SCHEME OF WORK MATHEMATICS FORM 3 2022-MAY

TERM I ENDARASHA BOYS

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **L/T ACTIVITIES** | **L/T AIDS** | **REFERENCE** | **REMARKS** |
| **2** | 1 | Quadratic Expressions and Equations | Factorization of quadratic expressions | By the end of the lesson, the learner should be able to:  Factorize quadratic expressions  Write the perfect squares | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 1 |  |
| 2 | Quadratic Expressions and Equations | Completing squares | By the end of the lesson, the learner should be able to:  Factorize quadratic expression by completing square method | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 1-2 |  |
| 3 | Quadratic Expressions and Equations | Completing squares | By the end of the lesson, the learner should be able to:  Factorize quadratic expression by completing square method | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 3-4 |  |
| 4 | Quadratic Expressions and Equations | Solving quadratic expression by completing square | By the end of the lesson, the learner should be able to:  Factorize quadratic expressions  Solve quadratic expressions by completing square | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 5-6 |  |
| 5 | Quadratic Expressions and Equations | Solving quadratic expression by factorization | By the end of the lesson, the learner should be able to:  Factorize quadratic expressions  Solve quadratic expressions by factorization | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 7 |  |
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|  | 6 | Quadratic Expressions and Equations | The quadratic formula | By the end of the lesson, the learner should be able to:  Solve quadratic expressions using the quadratic formula | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 7-9 |  |
| 7 | Quadratic Expressions and Equations | The quadratic formula | By the end of the lesson, the learner should be able to:  Solve quadratic expressions using the quadratic formula | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 7-9 |  |
| 8 | Quadratic Expressions and Equations | Formation of quadratic equations | By the end of the lesson, the learner should be able to:  Form a quadratic equation from word problem  Solve the quadratic equation | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 9-10 |  |
| **3** | 1 | Quadratic Expressions and Equations | Graphs of quadratic functions | By the end of the lesson, the learner should be able to:  Draw a table of the quadratic functions Draw graphs of quadratic functions | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 12-15 |  |
| 2 | Quadratic Expressions and Equations | Graphs of quadratic functions | By the end of the lesson, the learner should be able to:  Draw a table of the quadratic functions Draw graphs of quadratic functions | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 12-15 |  |
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|  | 3 | Quadratic Expressions and Equations | Graphical solutions of quadratic equation | By the end of the lesson, the learner should be able to:  Draw graphs of quadratic functions Solve quadratic equations using the graphs | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 15-17 |  |
| 4 | Quadratic Expressions and Equations | Graphical solutions of quadratic equation | By the end of the lesson, the learner should be able to:  Draw graphs of quadratic functions Solve quadratic equations using the graphs | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 17-19 |  |
| 5 | Quadratic Expressions and Equations | Graphical solutions of simultaneous equations | By the end of the lesson, the learner should be able to:  Draw tables for simultaneous equations Find the graphical solutions of simultaneous equations | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 19-21 |  |
| 6 | Quadratic Expressions and Equations | Further graphical solutions | By the end of the lesson, the learner should be able to:  Draw tables of other related quadratic equations  Solve other related quadratic functions graphically | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 21-23 |  |
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|  | 7 | Approximations and Errors | Computing using calculators | By the end of the lesson, the learner should be able to:  Solve basic operations using calculators | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 24-26 |  |
| 8 | Approximations and Errors | Computing using calculators | By the end of the lesson, the learner should be able to:  Solve basic operations using calculators | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 26-28 |  |
| **4** | 1 | Approximations and Errors | Approximation | By the end of the lesson, the learner should be able to:  Approximate values by rounding off Approximate values by truncation | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 29-30 |  |
| 2 | Approximations and Errors | Estimation | By the end of the lesson, the learner should be able to:  Approximate values by estimation | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 30 |  |
| 3 | Approximations and Errors | Accuracy and errors | By the end of the lesson, the learner should be able to:  Find the absolute error Find the relative error | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 31-32 |  |
| 4 | Approximations and Errors | Percentage error | By the end of the lesson, the learner should be able to:  Find the percentage error of a given value | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 32-34 |  |
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|  | 5 | Approximations and Errors | Rounding off error and truncation error | By the end of the lesson, the learner should be able to:  Find the rounding off error  Find the truncation error | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 34 |  |
| 6 | Approximations and Errors | Propagation of errors | By the end of the lesson, the learner should be able to:  Find the propagation of errors in addition and subtraction | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 35-36 |  |
| 7 | Approximations and Errors | Propagation of errors | By the end of the lesson, the learner should be able to:  Find the propagation of errors in addition and subtraction | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 35-36 |  |
| 8 | Approximations and Errors | Propagation of errors | By the end of the lesson, the learner should be able to:  Find the propagation of errors in multiplication | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 36-37 |  |
| **5** | MID TERM EXAMS AND BREAK | | | | | | | |
| **6** | 1 | Approximations and Errors | Propagation of errors | By the end of the lesson, the learner should be able to:  Find the propagation of errors in multiplication | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 36-37 |  |
| 2 | Approximations and Errors | Propagation of errors | By the end of the lesson, the learner should be able to:  Find the propagation of errors in division | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 37-38 |  |
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|  | 3 | Approximations and Errors | Propagation of errors | By the end of the lesson, the learner should be able to:  Find the propagation of errors in division | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 37-38 |  |
| 4 | Approximations and Errors Trigonometry (II) | Word problems  The unit circle | By the end of the lesson, the learner should be able to:  Find the propagation of errors of a word problem  Draw the unit circle | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 39-40 |  |
| 5 | Trigonometry (II) | The unit circle | By the end of the lesson, the learner should be able to:  Solve problems using the unit circle | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 43-44 |  |
| 6 | Trigonometry (II) | Trigonometric ratios of angles greater than 900 | By the end of the lesson, the learner should be able to:  Find the trigonometric values of angles | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 44-45 |  |
| 7 | Trigonometry (II) | Trigonometric ratios of angles greater than 900 | By the end of the lesson, the learner should be able to:  Find the trigonometric values of angles | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 46-47 |  |
| 8 | Trigonometry (II) | Trigonometric ratios of negative angles | By the end of the lesson, the learner should be able to:  Find the trigonometric values of negative angles | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 48-49 |  |
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| **7** | 1 | Trigonometry (II) | Trigonometric ratios of angles greater than 3600 | By the end of the lesson, the learner should be able to:  Find the trigonometric values of angles greater than 3600 | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 49-51 |  |
| 2 | Trigonometry (II) | Use of mathematical tables | By the end of the lesson, the learner should be able to:  Use mathematical tables to find sine and cosine | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 51-55 |  |
| 3 | Trigonometry (II) | Use of mathematical tables | By the end of the lesson, the learner should be able to:  Use mathematical tables to find tan | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 55-56 |  |
| 4 | Trigonometry (II) | Use of calculators | By the end of the lesson, the learner should be able to:  Use calculators to find sine, cosine and tan | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 56-58 |  |
| 5 | Trigonometry (II) | Radian measure | By the end of the lesson, the learner should be able to:  Convert degrees to radians and vice versa | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 58-61 |  |
| 6 | Trigonometry (II) | Simple trigonometric graphs | By the end of the lesson, the learner should be able to:  Draw tables for sine of values  Draw graphs of sine functions | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 62-63 |  |
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|  | 7 | Trigonometry (II) | Graphs of cosines | By the end of the lesson, the learner should be able to:  Draw tables for cosine of values  Draw graphs of cosine functions | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 63-64 |  |
| 8 | Trigonometry (II) | Graphs of tan | By the end of the lesson, the learner should be able to:  Draw tables for tan of values  Draw graphs of tan functions | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 64-65 |  |
| **8** | 1 | Trigonometry (II) | The sine rule | By the end of the lesson, the learner should be able to:  State the sine rule Use sine rule to find solution of triangles | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 65-70 |  |
| 2 | Trigonometry (II) | Cosine rule | By the end of the lesson, the learner should be able to:  State the sine rule Use sine rule to find solution of triangles | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 71-75 |  |
| 3 | Trigonometry (II) | Problem solving | By the end of the lesson, the learner should be able to:  Solve problems on cosines, sines and tan | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 76-77 |  |
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|  | 4 | Surds | Rational and irrational numbers | By the end of the lesson, the learner should be able to:  Classify numbers as rational and irrational numbers | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 78 |  |
| 5 | Surds | Surds | By the end of the lesson, the learner should be able to:  State the order of surds Simplify surds | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 78-79 |  |
| 6 | Surds | Addition of surds | By the end of the lesson, the learner should be able to:  Add surds | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 79-80 |  |
| 7 | Surds | Subtraction of surds | By the end of the lesson, the learner should be able to:  Subtract surds | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 80 |  |
| 8 | Surds | Multiplication of surds | By the end of the lesson, the learner should be able to:  Multiply surds | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 80-82 |  |
| **9** | 1 | Surds | Division of surds | By the end of the lesson, the learner should be able to:  Divide surds | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 81-82 |  |
| 2 | Surds | Rationalizing the denominator | By the end of the lesson, the learner should be able to:  Rationalize the denominator | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 85-87 |  |
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|  | 3 | Surds | Solving problem | By the end of the lesson, the learner should be able to:  Solve problems on surds | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 87-88 |  |
| 4 | Further Logarithms | Introduction | By the end of the lesson, the learner should be able to:  Use calculators to find the logarithm of numbers | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 89 |  |
| 5 | Further Logarithms | Laws of logarithms | By the end of the lesson, the learner should be able to:  State the laws of logarithms  Use laws of logarithms to solve problems | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 90-93 |  |
| 6 | Further Logarithms | Laws of logarithms | By the end of the lesson, the learner should be able to:  State the laws of logarithms  Use laws of logarithms to solve problems | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 90-93 |  |
| 7 | Further Logarithms | Logarithmic equations and expressions | By the end of the lesson, the learner should be able to:  Solve the logarithmic equations and expressions | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 93-95 |  |
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|  | 8 | Further Logarithms | Logarithmic equations and expressions | By the end of the lesson, the learner should be able to:  Solve the logarithmic equations and expressions | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 93-95 |  |