**MATHEMATICS SCHEMES OF FORM 3**

**TERM 2**

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **T/L ACTIVITIES** | **T/L AIDS** | **REFERENCE** | **REMARKS** |
| 1 | **Opening and Revision** | | | | | | | |
| 2 | 1 | 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 |  |
| 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 | 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 |  |
| 4 | 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 |  |
| 5 | 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 |  |
| 6 | Commercial arithmetic | Simple interest Compound interest | By the end of the lesson, the learner should be able to:  Calculate simple interest Calculate the compound interest | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 98-99 |  |
| 7 | 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 |  |
| 3 | 1 | Commercial arithmetic | Depreciation | By the end of the lesson, the learner should be able to:   Calculate the depreciation value of items | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 109 |  |
| 2 | Commercial arithmetic | Hire purchase | By the end of the lesson, the learner should be able to:   Find the hire purchase | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 110-112 |  |
| 3 | 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 |  |
| 4 | 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 |  |
| 5 | Circles: Chords and tangents | Length of an arc | By the end of the lesson, the learner should be able to:   Calculate the length of an arc | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 124-125 |  |
| 6 | Circles: Chords and tangents | Chords | By the end of the lesson, the learner should be able to:   Calculate the length of a chord | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 126-128 |  |
| 7 | 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 | 1 | 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 |  |
| 2 | Circles: Chords and tangents | 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 |  |
| 3 | Circles: Chords and tangents | 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 135-139 |  |
| 4 | Circles: Chords and tangents | Tangent to a circle Tangent to a circle | By the end of the lesson, the learner should be able to:  Construct a tangent to a circle Calculate the length of tangent Calculate the angle between tangents | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 139-140 |  |
| 5 | Circles: Chords and tangents | Properties of tangents to a circle from an external point | By the end of the lesson, the learner should be able to:   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 142-144 |  |
| 6 | 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 |  |
| 7 | 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 |  |
| 5 | 1 | Circles: Chords and tangents | 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 |  |
| 2 | Circles: Chords and tangents | 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 153-154 |  |
| 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 | 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 160-161 |  |
| 6 | Circles: Chords and tangents | Circumscribed circle | By the end of the lesson, the learner should be able to:   Construct circumscribed circles | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 165 |  |
| 7 | 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 |  |
| 6 | 1 | Circles: Chords and tangents | Centroid Orthocenter | By the end of the lesson, the learner should be able to:  Construct centroid  Construct orthocenter | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 166 |  |
| 2 | Matrices | Matrix representation and order of matrix | By the end of the lesson, the learner should be able to:   Represent matrix State the order of a matrix | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 168-170 |  |
| 3 | 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 |  |
| 4 | 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 |  |
| 5 | Matrices | Combined addition and subtraction of matrices | By the end of the lesson, the learner should be able to:   Perform the combined operation on matrices | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 171-174 |  |
| 6 | 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 174-175 |  |
| 7 | 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 |  |
| 7 | 1 | Matrices | Identity matrix | By the end of the lesson, the learner should be able to:   Find the identity matrix | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 182-183 |  |
| 2 | Matrices | Determinant of a 2 | By the end of the lesson, the learner should be able to:   Find the determinant of a 2 | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 183 |  |
| 3 | 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 |  |
| 4 | 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 |  |
| 5 | Matrices | 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 |  |
| 6 | Matrices | Solutions of simultaneous equations by matrix method Problem solving | By the end of the lesson, the learner should be able to:  Solve simultaneous equations by matrix method Calculate the inverse of a matrix | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 188-190 |  |
| 7 | 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 |  |
| 8 | **Mid Term Exams and Break** | | | | | | | |
| 9 | 1 | Formulae and variations | Direct variation | By the end of the lesson, the learner should be able to:   Solve problems involving direct variations | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 194-196 |  |
| 2 | Formulae and variations | Inverse variation | By the end of the lesson, the learner should be able to:   Solve problems involving inverse variations | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 197-200 |  |
| 3 | 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 |  |
| 4 | 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 |  |
| 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 206 |  |
| 6 | Sequences and series | Sequences | By the end of the lesson, the learner should be able to:   Find the next terms | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 207-208 |  |
| 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 |  |
| 10 | 1 | 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 |  |
| 2 | Sequences and series | Arithmetic series | By the end of the lesson, the learner should be able to:   Find the nth term of a given arithmetic series | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 214-215 |  |
| 3 | 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 |  |
| 4 | Sequences and series Vectors II | Geometric series Coordinates in two dimensions | By the end of the lesson, the learner should be able to:  Find the nth term of a given geometric series Identify the coordinates of appoint in two dimensions | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 216-219 |  |
| 5 | Vectors II | Coordinates in three dimensions | By the end of the lesson, the learner should be able to:   Identify the coordinates of appoint in three dimensions | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 222 |  |
| 6 | 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 |  |
| 7 | 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 |  |
| 11 | 1 | Vectors II | 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 |  |
| 2 | Vectors II | 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 |  |
| 3 | 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 |  |
| 4 | 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 |  |
| 5 | Vectors II | 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 |  |
| 6 | Vectors II | 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 233-234 |  |
| 7 | 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 |  |
| 12 | 1 | Vectors II | Proportion division of a line 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 Divide a line internally and externally in the given ratio | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 238 |  |
| 2 | Vectors II | Ratio theorem | By the end of the lesson, the learner should be able to:   Express position vectors | Discussions Solving  Demonstrating  Explaining | Calculators Protractor Ruler Pair of compasses | KLB Mathematics Book Three Pg 240 |  |
| 3 | 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 |  |
| 4 | 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 |  |
| 5 | Vectors II | 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 |  |
| 6 | Vectors II | 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 246-248 |  |
| 7 | 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 |  |
| 13-14 | **End Term Exams and closing** | | | | | | | |