Mathematics schemes of work

Standard Seven Term One

**References**

1. New progressive primary mathematics teacher’s guide book 7
2. New progressive primary mathematics pupil’s book 7
3. Primary mathematics pupil’s book 7
4. Primary mathematics teacher’s guide book 7

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| WEEK | LESSON | TOPIC | SUB-TOPIC | OBJECTIVES | TEACHER’S ACTIVITIES | LEANER’S ACTIVITIES | LEARNING/ TEACHING RESOURCES | REFERENCES | ASSESSMENT | REMARKS |
| 1 | REPORTNG AND PREPARATION | | | | | | | | |  |
| 2 | 1 | **NUMBERS** | Place value | By the end of the lesson the learner should be able to **identify the place value of a given numbers** | -Grouping  - Explanation  -Working out  demonstration  -Discussion | -Grouping  - Explanation  -Working out  -demonstration  -Discussion | -Objects like tins, books, pencils, cups, pictures, etc  -place value chart | PM PB7 Pg2  TG 7Pg1  NPM PB7 Pg3  TG b7Pg2 | WRTTEN EXERCISE |  |
| 2 | **NUMBERS** | Total value | By the end of the lesson the learner should be able to **identify total value of a given number** | -Grouping objects  - arranging  -Labelling and matching objects | -Grouping objects  - arranging  -Labelling and matching objects according to common features. | place value chart | PM PB7 Pg4  TG 7Pg3  NPM PB7 Pg6  TG b7Pg4 | Filling in blanks spaces |  |
| 3 | **NUMBERS** | Reading numbers | By the end of the lesson the learner should be able to **read and write numbers in words and in symbols** | -- Explanation  -Working out  -demonstration  -reading | -- Explanation  -Working out  -demonstration  -reading | place value chart | PM PB7 Pg7  TG 7Pg4  NPM PB7 Pg8  TG b7Pg5 | Written excises |  |
| 4 | **NUMBERS** | Writing numbers | By the end of the lesson the learner should be able to **read and write numbers in words and in symbols** | -- Explanation  -Working out  -demonstration  -writing | -- Explanation  -Working out  -demonstration  -writing | place value chart+ | PM PB7 Pg7  TG 7Pg4  NPM PB7 Pg8  TG b7Pg4 | Filling in blanks spaces |  |
| 5 | **NUMBERS** | Squares of numbers | By the end of the lesson the learner should be able **to work out squares of numbers** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Rectangles, circles, triangles  of different sizes and  colours | PM PB7 Pg8  TG 7Pg5  NPM PB7 Pg8  TG b7Pg5 | Written excises |  |
| 6 | **NUMBERS** | Square roots of numbers | By the end of the lesson the learner should be able to **workout the square root of numbers** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Rectangles, circles, triangles  of different sizes and  colours | PM PB7 Pg8  TG 7Pg5  NPM PB7 Pg9  TG b7Pg6 | Filling in blanks spaces |  |
| 7 | **NUMBERS** | Square and square root of numbers | By the end of the lesson the learner should be able to **work out square numbers and square root of perfect squares** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Objects like tins, books, bottles, pictures, of different size | PM PB7 Pg8  TG 7Pg5  NPM PB7 Pg8  TG b7Pg5 | Written excises |  |
| 3 | 1 | **NUMBERS** | Divisibility test for 11 | By the end of the lesson the learner should be able to **determine numbers divisible by eleven** | - Explanation  -Working out  -demonstration  -Divide | - Explanation  -Working out  -demonstration  -Divide | Objects like tins, books, bottles, pictures, of different size | PM PB7 Pg7  TG 7Pg7  NPM PB7 Pg8  TG b7Pg5 | Written exercise |  |
| 2 | **NUMBERS** | Divisibility test | By the end of the lesson the learner should be able to **work out a problem involving divisibility test of eleven** | - Explanation  -Working out  -demonstration  -Divide | - Explanation  -Working out  -demonstration  -Divide | Objects that have smooth or rough texture like wood,  paper, glass, soil, mirror,  leaves, etc. | PM PB7 Pg7  TG 7Pg6  NPM PB7 Pg8  TG b7Pg6 | Matching exercise |  |
| 3 | **Fractions** | Square of fractions | By the end of the lesson the learner should be able **to work out square of fraction** | • Identifying  • Matching  • Comparing- Explanation | • Identifying  • Matching  • Comparing- Explanation | Objects that have smooth or rough texture | PM PB7 Pg10  TG 7Pg8  NPM PB7 Pg12  TG b7Pg 7 |  |  |
| 4 | **Fractions** | Square root of fractions | By the end of the lesson the learner should be able to **workout square root of a fraction** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Chart | PM PB7 Pg11  TG 7Pg  NPM PB7 Pg12  TG b7Pg7 | Filling in blanks spaces |  |
| 5 | **Fractions** | Perfect squares | By the end of the lesson the learner should be able to **work out squawroot of fraction involving perfect squares** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Chart | PM PB7 Pg11  TG 7Pg  NPM PB7 Pg12  TG b7Pg8 | Written excises |  |
| 6 | **Decimal**s | Place value | By the end of the lesson the learner should be able to **identify place value of digits in decimals** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | place value chart | PM PB7 Pg12  TG 7Pg9  NPM PB7 Pg14  TG b7Pg11 | Written exercise |  |
| 7 | **Decimal**s | Total value | By the end of the lesson the learner should be able to **identify total value of digits in decimals** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | place value chart | PM PB7 Pg12  TG 7Pg  NPM PB7 16Pg14  TG b7Pg | Matching exercise |  |
| 4 | 1 | **Decimal**s | Conversion of decimal to fraction | By the end of the lesson the learner should be able to **convert non-recurring decimal to fraction** | - Explanation  -Working out  -demonstration  -Conversion | - Explanation  -Working out  -demonstration  -Conversion | place value chart | PM PB7 Pg15  TG 7Pg  NPM PB7 Pg18  TG b7Pg | Filling in blanks spaces |  |
| 2 | **Decimal**s |  | By the end of the lesson the learner should be able **to convert fraction to decimal** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | place value chart | PM PB7 Pg17  TG 7Pg13  NPM PB7 Pg  TG b7Pg20 | Written excises |  |
| 3 | **Decimal**s |  | By the end of the lesson the learner should be able **to convert fraction to decimal involving non-recurring and recurring decimals** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | place value chart | PM PB7 Pg22  TG 7Pg  NPM PB7 Pg32  TG b7Pg22 | Written exercise |  |
| 4 | **Decimal**s |  | By the end of the lesson the learner should be able to work out **square of decimals** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | place value chart | PM PB7 Pg25  TG 7Pg  NPM PB7 Pg  TG b7Pg | Matching exercise |  |
| 5 | **Decimal**s |  | By the end of the lesson the learner should be able to **work out square root of decimals involving perfect squares** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | place value chart | PM PB7 Pg30  TG 7Pg  NPM PB7 Pg34  TG b7Pg | Filling in blanks spaces |  |
| 6 | Percentages | Conversion | By the end of the lesson the learner should be able to **convert percentage into fraction** | - Explanation  -Conversion  -demonstration  -Discussion | - Explanation  -Conversion  -demonstration  -Discussion | Conversion chart  Chalk board layout | PM PB7 Pg34  TG 7Pg27  NPM PB7 Pg35  TG b7Pg | Written excises |  |
| 7 | Percentages |  | By the end of the lesson the learner should be able **to convert fraction into percentage.** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Multiplication table | PM PB7 Pg37  TG 7Pg27  NPM PB7 Pg38  TG b7Pg | Written exercise |  |
| 5 | 1 | Percentages |  | By the end of this topic, the  pupils should be **convert decimal into percentage** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Multiplication table | PM PB7 Pg40  TG 7Pg  NPM PB7 Pg45  TG b7Pg | Matching exercise |  |
| 2 | Percentages |  | By the end of this topic, the  pupils should be able **to convert percentage into decimals** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Multiplication table | PM PB7 Pg42  TG 7Pg32  NPM PB7 Pg  TG b7Pg | Filling in blanks spaces |  |
| 3 | OPERATION | **Whole numbers**  **Addition** | By the end of this topic, the  pupils should be able to **add whole numbers by whole numbers correctly** | - Explanation  -Addition  -demonstration  -Discussion | - Explanation  -Addition  -demonstration  -Discussion | Multiplication table | PM PB7 Pg42  TG 7Pg32  NPM PB7 Pg46  TG b7Pg36 | Written excises |  |
| 4 | OPERATION | **subtraction** | By the end of this topic, the  pupils should be able to **subtract whole numbers by whole numbers correctly** | - Explanation  -Subtraction  -demonstration  -Discussion | - Explanation  -Subtraction  -demonstration  -Discussion | Multiplication table | PM PB7 Pg41  TG 7Pg33  NPM PB7 Pg47  TG b7Pg | Written exercise |  |
| 5 | OPERATION | Multiplication | By the end of this topic, the  pupils should be able to **multiply whole number by whole numbers correctly** | - Explanation  -Multiplication  -demonstration  -Discussion | - Explanation  -Multiplication  -demonstration  -Discussion | Multiplication table | PM PB7 Pg41  TG 7Pg  NPM PB7 Pg47  TG b7Pg36 | Matching exercise |  |
| 6 | OPERATION | Division | By the end of this topic, the  pupils should be able to **divide whole numbers by up to 3-digit numbers** | - Explanation  -Division  -demonstration  -Discussion | - Explanation  -Division  -demonstration  -Discussion | Multiplication table | PM PB7 Pg42  TG 7Pg33  NPM PB7 Pg48  TG b7Pg36 | Filling in blanks spaces |  |
| 7 | OPERATION | Mixed exercise | By the end of the lesson the learner should be able to do **a revision exercise on the work covered.** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Multiplication table | PM PB7 Pg42  TG 7Pg33  NPM PB7 Pg  TG b7Pg | Written excises |  |
| 6 | 1 | OPERATION | Combined operation | By the end of this topic, the  pupils should be able to **work out problems involving combined operation in whole numbers** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Multiplication table | PM PB7 Pg43  TG 7Pg34  NPM PB7 Pg  TG b7Pg38 | Written exercise |  |
| 2 | OPERATION | Number sequence | By the end of this topic, the  pupils should be able to **recognize and identify number sequence involving whole numbers** | - Explanation  -addition  -demonstration  -Discussion | - Explanation  -addition  -demonstration  -Discussion | Multiplication table | PM PB7 Pg43  TG 7Pg33  NPM PB7 48Pg48  TG b7Pg | Matching exercise |  |
| 3 | Fraction | Addition | By the end of this topic, the  pupils should be able to **work out addition of fraction by fraction** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Place value table | PM PB7 Pg32-43  TG 7Pg23  NPM PB7 Pg  TG b7Pg22 | Filling in blanks spaces |  |
| 4 | Fraction | Subtraction | By the end of this topic, the  pupils should be able to **work out subtraction of fraction by fraction** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Chalkboard layout | PM PB7 Pg38  TG 7Pg  NPM PB7 Pg36  TG b7Pg | Written excises |  |
| 5 | Fraction | Multiplication | By the end of this topic, the  pupils should be able to **work out multiplication of fraction by fraction** | - Explanation  -Working out  -Multiplication  -Discussion | - Explanation  -Working out  -Multiplication  -Discussion | Place value table | PM PB7 Pg37  TG 7Pg  NPM PB7 Pg38  TG b7Pg29 | Written exercise |  |
| 6 | Fraction | Division | By the end of this topic, the  pupils should be able to **work out division of fraction by fraction** | - Explanation  -Working out  -demonstration  -Division | - Explanation  -Working out  -demonstration  -Division | Chalkboard layout | PM PB7 Pg42  TG 7Pg  NPM PB7 Pg42  TG b7Pg29 | Matching exercise |  |
| 7 | Fraction | Combined operation | By the end of this topic, the  pupils should be able **to work out combined operation involving fraction** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Place value table | PM PB7 Pg  TG 7Pg  NPM PB7 Pg  TG b7Pg | Filling in blanks spaces |  |
| 7 | MID TERM EXAMS | | | | | | | | |  |
| 8 | MID TERM BREAK | | | | | | | | |  |
| 9 | 1 | Fraction | Number sequence | By the end of this topic, the  pupils should be able to **work out number sequence involving fraction** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Chalkboard layout | PM PB7 Pg  TG 7Pg  NPM PB7 Pg  TG b7Pg | Written exercise |  |
| 2 | Fraction | Revision | By the end of the lesson the learner should be able to do **a revision exercise on the work covered**. | - Explanation  -Working out  -demonstration  -revision | - Explanation  -Working out  -demonstration  -revision | Place value table | PM PB7 Pg  TG 7Pg  NPM PB7 Pg  TG b7Pg | Matching exercise |  |
| 3 | Decimals | Addition | By the end of the lesson the learner should be able to **work out addition involving decimal and decimals** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Place value table | PM PB7 Pg  TG 7Pg  NPM PB7 Pg  TG b7Pg | Filling in blanks spaces |  |
| 4 | Decimals | Subtraction | By the end of the lesson the learner should be able to **work out subtraction involving decimal and decimals** | - Explanation  -subtraction  -demonstration  -Discussion | - Explanation  -subtraction  -demonstration  -Discussion | Chalkboard layout | PM PB7 Pg  TG 7Pg  NPM PB7 Pg  TG b7Pg | Written excises |  |
| 5 | Decimals | Multiplication | By the end of the lesson the learner should be able to **work out multiplication involving decimal and decimals** | - Explanation  -multiplication  -demonstration  -Discussion | - Explanation  -multiplication  -demonstration  -Discussion | Place value table | PM PB7 Pg  TG 7Pg  NPM PB7 Pg  TG b7Pg | Written exercise |  |
| 6 | Decimals | Division | By the end of the lesson the learner should be able to **work out division involving decimal and decimals** | - Explanation  -dividing  -demonstration  -Discussion | - Explanation  -dividing  -demonstration  -Discussion | Chalkboard layout | PM PB7 Pg  TG 7Pg  NPM PB7 Pg  TG b7Pg | Matching exercise |  |
| 7 | Decimals |  | By the end of the lesson the learner should be able to **work out combined operation involving decimal** | - Explanation  -Working out  -demonstration  -Discussion | - Explanation  -Working out  -demonstration  -Discussion | Place value table | PM PB7 Pg33  TG 7Pg24  NPM PB7 Pg34  TG b7Pg | Filling in blanks spaces |  |

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| WEEK | LESSON | TOPIC | SUB-TOPIC | OBJECTIVES | LEANING/ TEACHING ACTIVITIES | LEANING/ TEACHING ACTIVITIES | LEARNING/ TEACHING RESOURCES | REFERENCES |  |  |
| 10 | 1 | **Percentage** | Percentage increase | By the end of the lesson the learner should be able to **work out problems involving percentage increase** | -Grouping  - Explanation  -Working out  -demonstration  -Discussion | -- Explanation  -Working out  -demonstration  -Discussion | -Objects like tins, books, pencils, cups, pictures, etc | PM PB7 Pg37  TG 7Pg26  NPM PB7 Pg36  TG b7Pg37 | Filling in blanks spaces |  |
| 2 | **Percentage** | Percentage decrease | By the end of the lesson the learner should be able to **work out problems involving percentage decrease** | -Grouping objects  - arranging  -Labelling and | - Explanation  -Working out  -demonstration  -Discussion | -Objects like tins, -books, pencils, -cups, pictures, etc | PM PB7 Pg38  TG 7Pg  NPM PB7 Pg43  TG b7Pg26 | Written excises |  |
| 3 | Measurements | Decimetre | By the end of the lesson the learner should be able to **recognize and identify decimetre (dm) as a unit of measuring length** | -- Explanation  -Working out  -demonstration  -reading | - Explanation  -Working out  -Drawing  -Discussion  -measuring | Coloured Manila cards  (squares, triangles, circles),  books, beads, | PM PB7 Pg37  TG 7Pg26  NPM PB7 Pg  TG b7Pg | Written exercise |  |
| 4 | Measurements | Decametre | By the end of the lesson the learner should be able to **recognize and identify decametre (Dm) as a unit of measuring length** | -- Explanation  -Working out  -demonstration  -writing | -Identifying Explanation  -Working out  -Drawing  -Discussion  measuring | Coloured Manila cards  (squares, triangles, circles),  books, beads, | PM PB7 Pg43  TG 7Pg30  NPM PB7 Pg43  TG b7Pg45 | Matching exercise |  |
| 5 | Measurements | Hectometre | By the end of the lesson the learner should be able to **recognize and identify hectometre (hm) as a unit of measuring length** | - Explanation  -Working out  -demonstration  -Discussion | Identifying  Explanation  -Working out  -Drawing  -Discussion | Rectangles, circles, triangles  of different sizes and  colours | PM PB7 Pg  TG 7Pg  NPM PB7 Pg  TG b7Pg | Filling in blanks spaces |  |
| 6 | Measurements | Converting units of measurement | By the end of the lesson the learner should be able to **convert units of measurement from one to another** | - Explanation  -Working out  -demonstration  -Discussion | Explanation  -Working out  -Drawing  -Discussion  measurement | Rectangles, circles, triangles  of different sizes and  colours | PM PB7 Pg37  TG 7Pg32  NPM PB7 Pg43  TG b7Pg | Written excises |  |
| 7 | Measurements | Perimeter | By the end of the lesson the learner should be able to **work out perimeter involving circles** | - Explanation  -Working out  -demonstration  -Discussion | Explanation  -Working out  -Drawing  -Discussion | Objects like tins, books, bottles, pictures, of different size | PM PB7 Pg45  TG 7Pg  NPM PB7 Pg  TG b7Pg | Written exercise |  |
| 11 | 1 | Measurements | Perimeter of triangle | By the end of the lesson the learner should be able to **work out perimeter involving triangles** | - Explanation  -Working out  -demonstration  -Divide | Explanation  -Working out  -Drawing  -Discussion | Objects like tins, books, bottles, pictures, of different size | PM PB7 Pg45  TG 7Pg  NPM PB7 Pg44  TG b7Pg | Matching exercise |  |
| 2 | Measurements |  | By the end of the lesson the learner should be able to **work out perimeter involving quadrilateral** | - Explanation  -Working out  -demonstration  -Divide | • Identifying the texture of an Explanation  -Working out  -Drawing  -Discussion • Matching objects according | Objects that have smooth or rough texture like wood,  paper, glass, soil, mirror,  leaves, etc. | PM PB7 Pg47  TG 7Pg  NPM PB7 Pg43  TG b7Pg34 | Filling in blanks spaces |  |
| 3 | Measurements |  | By the end of the lesson the learner should be able **to work out problems involving units of length in real life** | • Identifying  • Matching  • Comparing- Explanation  -Working out  -demonstration  -Discussion | Explanation  -Working out  -Drawing  -Discussion | Objects that have smooth or rough texture like wood,  paper, glass, soil, mirror,  Leaves, etc. | PM PB7 Pg34  TG 7Pg  NPM PB7 Pg  TG b7Pg48 |  |  |
| 4 | Measurements | Area | By the end of the lesson the learner should be able to **workout the area of a circle** | - Explanation  -Working out  -demonstration  -Discussion | Explanation  -Working out  -Drawing  -Discussion | Rectangles, circles, triangles  of different sizes and  colours | PM PB7 Pg48  TG 7Pg  NPM PB7 49Pg47  TG b7Pg | Filling in blanks spaces |  |
| 5 |  |  | By the end of the lesson the learner should be able to **work out problems involving area of a circle using the formulae** | - Explanation  -Working out  -demonstration  -Discussion | Explanation  -Working out  -Drawing  -Discussion | Rectangles, circles, triangles | PM PB7 Pg49  TG 7Pg345  NPM PB7 Pg54  TG b7Pg | Written excises |  |
| 6 |  | Trapezium | By the end of the lesson the learner should be able to **calculate the area of the of a trapezium** | - Explanation  -Working out  -demonstration  -Discussion | Explanation  -Working out  -Answering  -Discussion | Rectangles, circles, triangles | PM PB7 Pg52  TG 7Pg  NPM PB7 Pg  TG b7Pg | Written exercise |  |
| 7 |  | Parallelogram | By the end of the lesson the learner should be able to **calculate the area of parallelograms** | - Explanation  -Working out  -demonstration  -Discussion | Explanation  -Working out  -Answering  -Discussion | Rectangles, circles, triangles | PM PB7 Pg56  TG 7Pg45  NPM PB7 Pg  TG b7Pg | Matching exercise |  |
| 12 | 1 | Measurements | Area of a border | By the end of the lesson the learner should be able to **work out problems involving area of a border** | - Explanation  -Working out  -demonstration  -Conversion | Explanation  -Working out  -Answering  -Discussion | Rectangles, circles, triangles | PM PB7 Pg99-110  TG 7Pg67-77  NPM PB7 Pg107-114  TG b7Pg70-75 | Filling in blanks spaces |  |
| 2 | Measurements | Combined shape | By the end of the lesson the learner should be able to **work out problems involving area combined shape** | - Explanation  -Working out  -demonstration  -Discussion | Explanation  -Working out  -Answering  -Discussion | Rectangles, circles, triangles | PM PB7 Pg99-110  TG 7Pg67-77  NPM PB7 Pg107-114  TG b7Pg70-75 |  |  |
| 3 | Measurements | Surface area of cuboids | By the end of the lesson the learner should be able to **work out problems involving surface area of cuboids** | - Explanation  -Working out  -demonstration  -Discussion | Explanation  -Working out  -Answering  -Discussion | Rectangles, circles, triangles | PM PB7 Pg99-110  TG 7Pg67-77  NPM PB7 Pg107-114  TG b7Pg70-75 |  |  |
| 4 | Measurements | Surface area of cylinder | By the end of the lesson the learner should be able to **work out problems involving surface area of cylinders** | - Explanation  -Working out  -demonstration  -Discussion | Explanation  -Working out  -Answering  -Discussion | Rectangles, circles, triangles | PM PB7 Pg99-110  TG 7Pg67-77  NPM PB7 Pg107-114  TG b7Pg70-75 |  |  |
| 12 | TERM ONE REVISION EXERCISES | | | | | | | | |  |
| 13 | END OF TERM ONE EXAMINATIONS | | | | | | | | |  |