | In groups or pairs,learners are:led and guided in outlining and illustrating the steps in determining cube roots of numbers by factor method.  in pairs, groups or individually,learners to use the factor method in working out the cube roots of numbers.  learners to share their findings with peers for assessment. | How can you determine cube roots of numbers using the factor method? | Lesson notes.  Charts illustrating the factor method.  Mathematics Learners Textbook.  Teacher's Guide. | Assessment rubrics.  Checklists.  Written questions.  Peer Assessment.  Oral questions.  Illustrations. |  |
| 3 | 1 | Numbers | Cubes and Cube Roots. | By the end of the lesson, the learner should be able to:   1. Outline the steps to follow in determining cube roots of numbers from mathematical tables. 2. Determine cube roots of numbers from mathematical tables in different situations. 3. Enjoy using mathematical tables in working out cube roots of numbers. | In groups or pairs,learners are guided and led in outlining and illustrating the steps to follow in determining the cube roots of numbers from mathematical tables.  in pairs, groups or individually,learners are guided to use mathematical tables to read and work out cube roots of numbers.  learners to present their findings in class for assessment and feedback. | How do you determine the cube roots of numbers from mathematical tables? | Mathematical tables.  Mathematics Learner's Textbook.  Teacher's Guide. | Illustrations.  Assessment rubrics.  Written questions.  Peer Assessment  Checklists. |  |
| 2 | Numbers | Cubes and Cube Roots. | By the end of the lesson,the learner should be able to:   1. Determine cube and cube roots of numbers using calculators. 2. Enjoy using calculators in working out cubes and cube roots of numbers. | In groups or pairs,learners are guided on how to work out cube and cube roots of numbers using calculators.  individually or in pairs,learners to work out cubes and cube roots of numbers using calculators.  learners to share their findings in class for assessment. | How do we use calculators in working out cube and cube roots of numbers? | Calculators.  Mathematics Learner's Textbook.  Teacher's Guide. | Checklists.  Illustrations.  Assessment rubrics.  Checklists.  Peer Assessment  Written questions. |  |
| 3 | Numbers | Cubes and Cube Roots. | By the end of the lesson,the learner should be able to:   1. Identify real life situations where cubes and cube roots are applied. 2. Discuss the applications of cubes and cube roots in real life situations. 3. Search the internet for information on applications of cubes and cube roots in real life situations. 4. Apply cubes and cube roots in real life situations. | In groups or pairs, learners are guided to:  brainstorm and present the areas of applications of cubes and cube roots in real life situations.  use digital resources to search for information on the applications of cubes and cube roots in real life situations.  discuss the applications of cubes and cube roots in real life situations and present in class. | Where do we apply cubes and cube roots in real life situations? | Digital resources.  Lesson notes.  Mathematics Learner's Textbook.  Charts. | Assessment rubrics.  Checklists.  Oral discussion.  Oral presentation. |  |
| 4 | Numbers | Indices and Logarithms. | By the end of the lesson, the learner should be able to:   1. Outline the steps for expressing numbers in index form. 2. Express numbers in index form in different situations. 3. Use digital devices to search and watch a clip on expressing numbers in index form. 4. Have fun expressing numbers in index form. | In groups or pairs,learners are guided to;  discuss indices.  outline the steps for expressing numbers in index form.  express numbers in index form in different situations.  identify the base and index from the numbers expressed in index form. | How do we express numbers in index form? | Mathematics Learner's Textbook.  Lesson notes.  Calculators.  Teacher's Guide.  Charts. | Assessment rubrics.  Checklists.  Oral questions.  Illustrations.  Peer Assessment.  Written tests. |  |
| 5 | Numbers | Indices and Logarithms | By the end of the lesson,the learner should be able to:   1. Identify the laws of indices in different situations. 2. Discuss the different laws of indices in different situations. 3. Use digital resources to search for information on laws of indices. 4. Acknowledge the importance of the different laws of indices. | In groups or pairs,learners are guided to:  use digital resources or textbooks to search for information on laws of indices.  watch clips on the laws of indices.  identify and discuss the rules of indices using relevant examples and make a presentation.  prepare charts showing the laws of indices using multiplication and division. | What are the laws of indices? | Mathematics Learners Textbook.  Teacher's Guide.  Digital resources.  Video clips.  Charts. | Assessment rubrics.  oral discussion.  Peer assessment.  Checklists.  Illustration. |  |
| 4 | 1 | Numbers | Indices and Logarithms. | By the end of the lesson, the learner should be able to:   1. Work out indices using the laws of indices. 2. Appreciate the laws of indices in working out indices. | In groups or pairs or individually,learners are guided to:  collaborate in working out indices problems using the laws of indices.  share their work for assessment and feedback. | How do we apply the laws of indices in working out indices problems? | Mathematics Learner's Textbook.  Teacher's Guide.  Digital resources.  Calculators. | Checklists.  Assessment Rubrics.  Written tests.  Peer assessment.  Class Activities. |  |
| 2 | Numbers | Indices and Logarithms. | By the end of the lesson,the learner should be able to:   1. Work out indices using the laws of indices. 2. Enjoy using the laws of indices in solving problems involving indices. | Individually or In pairs,learners are guided to:  solve more indices problems applying the different laws of indices.  share their answers/findings in class for assessment and feedback. | Why are the laws of indices important? | Mathematics Learner's Textbook.  Calculators.  Teacher's Guide | Assessment rubrics.  Checklists.  Written tests.  Peer Assessment. |  |
| 3 | Numbers | Indices and Logarithms. | By the end of the lesson,the learner should be able to:   1. Explain the meaning of common logarithms. 2. Relate powers of 10 to common logarithms in different situations. 3. Appreciate the use of logarithms in real life situations. | In groups or pairs,learners are guided to:  explain the meaning of common logarithms and illustrate how they are written or expressed.  discuss and relate powers of 10 to common logarithms.  create cards with different powers of 10 and cards with corresponding with logarithmic values.  match each power of 10 with the correct logarithmic value and display in class. | How do we express numbers in powers? | Mathematics Learners Textbook.  Lesson notes.  Video clips.  Teacher's Guide.  Digital resources.. | Assessment rubrics.  Class activities.  Checklists.  Written tests |  |
| 4 | Algebra | Indices and Logarithms | By the end of the lesson, the learner should be able to:   1. Use calculators and mathematical tables to work out common algorithms. 2. Enjoy working out common logarithms using calculators and mathematical tables. | In groups,learners are guided on how to use calculators and mathematical tables to work out common logarithms.  individually or in pairs/ groups,learners to use calculators and mathematical tables to work out problems involving common logarithms.  learners to share their answers/findings with peers for assessment. | How can we work out common logarithms using calculators and mathematical tables? | Calculators.  Mathematical tables.  Mathematics Learners Textbook.  Teacher's Guide. | Class Activities.  Checklists.  Illustrations.  Written tests.  Peer assessment. |  |
| 5 | Numbers. | Compound Proportions and Rates of Work. | By the end of the lesson,the learner should be able to:   1. Outline the steps for dividing quantities into proportional parts. 2. Divide quantities into proportional parts in real-life situations. 3. Apply proportion division in real life situations. | In groups or pairs, learners are guided and led through the steps involved in dividing quantities into proportional parts.  in groups,learners are guided to discuss and divide quantities into proportional parts.  in groups or pairs or individually,learners are guided to express the quantities divided into proportional parts as fractions. | What are proportions? | Mathematics Learners Textbook.  Teacher's Guide.  Calculators. | Assessment rubrics.  Oral questions.  Written tests.  Checklists. |  |
| 5 | 1 | Numbers. | Compound Proportions and Rates of Work. | By the end of the lesson, the learner should be able to:   1. Identify the key terms and concepts related to proportional parts. 2. Relate different proportional parts in real life situations. 3. Enjoy relating different proportional parts in real life situations. | In groups or pairs,learners are guided to;  explain how ratios represent relationships between quantities.  explore different real life situations involving ratio.  compare and write the different ratios. | How can understanding ratios help us make better decisions in everyday situations? | Mathematics Learner's Textbook.  Teacher's Guide.  Real life scenarios. | Assessment rubrics.  Class activities.  Checklists.  Peer assessment.  Written tests. |  |
| 2 | Numbers. | Compound Proportions and Rates of Work. | By the end of the lesson,the learner should be able to:   1. Outline the steps for solving compound proportions using the ratio method. 2. Work out compound proportions using the ratio method in different situations. 3. Appreciate the use of compound proportions in real life situations. | In groups or pairs,learners are guided and led to:  outline the steps for solving compound proportions using the ratio method.  collaborate in determining compound proportions using ratios.  share their answers in class for assessment and feedback. | What is a compound proportion? | Mathematics Learner's Textbook.  Teacher's Guide.  Lesson notes.  Calculators. | Assessment rubrics.  Checklists.  Peer assessment.  Class activities.  Written tests. |  |
| 3 | Numbers | Compound Proportions and Rates of Work. | By the end of the lesson,the learner should be able to:   1. Work out compound proportions using the ratio method in different situations. 2. Enjoy working out compound proportions using the ratio method in different situations. | In groups or pairs,learners are guided to;  collaborate in solving problems involving compound proportions using the ratio method.  share their findings with peers for assessment and feedback. | How do we work out compound proportions using the factor method? | Teacher's Guide.  Mathematics Learner's Textbook. | Written tests.  Peer Assessment  Assessment rubrics. |  |
| 4 | Numbers. | Compound Proportions and Rates of Work. | By the end of the lesson, the learner should be able to:   1. Identify the formula for calculating rate of work. 2. Calculate the rates of work in real life situations. 3. Appreciate the use of rates of work in real life situation. | In groups or pairs, learners are guided and led:  in explaining the key concepts of rates of work.  identify the formula for finding the rate of work.  work out rates of work applying the identified formula. | How do we determine the rate of work? | Mathematics Learner's Textbook.  Teacher's Guide.  Digital resources.  Charts. | Class activities.  Assessment rubrics.  Written tests.  Checklists.  Peer assessment. |  |
| 5 | Numbers. | Compound Proportions and Rates of work. | By the end of the lesson,the learner should be able to:   1. Solve problems involving rates of work in real life situations. 2. Enjoy working out rates of work in real life situations. | In groups or pairs,learners are guided to;  collaborate to work out problems involving rates of work.  share and present their working in class. | Why do we work fast? | Mathematics Learner's Textbook.  Teacher's Guide. | Assessment rubrics.  Written tests.  Class Activities.  Peer Assessment. |  |
| 6 | 1 | Algebra | Matrices. | By the end of the lesson, the learner should be able to:   1. Identify a matrix in different situations. 2. Discuss the key components of a Matrix. 3. Enjoy identifying matrices in different situations. | In groups or pairs,learners are guided to:  explain the concept of matrix and outline the components of a matrix.  explore different resources and find examples of matrices.  discuss the use of tables such as football league tables, travel schedules and shopping lists as matrices. | What are the key components of a Matrix? | Mathematics Learner's Textbook.  Teacher's Guide.  Digital resources.  Tables e.g football league tables, travel schedules etc | Assessment rubrics.  Checklists.  Observation.  Illustration. |  |
| 2 | Algebra. | Matrices | By the end of the lesson,the learner should be able to:   1. Outline the steps for finding the order of a matrix. 2. Determine the order of a matrix in different situations. 3. Recognize the importance of organized data structures in making complex information manageable. | In groups or pairs,learners are guided to:  explain the concept of order of a matrix.  outline the steps for finding the order of a matrix.  count rows and columns and then arrange the the items in rows and columns.  discuss how to represent a matrix.  collaborate in organizing objects in rows and columns and give the order of the matrix in terms of rows and columns. | How do we determine the order of a matrix? | Mathematics Learner's Textbook.  Teacher's Guide.  Charts..  Digital resources. | Assessment rubrics.  Checklists.  Written tests.  Class Activities.  Oral questions.  Illustration. |  |
| 3 | Algebra. | Matrices | By the end of the lesson,the learner should be able to:   1. Outline the steps for determining the position of items in a matrix. 2. Determine the position of items in a matrix in different situations. 3. Enjoy determining position of items in matrices. | In groups or pairs,learners are guided to;  outline the steps for determining the position of items in a matrix by illustration.  discuss and identify the position of each item or element in terms of row and column.  share their findings in class for assessment. | How do we determine the position of items in a matrix? | Mathematics Learner's Textbook.  Teacher's Guide.  Digital resources. | Assessment rubrics.  Illustrations.  Checklists.  Written tests.  Oral questions. |  |
| 4 | Algebra. | Matrices | By the end of the lesson, the learner should be able to:   1. Explain the meaning of compatibility of matrices. 2. Determine the compatibility of matrices in addition and subtraction. 3. Acknowledge the the importance of compatibility of matrices in addition and subtraction. | In groups or pairs,learners are guided to:  discuss the concept of compatibility of matrices in performing different operations.  discuss and identify matrices that have an equal number of rows and columns for compatibility in addition and subtraction.  note down the matrices that shows compatibility and present in class. | Why is compatibility of matrices important in performing different operations? | Mathematics Learner's Textbook.  Teacher's Guide.  Charts.  Digital resources. | Assessment rubrics.  Illustrations.  Checklists.  Class activities.  Peer assessment. |  |
| 5 | Algebra. | Matrices | By the end of the lesson,the learner should be able to:   1. Outline the steps for adding matrices. 2. Carry out addition of matrices in real life situations. 3. Enjoy adding matrices in real life situations. | In groups or pairs,learners are led through the steps involved in adding matrices by illustrations.  in groups,pairs or individually,learners to collaborate in adding matrices.  share their answers in class for assessment and feedback. | How do we add matrices? | Mathematics Learner's Textbook.  Teacher's Guide.  Lesson notes.  Digital resources.  Charts. | Assessment rubrics.  Checklists.  Written tests.  Class activities.  Peer Assessment. |  |
| 7 | 1 | Algebra. | Matrices. | By the end of the lesson, the learner should be able to:   1. Outline the steps for subtracting matrices. 2. Carry out substraction of matrices in real life situations. 3. Enjoy subtracting matrices. | In groups or pairs,learners are led through the steps involved in substraction of matrices by illustrations.  in groups,pairs or individually,learners to collaborate in subtracting matrices correctly following the steps outlined.  share their answers in class for peer assessment and feedback. | How do we subtract matrices? | Teacher's Guide.  Mathematics Learner's Textbook.  Digital resources.  Charts. | Illustrations.  Peer Assessment.  Checklists.  Written tests.  Assessment rubrics. |  |
| 2 | Algebra. | Matrices. | By the end of the lesson,the learner should be able to;   1. Identify the use of matrices in real life situations. 2. Discuss the uses of matrices in real life situations. 3. Reflect on the use of matrices in real life situations. | In groups or pairs,learners are guided to:  brainstorm on the uses of matrices in real life situations.  use digital or print resources to search for information on the uses of matrices in real life situations.  identify and discuss the uses of matrices in real life situations.  present their findings in class. | How do we use matrices in real life situations? | Mathematics Learner's Textbook.  Digital resources.  Lesson notes. | Assessment rubrics.  Oral discussion.  Oral presentation.  Checklists. |  |
| 3 | Algebra | Equations of Straight lines. | By the end of the lesson,the learner should be able to:   1. Explain the concept of gradient of a line. 2. Identify the gradient in real-life situations. 3. Discuss the real life situations involving gradient of lines. 4. Appreciate the use of gradients in real life situations. | In groups or pairs,learners are guided to:  state the meaning of gradient of a line and identify the formula for calculating gradient of a line.  identify gradients in real life situations.  discuss steepness concerning gradient from the immediate environment.  incline a ladder at different positions on the wall to demonstrate change in steepness of gradient.  discuss and compare the positions where the ladder is steeper.  observe and climb up down places such as stairs and hills and relate to gradients. | What is a gradient of a line?  How do we use gradient or steepness in our daily activities? | Mathematics Learner's Textbook.  School surrounding.  Ladders and stairs.  Digital resources. | Assessment rubrics.  Class activities  Checklists.  Illustrations.  Observation. |  |
| 4 | Algebra | Equations of Straight Lines. | By the end of the lesson, the learner should be able to:   1. Outline the steps for determining the gradient of a line from two known points. 2. Determine the gradient of a line from two known points. 3. Enjoy determining gradient of lines from two known points. | In groups or pairs,learners are led through the steps in determining the gradient of line from two known points.  identify the formula for calculating gradient of a line given two known points.  in groups or pairs,learners to collaborate in working out the gradient of a line from two points.  share their findings with peers for assessment and feedback. | How do we determine the gradient of a line from two known points? | Mathematics Learner's Textbook.  Teacher's Guide.  Lesson notes.  Charts. | Illustration.  Assessment rubrics.  Written tests.  Peer Assessment  Checklists. |  |
| 5 | Algebra | Equations of Straight Lines. | By the end of the lesson,the learner should be able to:   1. Outline the steps for determining the equation of a line given two points. 2. Determine the equation of a straight line given two points. 3. Recognize the use of equations of straight lines in real life. | In groups or pairs, learners are guided to:  outline and illustrate the steps for determining the equation of a straight line given two points.  collaborate in working out the equation of a straight line given two points.  present their working and findings on the exercise. | How do we determine the equation of a straight line given two points? | Mathematics Learner's Textbook.  Digital resources.  video clips.  Teacher's Guide.  Charts. | Demonstration.  Assessment rubrics.  Written tests.  Checklists.  Peer Assessment. |  |
| 8 | **MID-TERM BREAK** | | | | | | | | |
| 9 | 1 | Algebra | Equations of Straight Lines. | By the end of the lesson, the learner should be able to:   1. Outline the steps for determining the equation of straight line from a known point and a gradient. 2. Determine the equation of a straight line from a known point and a gradient. | In groups or pairs,learners are led through the steps involved in determining the equation of straight line from a known point and a gradient by illustration.  in groups or pairs, learners to collaborate in working out the equation of a straight line given a point and a gradient.  present their working and answers in class for assessment. | How do we determine the equation of a straight line from a known point and a gradient? | Mathematics Learner's Textbook.  Teacher's Guide.  Digital resources.  Charts. | Illustration.  Checklists.  Peer Assessment  Class activities.  Assessment rubrics. |  |
| 2 | Algebra | Equations of Straight Lines. | By the end of the lesson,the learner should be able to:   1. Work out equations of straight lines given two points and given a point and gradient. 2. Value collaboration as they work out the exercises. | In groups or pairs or individually,learners are guided to;  collaborate in working out problems on determining equations of straight lines given two points or given a point and a gradient.  share their findings with others and present in class for assessment and feedback. | Why is it important to determine the equations of straight lines? | Mathematics Learner's Textbook.  Teacher-Made Exercises.  Calculators. | Assessment rubrics.  Checklists.  Peer assessment.  Written tests |  |
| 3 | Algebra | Equations of Straight Lines. | By the end of the lesson,the learner should be able to:   1. Explain how to express equations of straight lines in the form of y=mx + c. 2. Express equations of straight lines in the form of y=mx + c. 3. Enjoy expressing equations of straight lines in the form of y=mx + c. | In groups,learners are guided and led through the steps involved in expressing equations of straight lines in the form of y=mx + c by illustrations.  discuss and rewrite the equations of a straight line as y=mx + c.  present their answers in class for assessment and feedback. | How do we express equations of straight lines in the form of y=mx + c? | Mathematics Learner's Textbook.  Lesson notes.  Teacher's Guide.  illustration charts. | Assessment rubrics.  Checklists  Illustration.  Peer Assessment. |  |
| 4 | Algebra | Equations of Straight Lines. | By the end of the lesson, the learner should be able to:   1. Interpret the equation y=mx + c in different situations. 2. Recognize the application of the equation y=mx + c in different situations. | In groups,learners are guided to;  identify and label the m and c in the given scenarios or real life situations.  explain what the m and c represent in each of the scenarios.  discuss how changing the c or m would alter the scenarios given. | How do we use the equation y=mx + c in interpreting real life situations? | Mathematics Learner's Textbook.  Lesson notes.  Real life situations/scenarios. | Class Activities.  Assessment rubrics.  Checklists.  Oral discussion and presentations. |  |
| 5 | Algebra | Equations of Straight Lines. | By the end of the lesson,the learner should be able to:   1. Outline the steps for finding x when y is zero. 2. Work out the value of x when y is zero. 3. Enjoy working out the value of x when y is zero. | In groups or pairs,learners are guided and led through the steps of finding the value of x when y is zero by illustration.  in groups or pairs,learners to collaborate in working out the value of x when y is zero.  learners to note down their findings and present in class for assessment and feedback. | How do we determine the x intercept of a straight line? | Mathematics Learner's Textbook.  Teacher's Guide.  Digital resources.  Illustration charts. | Assessment rubrics.  Checklists  Peer assessment.  Written tests. |  |
| 10 | 1 | Algebra | Equations of a straight line. | By the end of the lesson, the learner should be able to:   1. Outline the steps for determining y intercept in a straight line. 2. Determine the y intercept of a straight line. | In groups or pairs,learners are guided through the steps of finding the value of y when x is zero.  in groups or pairs,learners to collaborate in working out the value of y when x is zero.  share their working and findings with peers for assessment and feedback. | How do we determine the y intercept of a straight line? | Mathematics Learner's Textbook.  Lesson notes.  Digital resources.  Illustration charts. | Assessment rubrics.  Checklists.  Peer assessment  Illustration.  Written tests. |  |
| 2 | Algebra. | Equations of a Straight Line. | By the end of the lesson,the learner should be able to:   1. Identify the uses of equations of straight lines in real life. 2. Discuss the uses of equations of straight lines in real life. 3. Recognize the use of equations of straight lines in real life. | In groups or pairs,learners are guided to;  brainstorm on the uses of the equations of straight lines in real life.  use digital or print resources to search for information on the uses of equations of straight lines in real life.  discuss the uses of equations of straight lines in real life.  make presentations of their findings in class. | What are the uses of equations of straight lines in real life? | Digital resources.  Mathematics Learner's Textbook.  Lesson notes. | Class activities.  Assessment rubrics.  Oral discussion and presentations. |  |
| 3 | Algebra. | Linear Inequalities. | By the end of the lesson,the learner should be able to:   1. Identify linear inequalities in resource distribution. 2. Analyze linear inequalities related to real life resource distribution. 3. Apply linear inequalities to real life situations. | In groups , learners are provided with real life scenarios e.g. budget constraints for a school event, resource allocation in a community.  learners to identify the linear inequalities representing those situations.  work out linear inequalities that involve real life cases.  in groups,learners to discuss why sometimes resources are shared unequally.  present their findings in class. | Why are resources shared unequally in the society? | Mathematics Learner's Textbook.  Teacher's Guide.  Lesson notes. | Class activities  Assessment rubrics.  Oral discussion.  Oral presentation. |  |
| 4 | Algebra | Linear Inequalities. | By the end of the lesson, the learner should be able to:   1. Outline the steps for solving linear inequalities in one unknown. 2. Solve linear inequalities in one unknown. 3. Enjoy working out inequalities in one unknown. | In groups or pairs,learners are guided to:  discuss simple inequality statements form.  led learners through the steps for solving linear inequalities in one unknown by illustration.  learners to collaborate in working out the inequalities in one unknown.  learners to share their findings in class for assessment and feedback. | How do you solve linear inequalities in one unknown? | Mathematics Learner's Textbook.  Teacher's Guide.  Digital resources.  Illustration charts. | Illustration.  Checklists.  Assessment rubrics.  Written tests. |  |
| 5 | Algebra | Linear Inequalities. | By the end of the lesson,the learner should be able to:   1. Work out the inequalities in one unknown. 2. Enjoy working out inequalities in one unknown. | Individually or in pairs,learners to:  collaborate in working out problems involving inequalities in one unknown.  share their findings in class for assessment and feedback. | How do we solve linear inequalities in one unknown? | Mathematics Learner's Textbook.  Teacher's Guide.  Teacher-Made Questions.  Digital resources. | Written tests.  Assessment rubrics.  Checklists.  Peer Assessment. |  |
| 11 | 1 | Algebra | Linear Inequalities. | By the end of the lesson, the learner should be able to:   1. Outline the steps for representing linear inequalities in one unknown graphically. 2. Represent linear inequalities in one unknown graphically. 3. Enjoy representing linear inequalities in one unknown graphically. | In groups or pairs,learners are guided and led through the steps for representing linear inequalities in one unknown graphically.  in groups or pairs, learners are guided to discuss and generate a table of values.  individually or in pairs, learners are guided to draw linear inequalities in one unknown.  indicate and discuss the region that satisfies the inequalities. | How do we represent linear inequalities in one unknown in graphs? | Mathematics Learner's Textbook.  Lesson notes.  Teacher's Guide.  Graph books. | Checklists.  Assessment rubrics.  Illustration.  Drawing graphs.  Oral questions.  Written tests. |  |
|  | 2 | Algebra | Linear Inequalities. | By the end of the lesson,the learner should be able to:   1. Solve linear inequalities in two unknowns. 2. Enjoy working out linear inequalities in two unknowns. | In groups,learners are guided through the steps for solving linear inequalities in two unknowns.  in groups or pairs,learners to work out the inequalities in two unknowns.  learners to share their answers in class for assessment and feedback. | How do we solve linear inequalities in two unknowns? | Mathematics Learner's Textbook.  Teacher's Guide.  Lesson notes.  Calculators. | Assessment rubrics.  Written tests.  Checklists.  Illustrations. |  |
|  | 3 & 4 | Algebra. | Linear Inequalities. | By the end of the lesson,the learner should be able to:   1. Represent linear inequality in two unknowns graphically. 2. Enjoy representing linear inequalities in two unknowns graphically. | In groups or pairs and individually learners are guided to:  discuss and generate a table of values.  draw linear inequalities in two unknowns.  indicate and discuss the region that satisfies the inequalities.  use digital devices to present linear inequalities. | How do we represent linear inequalities in two unknowns graphs? | Graph books.  Mathematics Learner's Textbook.  Teacher's Guide. | Assessment rubrics.  Checklists.  Drawing activities  Peer Assessment. |  |
|  | 5 | Algebra | Linear Inequalities. | By the end of the lesson,the learner should be able to:   1. Identify the uses of linear inequalities in real life. 2. Discuss the uses of linear inequalities in real life. 3. Reflect on the uses of linear inequalities in real life. | In groups or pairs,learners are guided to:  brainstorm and present on the uses of linear inequalities in real life.  use digital or print resources to search for information on uses of linear inequalities in real life.  discuss the uses of linear inequalities in real life and present their findings.  work out linear inequalities that involve real life cases. | How do we use linear inequalities in real life situations? | Digital resources.  Lesson notes.  Mathematics Learner's Textbook. | Class activities.  Checklists.  Assessment rubrics.  Oral discussion.  Oral presentation. |  |
| 12 | **REVISION & END OF TERM ASSESSMENT** | | | | | | | | |
| 13 | **END OF TERM 1 BREAK** | | | | | | | | |