SCHEME OF WORK MATHEMATICS FORM 3 2022

TERM II ENDARASHA BOYS

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **T/L ACTIVITIES** | **T/L AIDS** | **REFERENCE** | **REMARKS** |
| **2** | 1 | Further Logarithms | Further computation using logarithms Further computation using logarithms | By the end of the lesson, the learner should be able to:  Solve problems involving logarithms | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 95-96 |  |
| 2 | Further Logarithms | Further computation using logarithms | By the end of the lesson, the learner should be able to:  Solve problems involving logarithms | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 95-96 |  |
| 3 | Further Logarithms | Problem solving | By the end of the lesson, the learner should be able to:  Solve problems involving logarithms | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 97 |  |
| 4 | Further Logarithms Commercial arithmetic | Problem solving Simple interest | By the end of the lesson, the learner should be able to:  Solve problems involving logarithms Calculate simple interest | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 97 |  |
| 5 | Commercial arithmetic | Compound interest | By the end of the lesson, the learner should be able to:  Calculate the compound interest | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 102-106 |  |
| 6 | Commercial arithmetic | Appreciation | By the end of the lesson, the learner should be able to:  Calculate the appreciation value of items | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 108 |  |
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|  | 7 | Commercial arithmetic | Depreciation Hire purchase | By the end of the lesson, the learner should be able to:  Calculate the depreciation value of items  Find the hire purchase | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 109 |  |
| 8 | Commercial arithmetic | Income tax | By the end of the lesson, the learner should be able to:  Calculate the income tax | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 112-114 |  |
| **3** | 1 | Commercial arithmetic | P.A.Y.E | By the end of the lesson, the learner should be able to:  Calculate the p.a.y.e | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 114-117 |  |
| 2 | Circles: Chords and tangents | Length of an arc  Chords | By the end of the lesson, the learner should be able to:  Calculate the length of an arc  Calculate the length of a chord | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 124-125 |  |
| 3 | Circles: Chords and tangents | Parallel chords | By the end of the lesson, the learner should be able to:  Calculate the perpendicular bisector Find the value of parallel chords | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 129-131 |  |
| 4 | Circles: Chords and tangents | Equal chords | By the end of the lesson, the learner should be able to:  Find the length of equal chords | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 131-132 |  |
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|  | 5 | Circles: Chords and tangents | Intersecting chords Intersecting chords | By the end of the lesson, the learner should be able to:  Calculate the length of intersecting chords | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 132-135 |  |
| 6 | Circles: Chords and tangents | Tangent to a circle | By the end of the lesson, the learner should be able to:  Construct a tangent to a circle | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 139-140 |  |
| 7 | Circles: Chords and tangents | Tangent to a circle Properties of tangents to a circle from an external point | By the end of the lesson, the learner should be able to:  Calculate the length of tangent  Calculate the angle between tangents State the properties of  tangents to a circle from an external point | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 141-142 |  |
| 8 | Circles: Chords and tangents | Tangents to two circles | By the end of the lesson, the learner should be able to:  Calculate the tangents of direct common tangents | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 148-149 |  |
| **4** | 1 | Circles: Chords and tangents | Tangents to two circles | By the end of the lesson, the learner should be able to:  Calculate the tangents of transverse common tangents | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 150-151 |  |
| 2 | Circles: Chords and tangents | Contact of circles Contact of circles | By the end of the lesson, the learner should be able to:  Calculate the radii of contact circles | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 151-153 |  |
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|  | 3 | Circles: Chords and tangents | Problem solving | By the end of the lesson, the learner should be able to:  Solve problems involving chords, tangents and contact circles | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 154-157 |  |
| 4 | Circles: Chords and tangents | Angle in alternate segment | By the end of the lesson, the learner should be able to:  Calculate the angles in alternate segments | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 157-160 |  |
| 5 | Circles: Chords and tangents | Angle in alternate segment Circumscribed circle | By the end of the lesson, the learner should be able to:  Calculate the angles in alternate segments Construct circumscribed circles | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 160-161 |  |
| 6 | Circles: Chords and tangents | Escribed circles | By the end of the lesson, the learner should be able to:  Construct escribed circles | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 165-166 |  |
| 7 | Circles: Chords and tangents | Centroid | By the end of the lesson, the learner should be able to:  Construct centroid | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 166 |  |
| 8 | Circles: Chords and tangents Matrices | Orthocenter Matrix representation and order of matrix | By the end of the lesson, the learner should be able to:  Construct orthocenter Represent matrix State the order of a matrix | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 167 |  |
| **5** | MID TERM EXAMS AND BREAK | | | | | | | |

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| **6** | 1 | Matrices | Addition of matrix | By the end of the lesson, the learner should be able to:  Add matrices | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 170 |  |
| 2 | Matrices | Subtraction of matrices | By the end of the lesson, the learner should be able to:  Subtract matrices | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 171 |  |
| 3 | Matrices | Combined addition and subtraction of matrices Matrix multiplication | By the end of the lesson, the learner should be able to:  Perform the combined operation on matrices Multiply matrices | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 171-174 |  |
| 4 | Matrices | Matrix multiplication | By the end of the lesson, the learner should be able to:  Multiply matrices | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 176-179 |  |
| 5 | Matrices | Identity matrix Determinant of a 2 | By the end of the lesson, the learner should be able to:  Find the identity matrix Find the determinant of a 2 | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 182-183 |  |
| 6 | Matrices | Inverse of a 2 | By the end of the lesson, the learner should be able to:  Calculate the inverse of a 2 | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 183-185 |  |
| 7 | Matrices | Inverse of a 2 | By the end of the lesson, the learner should be able to:  Calculate the inverse of a 2 | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 186-187 |  |
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|  | 8 | Matrices | Solutions of simultaneous equations by matrix method Solutions of simultaneous equations by matrix method | By the end of the lesson, the learner should be able to:  Solve simultaneous equations by matrix method | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 188-190 |  |
| **7** | 1 | Matrices | Problem solving | By the end of the lesson, the learner should be able to:  Calculate the inverse of a matrix  Solve simultaneous equations by matrix method | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 190 |  |
| 2 | Formulae and variations | Formulae | By the end of the lesson, the learner should be able to:  Make subject of the given formula | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 191-193 |  |
| 3 | Formulae and variations | Direct variation Inverse variation | By the end of the lesson, the learner should be able to:  Solve problems involving direct variations Solve problems  involving inverse variations | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 194-196 |  |
| 4 | Formulae and variations | Partial variation | By the end of the lesson, the learner should be able to:  Solve problems involving partial variations | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 201-203 |  |
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|  | 5 | Formulae and variations | Joint variation | By the end of the lesson, the learner should be able to:  Solve problems involving join variations | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 204-205 |  |
| 6 | Formulae and variations Sequences and series | Joint variation Sequences | By the end of the lesson, the learner should be able to:  Solve problems involving join variations Find the next terms | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 206 |  |
| 7 | Sequences and series | Arithmetic sequences | By the end of the lesson, the learner should be able to:  Find the nth term of a given arithmetic sequence | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 209-210 |  |
| 8 | Sequences and series | Geometric sequence | By the end of the lesson, the learner should be able to:  Find the nth term of a given geometric sequence | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 211-213 |  |
| **8** | 1 | Sequences and series | Arithmetic series Geometric series | By the end of the lesson, the learner should be able to:  Find the nth term of a given arithmetic series Find the nth term of a given geometric series | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 214-215 |  |
| 2 | Sequences and series | Geometric series | By the end of the lesson, the learner should be able to:  Find the nth term of a given geometric series | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 216-219 |  |
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|  | 3 | Vectors II | Coordinates in two dimensions Coordinates in three dimensions | By the end of the lesson, the learner should be able to:  Identify the coordinates of appoint in two dimensions  Identify the coordinates of appoint in three dimensions | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 221 |  |
| 4 | Vectors II | Column vectors | By the end of the lesson, the learner should be able to:  Find a displacement and represent it in column vector | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 223-224 |  |
| 5 | Vectors II | Position vector | By the end of the lesson, the learner should be able to:  Calculate the position vector | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 224 |  |
| 6 | Vectors II | Unit vectors Unit vectors | By the end of the lesson, the learner should be able to:  Express vectors in terms of unit vectors | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 226-228 |  |
| 7 | Vectors II | Magnitude of a vector in three dimensions | By the end of the lesson, the learner should be able to:  Calculate the magnitude of a vector in three dimensions | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 229-230 |  |
| 8 | Vectors II | Parallel vectors | By the end of the lesson, the learner should be able to:  Identify parallel vectors | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 231-232 |  |
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| **9** | 1 | Vectors II | Collinear points Collinear points | By the end of the lesson, the learner should be able to:  Show that points are collinear | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 232 |  |
| 2 | Vectors II | Proportion division of a line | By the end of the lesson, the learner should be able to:  Divide a line internally in the given ratio | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 237-238 |  |
| 3 | Vectors II | Proportion division of a line | By the end of the lesson, the learner should be able to:  Divide a line externally in the given ratio | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 238 |  |
| 4 | Vectors II | Proportion division of a line  Ratio theorem | By the end of the lesson, the learner should be able to:  Divide a line internally and externally in the given ratio  Express position vectors | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 239 |  |
| 5 | Vectors II | Ratio theorem | By the end of the lesson, the learner should be able to:  Find the position vector | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 242 |  |
| 6 | Vectors II | Mid-point | By the end of the lesson, the learner should be able to:  Find the mid-points of the given vectors | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 243 |  |
| 7 | Vectors II | Ratio theorem Ratio theorem | By the end of the lesson, the learner should be able to:  Use ratio theorem to find the given vectors | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 244-245 |  |
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|  | 8 | Vectors II | Applications of vectors | By the end of the lesson, the learner should be able to:  Use vectors to show the diagonals of a parallelogram | Discussions Solving Demonstrating Explaining | Calculators Protractor Ruler  Pair of compasses | KLB Mathematics Book Three  Pg 248-249 |  |
| **10** | END OF TERM BREAK AND SCHOOL CLOSING | | | | | | | |