**GREENHILL ACADEMY MATHEMATICS SCHEME OF WORK**

**YEAR: 2015 CLASS: P.4 TERM: II**

|  |  |  |  |  |  |  |  |  |  |  |  |
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| **WK 1** |  |  |  | **Completing term ones work and going through the holiday work.** | | **Holiday work** | **Holiday work** | **Holiday work** |  |  |  |
| **WK** | **PD** | **THE ME** | **TOPIC** | **COMPETENCES** | | **SUBTOPIC/CONTENT** | **METHODS** | **SKILLS** | **ACTIVITIES** | **T/AIDS** | **REF.** |
| **SUBJECT** | **LANGUAGE** |
| 2 | 1 | FRACTIONS | The Learner;  Names parts of fractions. | The learner;  Names the parts of a fraction.  Spells the words correctly. | Reviewing P.3 work  Parts of fractions | Whole class discussion  Brainstorming | Problem solving,  Decision making | Naming parts of fractions.  Identifying the parts.  Drawing parts of fractions. | Chalk board illustration  Chart showing fractions. | Under standing  Mtc bk 4  Pg 46  Mk bk 4  Pg 2. Mtc  Pg 80 |
|  | 2 | Describes shaded parts.  Shades parts of a fraction. | The Learner; ;  Names the parts of a fraction.  Spells the words correctly. | Shading and describing shaded parts | Whole class discussion  Brainstorming | Problem solving,  Decision making | Shading part of fractions  Describing the shaded parts. | Chalk board illustration  Chart showing fractions. | Under standing  Mtc bk 4  Pg 46  Mk bk 4  Pg 2. Mtc  Pg 80 |
|  | 3 |  | Identifies types of fractions | The Learner; Names the parts of a fraction.  Spells the words correctly | Types of fractions  Proper  Improper  mixed | Whole class discussion  Brainstorming | Problem solving,  Decision making | Identifying the types of fractions  Naming the types of fractions. | Chalk board illustration  Chart showing fractions. | Under standing  Mtc bk 4  Pg 46  Mk bk 4  Pg 2. Mtc  Pg 80 |
|  | 4 | changes mixed fractions to improper | The Learner; Describes  Numerator,  Denominator,  Whole number. | Changing mixed fractions to improper  Express 5 4 as an  7  Improper fraction    = w x d + n  D | Whole class discussion  Representation | Problem solving,  Decision making  Creative thinking | Changing mixed fractions to improper fractions | Chalk board illustration  Chart showing fractions. | Mk bk 4  Pg 2. Mtc  Pg 91 |
|  | 5 | ; Changes improper  Fractions to mixed. | The Learner; Reads and uses words like;  Remainder, whole number  Numerator. | Changing improper  Fractions to mixed  Change 17 to a mixed  5  Fraction | Discussion  Guided discovery | Problem solving,  Decision making  Creative thinking | Identifying improper fractions  Changing improper fractions to mixed. | Chalk board illustration  Chart showing fractions. | Under standing  Mtc bk 4  Pg  Mk bk 4  Pg 2. Mtc  Pg 91-92 |
| 3 | 1 | Finds equivalent fractions  Draws diagrams correctly. | The Learner; r; recites tables,  -Defines equivalent fractions. | Finding equivalent fractions  1 = 2 = 3 = 4  2 4 6 8  4 = \_\_ \_\_\_ \_\_\_ \_\_\_  5 | Whole class discussion  Brainstorming | -Decision making  Effective communication. | Defining equivalent fraction  Drawing diagrams correctly  Finding equivalent fractions | Chalk board illustration  Chart showing fractions. | Under standing  Mtc bk 4 |
|  | 2 | FRACTIONS | Finds the missing numbers correctly  Shows proper working. | The Learner; Mentions and cross multiplies,  unknown | Finding missing numbers in equivalent fractions.  2 = m  3 9  Find the value of m | Discussion  Guided discovery | Problem solving    Creative thinking | Identifying the  Fractions.  Finding the missing numbers | Chart showing equivalent fractions. | Under standing  Mtc bk 4  Pg 3  Mk bk 4  Pg 2. Mtc  Pg |
|  | 3 |  | Reduces fractions correctly.  Divides numbers correctly | ; mentions and uses words like common factor, divisor,  canceling | Reducing fractions to their simplest form  Reduce 8 to its  10  Simplest form. | Brain storming  Guided discovery | Creative thinking  Problem solving | Identifyingfractions  Reducing fractions to the lowest term. | Chalk board illustration  Chart showing fractions. | Mk bk 4  Pg 83-84 |
|  | 4 | NUMERACY | Compares fractions correctly | ; practices  The use of greater than, less than and equal to. | Comparing fractions  Use < , > or = correctly  3 …….. 1  4 2 | Whole class discussion  representation | Problem solving,  Decision making  Creative thinking | Identifying the signs used  Compairing fractions. | Chalk board illustration  Chart showing fractions. | Under standing  Mtc bk 4  Pg 50-51 |
|  | 5 | Arranges fractions in their correct order  Shows proper working | The Learner; reads and uses ascending  Descending order. | Ordering fractions  Arrange 1 5 3  2 4  Starting with the smallest.  The use of ascending- descending order. | Guided discovery  Discussion | -Decision making  Effective communication. | Renaming fractions  Arraigning fractions | Chalk board illustration  Chart showing fractions. | Under standing  Mtc bk 4  Pg 50-51 |
| 4 | 1  and  2 | Renames fractions correctly.  Subtracts fractions with both same and different denominators | The Learner; uses concepts like renaming. Equivalent fractions,  LCM | Addition of fractions with same and different denominators.  Add. 2 + 1  5 4  Adding the fractions by using equivalent fractions (renaming) | Whole class discussion  Brainstorming | -effective communication  Problem solving | Renaming fractions  Adding fractions | Chalk board illustration  Chart showing fractions. | Mk bk 4  Pg 94 |
|  | 3 | Renames fractions correctly.  Adds fractions with both same and different denominators. | The Learner; reviews words like denominators,  numerators | Addition of mixed fractions  Add 7 2/5 ­+ 21/5  (7 +2) + (2/5 +1/5) | Discussion  Guided discovery | effective communication  Problem solving | Renaming  fraction  Adding fractions | Chalkboard illustration. | Under standing  Mtc bk 4  Pg 46  Mk bk 4  Pg 100 |
|  | 4 | NUMERACY | Renames fractions correctly.  Subtracts fractions with both same and different denominators. | The Learner; ;  Learners review words like denominators,  numerators | Subtraction of fractions with same  Denominators and different denominators  Add. 2 - 1   1. 4   Adding the fractions by using equivalent fractions (renaming) | Whole class discussion  Brainstorming | effective communication  Problem solving | Renaming fractions  Subtracting fractions | Chalk board illustration  Chart showing fractions. | Under standing  Mtc bk 4  Pg 47  Mk bk 4  Pg 98 |
|  | 5 | Renames fractions correctly.  Subtracts fractions with both same and different denominators | The Learner; review words like denominators,  numerators  whole number | Subtraction of mixed fractions  Add 7 2/5 ­- 21/5  Subtracting fractions from wholes  1 – 3/9 | Discussion  Guided discovery | -Decision making  Effective communication. | Renaming fractions  Subtracting fractions. | Chart showing subtraction of fractions from wholes. | Under standing  Mtc bk 4  Pg 3  Mk bk 4  Pg 108 |
| 5 |  | **MIDTERM EXAMINATIONS** |  |  |  |  |  |  |  |
| 6 | 1 | Multiplies fractions  Correctly | The Learner; reviews words like denominators,  numerators  product | Multiplying fractions  2/5 X 3/7    ½ of 20 | Whole class discussion  Brainstorming | effective communication  Problem solving | Drawing |  | Under standing  Mtc bk 4  Pg 49  Mk bk 4  Pg 88-103 |
|  | 2 | FRACTIONS | Draws clear diagrams  Finds the number of pieces. | Learners;  Reads word problems correctly mentioning halves, quarters | Division of fractions  3 ÷ ½  How many ½ litre cups of milk will fill a 5 litre jerry can?. | Discussion  Guided discovery | effective communication  Problem solving | Drawing  Answering oral and written questions | Chalk board illustration | Under standing  Mtc bk 4  Pg 3  Mk bk 4  Pg 2. Mtc  Pg |
|  | 3 | NUMMERACY | Reads word problems correctly  Multiply fractions  Correctly. | Reads words  Spells words. | Application of fractions  ¾ of the 48 pupils in P.6 G are boys. How many boys are there? | Discussion  Guided discovery | -Decision making  Effective communication. | Answering oral and written questions | Chalk board illustration | Under standing  Mtc bk 4  Pg 3  Mk bk 4  Pg 2. Mtc  Pg |
|  | 4 | Learner;  Changes common fractions to decimals | Learner ;  Reads decimals  Writes decimals. | Changing common fractions into decimals | Discussion  Guided discovery | -Decision making  Effective communication. | Answering oral and written questions | Chalk board illustration | Under standing  Mtc bk 4  Pg 3  Mk bk 4  Pg 2. Mtc  Pg |
|  | 5 | Learner;  changes decimals into fractions | Learner ;  Reads decimals  Writes decimals | Changing decimals into fractions | Discussion  Guided discovery | -Decision making  Effective communication. | Answering oral and written questions | Chalk board illustration | Under standing  Mtc bk 4  Pg 3  Mk bk 4  Pg 2. Mtc  Pg |
| 7 | 1 |  |  | Learner;  Expresses mixed fractions as decimals. | Learner ;  Reads decimals  Writes decimals | Expressing mixed fractions as decimals | Discussion  Guided discovery | -Decision making  Effective communication. | Answering oral and written questions. | Chalk board illustration | Under standing  Mtc bk 4  Pg 3  Mk bk 4  Pg 2. Mtc  Pg |
|  | 2 | Learner;  Expresses decimals as mixed fractions | Learner ;  Reads decimals  Writes decimals | Expressing decimals as mixed fractions. | Discussion  Guided discovery | -Decision making  Effective communication. | Answering oral and written questions | Chalk board illustration | Under standing  Mtc bk 4  Pg 3  Mk bk 4  Pg 2. Mtc  Pg |
|  | 3 | Arranges numbers according to place values  Add decimals correctly | Learner; reads place values i.e. tenths, hundredths, ones.  Vertical arrangement. | Addition of decimals Computation  0.8 + 1.6    0.8  + 1.6 | Whole class discussion  Brainstorming | Problem solving,  Decision making  Creative thinking | Arranging numbers to there place values  Adding decimals | Chalk board illustration | Mk bk 4  Pg 102  Learning mtc  Pg 37 |
|  | 4 | Arranges numbers according to place values  subtracts decimals correctly | Learners; Reads place values i.e. tenths, hundredths, ones.  Vertical arrangement. | subtraction of decimals  7.8 - 1.6          7.8  - 1.6 | Discussion  Guided discovery  Discussion | Problem solving,  Decision making  Creative thinking | Arranging numbers to there place values  Subtracting decimals | Chalk board illustration | Learning mtc std 4  Pg 37-38 |
|  | 5 | Arranges numbers according to place values | Learner;  Reads decimals  Writes decimals | Ordering and comparing decimals | Discussion  Guided discovery  Discussion | Problem solving,  Decision making  Creative thinking | Answering oral and written questions | Chalk board illustration | Learning mtc std 4  Pg 37-38 |
| 8 | 1 | Learner ;  finds the perimeter of different shapes. | Learners; define perimeter,  Mention the correct units | **Perimeter** of different shapes like squares, rectangles, pentagon, etc | Brain storming  Whole class discussion | Effective communication  Problem solving  Critical thinking | Finding perimeter  Measuring objects. | Chart showing the different shapes | Mk bk 4  Pg 204-5 |
|  | 2 | MEASURES (LENGTH) | Learner;  Finds the area of the shapes.  Applies correct unit. | Learners; | **Area of squares and** rectangles.  Find the area of the figures below. | Drawing  Representation | Problem solving  Effective communication | Drawing shapes. | Chart showing the | Mk bk 4  Pg 209-5 |
|  | 3 | Learner;  Find the area of triangles correctly.  Applies correct unit. | Learners mention the correct units for area,  Mention the formula for finding area. | **Area and perimeter of a triangle ,**  Deriving the formula  A = 1 X b X h  2 | Guided discovery  Representation | Problem solving  Effective communication | Finding area | Chart showing how to derive area of a triangle | Mk bk 4  Pg 214 |
|  | 4& 5 |  | Learner ;  Find the missing sides of a rectangle.  Applies correct unit. | Learners mention the correct units for area,  Mention the formula for finding area. | **Finding the missing sides of shapes e.g.**  Finding the missing side of the rectangle given the area as 24cm2  w    6cm  A = L X W  24 cm2 = 6cm X W  24cm 2 = 6Wcm  24cm2  = 6Wcm  6cm 6cm  4cm = W  B] Finding the missing sides of a square | Brain storming  Whole class discussion | Effective communication  Problem solving  Critical thinking | Adding area  Answering questions | Chart showing addition of area | Mk bk 4  Pg 212-213 |
| 9 | 1 | MEASUREMENT | The learner;  Find the area of the shapes.  Applies correct unit.  Add up area | Learners mention the correct units for area,  Mention the formula for finding area. | Area of joined shapes  A= P + Q  = (l x w) + (l x w) = 6cm x 4cm +8cmx5cm  = 24cm2 + 40cm2  64cm2  (b) findthe perimeter of the above figure | Brain storming  Whole class discussion | Effective communication  Problem solving  Critical thinking | Adding area  Answering questions | Chart showing addition of area | Mk bk 4  Pg 212-213 |
|  | 2 | MEASURES (LENGTH) | The learner;  Finds the area the given shapes.  Finds difference in area. | Learners describe shaded regions | Difference in area of the shaded part  Area = inner fig.- outer fig  =( l x w) – ( l x w)  =(10cmx8cm)-(6cmx5cm)  = 80cm2- 30cm2  = 50cm2 | Representation  Guided discovery | Effective communication  Problem solving  Critical thinking | Subtracting area | Chart showing subtraction of area | Mk bk 5  Pg 204-5 |
|  | 3 | DATA HANDLING | The learner ;  Reads and Interprets the pictographs | The learner ;  Reads, interprets the pictures correctly | The pictograph below shows the number of trees planted by three boys.  **Scale: =5 trees**  a)how many trees were planted by Kintu | Representation  Guided discovery | Effective communication  Problem solving  Critical thinking | Subtracting area | Chart showing a pictograph | MK BK 4 PG 123 |
| 9 | 4&5 | GRAPHS | The learner ;  Draws pictograph from the given data | The learner ;  Reads, interprets the data correctly | Make pictographs for the following data (information)   * John has 12balls * Mega has 15 balls * Sarah has 18 balls * Kamoga has 9 balls   Scale: : =  3balls | Representation  Guided discovery | Effective communication  Problem solving  Critical thinking | Drawing pictures. | Chart showing a pictograph | MK BK 4 PG 122  Mk 4pg 122 and 120  Understanding mtc bk 5 pg 19 for graphs. |
|  |  | Learner ;  Interpret the scales of a pictograph.  Answer questions from the graph correctly | Learners;  **.** | **Pictographs**  Interpreting the symbols given for pictographs  The shows the number | Drawing  discussion | Effective communication  Problem solving  Critical thinking | Drawing graphs  Answering questions | Chart showing bar graph. | Mk bk 4.  Pg 116 -23,  115-118 |
| 10 | 1 | The learner;  Interprets the scales of a bar graph.  Answers questions from the graph correctly. | Learners;  **Reads and interprets the graph correctly** | **Bar graphs.**  Interpreting the scales of a bar graph.  The graph shows the number of pupil who like posho.   |  |  |  |  | | --- | --- | --- | --- | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  |   M T W TH | Brain storming  Whole class discussion | Effective communication  Problem solving  Critical thinking | Drawing graphs  Answering questions | Chart showing bar graph. | Under mtc  Bk 4  Pg 68-71  Learning  Mtc.  Std. 4  Pg 100-5 |
|  | 2 | The learner;  Draws, tallies correctly  Interprets and counts the tallies correctly | Learners;  **Reads and interprets the graph correctly** | **Tallying**  Organizing data by use of tallies | Question and answer  discussion | Effective communication  Problem solving  Critical thinking | Drawing tallies  Answering questions | Chart showing tallies. | Mk bk 4.  Pg 118-119 |
|  | 3 | The learner;  Finds the mode | Learners;  **Reads and interprets the graph correctly** | **Finding mode**  Kennedy got following marks in an exam; 70,88,70,90,85.Find his modal mark   |  |  |  |  |  | | --- | --- | --- | --- | --- | | M | 70 | 88 | 85 | 90 | | K | 2 | 1 | 1 | 1 | | Representation  Drawing | Effective communication  Problem solving  Critical thinking | Answering questions  Drawing tallies. | Chart showing mode, range, median and mean. | Mk bk 5  Unders’g  Mtc bk 5 |
|  | 4 | The learner;  Finds the range correctly.    Identifies the highest and lowest scores | Learners use read and mention the highest, lowest, and range | **Finding range**  Maureen scored the following goals in 4 netball matches; 7,9,6, 5  Find her range  R = h - l | Brain storming  Whole class discussion | Effective communication  Problem solving  Critical thinking | Answering questions | Chart showing mode, range, median and mean. | Mk bk 5  Unders’g  Mtc bk 5 |
|  | 5 | The learner;  Arranges the values in order of size  Finds the median | Learners define median, ascending, descending | **Finding median**  Find the median of 43, 74, 49, 90, 10 | Demonstration Guided discovery | Effective communication  Problem solving  Critical thinking | Arranging data | Chart showing mode, range, median and mean. | Mk bk 5  Unders’g  Mtc bk 5 |
| 11 | 1 | The learner;  Adds the values correctly  Calculates the average correctly. | Learners define average / mean. | Calculating mean/ average | Discussion  Group discussion | Effective communication  Problem solving  Critical thinking | Answering oral and written questions | Chart showing mode, range, median and mean. | Mk bk 5  Unders’g  Mtc bk 5 |
| 2 | 1&2 | **draws different** **types of triangles** | Learners define terms triangle | **Types of triangles**   * Right angled triangle * Isosceles triangle * Equilateral triangle * Scalene triangle   **Other polygons**   * Pentagon * Hexagon | Representation  Guided discovery | Effective communication  Problem solving  Critical thinking | Identifying types of triangles.  Naming types of triangles.  Drawing triangles. | Chart showing different types of triangles | Mk bk 4  Pg |
| 3 | 1&2 | Draws and names solid shapes. | Learners names the solid shapes | **Solid shapes**   * Cube * Cone * Cuboid * Pyramid * Prism * Cylinder | Representation  Demonstration | Problem solving  Effective communication | identifying solid shapes  Naming solid shapes.  Drawing solid shapes | Chart showing examples of solid shapes | Mk bk 4  Pg |
| 4 | 1&2 |  | The learner;  Names parts of solid figures | Learners name the part of solid shapes | **Parts of solid shapes**   * Faces * Edges * Vertices | Drawing  Guided discovery | Problem solving  Effective communication | Drawing solid shapes | Chart showing parts solid shapes | Mk bk 4  Pg |
| 6 | 1&2. | GEOMETRY | The learner;  Constructs angles | Learners read angles | Construction of angles  900 | Drawing  Guided discovery | Problem solving  Effective communication | Constructing angles.  Measuring angles. | Chalk board illustrations | Mk bk 5  pg |
| 7 | 1&2 | The learner;  Constructs angles.  Joins the points accurately. | Learners read angles | Construction of rectangle. | Drawing  Guided discovery | Problem solving  Effective communication | Constructing rectangles.  Measuring the length. | Chalk board illustrations | Mk bk 5  pg |
| 8 | 1&2 | The learner;  Constructs angles  Joins the points accurately. | Learners read angles | Construction of a square. | Drawing  Guided discovery | Problem solving  Effective communication | Constructing rectangles.  Measuring the length. | Chalk board illustrations | Mk bk 5  pg |
| 9 | 1&2 |  | The learner;  Constructs angles | Learners read angles | Construction of angles  600 | Drawing  Guided discovery | Problem solving  Effective communication | Constructing angles.  Measuring angles. | Chalk board illustrations | Mk bk 5  pg |
| 10 | 1&2 |  | The learner;  Constructs angles  Joins the points accurately. | Learners read angles | Construction of a an equilateral triangle. | Drawing  Guided discovery | Problem solving  Effective communication | Constructing rectangles.  Measuring the length. | Chalk board illustrations | Mk bk 5  pg |
| 2 | 1 | ALGEBRA | The learner;  Add s letters correctly  Collects like terms correctly | Learners mention and use like terms. | **Collecting like terms**  Simplify ; x +y + 3x +6y  x + 3x +y +6y  4x + 7y | Guided discovery  discussion | Effective communication  Problem solving  Critical thinking | Adding  Answering questions | Real materials like stones, leaves, | Understanding mtc bk 4  Pg 156-7 |
| 3 | 1 |  | The learner;  Substitutes letters for numbers | Learners use words like substitute,  Simply. | **Substitution**  Given that a=4, b=5  Find the value of   1. a + b 2. ab   (c)3a + 4b | brainstorming  discussion | Effective communication  Problem solving  Critical thinking | Adding  Answering questions | Chalk board illustrations.  Chart | MK  Bk 4  Pg 254 |
| 4 | 1 |  | ALGEBRA | The learner;  Solves the given equations correctly | Learners use terms like solve,  Simplify. | Forming and Solving equations involving addition  K +4 = 9  K +4-4=9-4  K +0 = 5  K =5 | Discussion  Brain storming | Effective communication  Problem solving  Critical thinking | Adding  Answering questions | Chalk board illustrations.  Chart | MK  Bk 4  Pg 254 |
| 6 | 1 |  |  | The learner;  Solves the given equations correctly | Learners observe the  Operation,  Balancing equations | Solving equations involving letters with subtractions  d - 14 = 30  b) Forming and solving equations | Brain storming  Whole class discussion | Effective communication  Problem solving  Critical thinking | Solving equations | Chalk board illustrations.  Chart | Learning  Mtc.  Std. 4  Pg 100-5 |
| 7 | 1 |  | The learner;  Solves the given equations correctly | Learners use terms like solve,  Simplify. | **Solving equations** involving multiplication  (i) 7x = 35  (ii) a X 6 = 24  b) Forming and solving equations | Discussion  Brain storming | Effective communication  Problem solving  Critical thinking | Solving equations | Chalk board illustrations.  Chart | Learning  Mtc.  Std. 4  Pg 100-5 |
| 8 | 1 | ALGEBRA | The learner;  Solves the given equations correctly | Learners state where Cross multiplying. | **Solving** equations involving **division**  (a) y = 8  3  (b) n ÷ 5 = 6  b) Forming and solving equations | Brain storming  Whole class discussion | Effective communication  Problem solving  Critical thinking | Solving equations | Chalk board illustrations.  Chart | Learning  Mtc.  Std. 4  Pg 100-5 |
| 9 | 1 |  | The learner;  Solves equations involving more than one operation | Learners use more than one operation | Equations involving more than one operation  1.Solve for y  2y+5 = 17  2y+5-5 =17-5  2y+0 = 12  2y =12  2y/2 = 12/2  Y = 6 | Discussion  Brain storming | Effective communication  Problem solving  Critical thinking | Solving equations | Chalk board illustrations.  Chart | Learning  Mtc.  Std. 4  Pg 100-5 |
| 10 | 1 |  | The learner;  Solves the given equations correctly | Learners; | **Forming and solving equations.**  Think of a number add 5 to it and the result is 23. What is the number? | Discussion  Brain storming | Effective communication  Problem solving  Critical thinking | Forming equations  Solving equations | Chalk board illustrations. | Learning  Mtc.  Std. 4  Pg 100-5 |