Mathematics schemes of work

Standard Seven Term III

**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 | REPORTING AND PREPARATIONS | | | | | | | | |  |
| 2 | 1 | **Algebra** | Form and Simplifying | By the end of the lesson the learner should be able to form and **simplify an algebraic equation** | -Grouping objects  -Naming objects  - Explanation  -Working out  -solving equation  -simplifying | -Grouping objects  -Naming objects  - Explanation  -Working out  -solving equation  -simplifying | -Objects like tins, books, pencils, cups, pictures, etc | Pg50-64  TG 7Pg  NPM PB7 Pg42-60  TG b7Pg40-51 | Filling in blanks spaces |  |
| 2 |  | Substitution | By the end of the lesson the learner should be able to **work out the value of algebraic equation through substitution** | -Grouping objects  - arranging  - Explanation  -Working out  -solving equation  -simplifying | -Grouping objects  - arranging  - Explanation  -Working out  -solving equation  -simplifying | -Objects like tins, -books, pencils, -cups, pictures, etc | Pg50-64  TG 7Pg  NPM PB7 Pg42-60  TG b7Pg40-51 | Written excises |  |
| 3 |  | Substitution | By the end of the lesson the learner should be able to **work out the value of algebraic equation through substitution** | - Explanation  -Working out  -solving equation  -simplifying | - Explanation  -Working out  -solving equation  -simplifying | Coloured Manila cards  (squares, triangles, circles),  books, beads, | Pg50-64  TG 7Pg  NPM PB7 Pg42-60  TG b7Pg40-51 | Written exercise |  |
| 4 |  | Solving | By the end of the lesson the learner should be able to **form and solve algebraic expression with one unknown** | Explanation  -Working out  -solving equation  -simplifying | Explanation  -Working out  -solving equation  -simplifying | Coloured Manila cards  (squares, triangles, circles),  books, beads, | Pg50-64  TG 7Pg  NPM PB7 Pg42-60  TG b7Pg40-51 | Matching exercise |  |
| 5 |  |  | By the end of the lesson the learner should be able to **form and solve algebraic expression with one unknown** | Explanation  -Working out  -solving equation  -simplifying | Explanation  -Working out  -solving equation  -simplifying | Rectangles, circles, triangles  of different sizes and  colours | Pg50-64  TG 7Pg  NPM PB7 Pg42-60  TG b7Pg40-51 | Filling in blanks spaces |  |
| 6 |  | Simplifying in equalities | By the end of the lesson the learner should be able to **simplify inequality with one unknown** | Explanation  -Working out  -solving equation  -simplifying | Explanation  -Working out  -solving equation  -simplifying | Rectangles, circles, triangles  of different sizes and  colours | Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Filling in blanks spaces |  |
| 7 |  |  | By the end of the lesson the learner should be able to **simplify inequality with one unknown** | Explanation  -Working out  -solving equation  -simplifying | Explanation  -Working out  -solving equation  -simplifying | Objects like tins, books, bottles, pictures, of different size | Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Written excises  Written exercise |  |
|  |
| 3 | 1 | **Tables and graphs** | Linear Scale | By the end of the lesson the learner should be able to **determine the appropriate scale for the graphs** | Identifying linear scale  Explanation  -Working out  -representing data  Drawing graph | Identifying linear scale  Explanation  -Working out  -representing data  Drawing graph | Objects like tins, books, bottles, pictures, of different size | Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Matching exercise |  |
| 2 |  |  | By the end of the lesson the learner should be able to **determine the appropriate scale for the graphs** | • Identifying the texture of an object as rough and smooth  Explanation  -Working out  -representing data  Drawing graph | • Identifying the texture of an object as rough and smooth  Explanation  -Working out  -representing data  Drawing graph | Objects that have smooth or rough texture like wood,  paper, glass, soil, mirror,  leaves, etc. | PM PB7 Pg  TG 7Pg  NPM PB7 Pg  TG b7Pg | Filling in blanks spaces |  |
| 3 |  | Interpreting tables | By the end of the lesson the learner should be able **to read and interpret tables in real life situation** | • Explanation  -Working out  -representing data  Drawing graph | • Explanation  -Working out  -representing data  Drawing graph | Objects that have smooth or rough texture like wood,  paper, glass, soil, mirror,  Leaves, etc. | Pg150-164 | Filling in blanks spaces |  |
| 4 |  |  | By the end of the lesson the learner should be able **to read and interpret tables in real life situation** | Explanation  -Working out  -representing data  Drawing graph | Explanation  -Working out  -representing data  Drawing graph |  | TG 7Pg | Written excises |  |
| 5 |  | Bar graph | By the end of the lesson the learner should be able to **represent data on a bar graph** | Explanation  -drawing  Representing data | Explanation  -drawing  Representing data |  | NPM PB7 Pg142-160 | Written exercise |  |
| 6 |  |  | By the end of the lesson the learner should be able to interpreting **data on a graph** | -Discussion  -interpreting data  -drawing | -Discussion  -interpreting data  -drawing |  | TG b7Pg94-96 | Matching exercise |  |
| 7 |  | Pie chart | By the end of the lesson the learner should be able to **represent data on a pie chart** | -Working out  -representing data  Drawing pie chart | -Working out  -representing data  Drawing pie chart |  | Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Filling in blanks spaces |  |
| 4 | 1 |  |  | By the end of the lesson the learner should be able to **interpret data on a pie chart** | -Conversion  -Working out  -representing data  Drawing pie chart | -Conversion  -Working out  -representing data  Drawing pie chart |  | Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Filling in blanks spaces |  |
| 2 |  | Travel graph | By the end of the lesson the learner should be able to **read and interpret data on a travel graph** | Explanation  -Working out  -representing data  Drawing graph | Explanation  -Working out  -representing data  Drawing graph |  | Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Written excises |  |
| 3 |  |  | By the end of the lesson the learner should be able to  **Present data on a travel graph** | - Explanation  -Working out  -representing data  Drawing graph | - Explanation  -Working out  -representing data  Drawing graph |  | PM PB7 Pg  TG 7Pg  NPM PB7 Pg  TG b7Pg | Written exercise |  |
| 4 |  | Line graph | By the end of the lesson the learner should be able to **read and interpret data on a line graph** | - Explanation  -Working out  -representing data  Drawing graph | - Explanation  -Working out  -representing data  Drawing graph |  | PM PB7 Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Matching exercise |  |
| 5 |  |  | By the end of the lesson the learner should be able to  **Present data on a line graph** | -Explanation  -demonstration  -Discussion  -Working out | -Explanation  -demonstration  -Discussion  -Working out |  | PM PB7 Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Filling in blanks spaces |  |
| 6 |  | Arithmetic mean | By the end of the lesson the learner should be able to **work out problems involving arithmetic mean** | Explanation  -demonstration  -Discussion  -Working out | Explanation  -demonstration  -Discussion  -Working out |  | PM PB7 Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Filling in blanks spaces |  |
| 7 |  | The mode | By the end of the lesson the learner should be able to **work out problems involving arithmetic mode** | -Explanation  -demonstration  -Discussion  -Working out  -Conversion | -Explanation  -demonstration  -Discussion  -Working out  -Conversion |  | PM PB7 Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Written excises |  |
| 5 | 1 |  |  | By the end of the lesson the learner should be able to **work out problems involving arithmetic mean and mode in real life situation** | Explanation  -Discussion  -Working out  -Conversion  -Observation | Explanation  -Discussion  -Working out  -Conversion  -Observation |  | PM PB7 Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Written exercise |  |
| 2 | **Scale drawing** | Linear scale in ratio form | By the end of this topic, the  pupils should be able **to read and write linear scale in ratio form** | -Explanation  -Discussion  -drawing  -Working out  -Conversion | -Explanation  -Discussion  -drawing  -Working out  -Conversion |  | PM PB7 Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Matching exercise |  |
| 3 |  | Conversion | By the end of this topic, the  pupils should be able to **convert linier scale from statement to ratio form** | Explanation  -Discussion  -Demonstration  -Working out  -Conversion | Explanation  -Discussion  -Demonstration  -Working out  -Conversion |  | PM PB7 Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Filling in blanks spaces |  |
| 4 |  |  | By the end of this topic, the  pupils should be able to **convert linier scale from ratio form to statement** | -Explanation  -Discussion  -Demonstration  -Working out  -Conversion | -Explanation  -Discussion  -Demonstration  -Working out  -Conversion |  | PM PB7 Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Filling in blanks spaces |  |
| 5 |  |  | By the end of this topic, the  pupils should be able to **convert linier scale from statement to ratio form and vice versa** | Explanation  -Discussion  -Working out  -Conversion | Explanation  -Discussion  -Working out  -Conversion |  | PM PB7 Pg150-164  TG 7Pg  NPM PB7 Pg142-160  TG b7Pg94-96 | Written excises |  |
| 6 |  | Making scale drawing | By the end of this topic, the  pupils should be able to **make a scale drawing** | -Explanation  -Discussion  -Working out  -Conversion | -Explanation  -Discussion  -Working out  -Conversion |  | PM PB7 Pg162  TG 7Pg  NPM PB7 Pg142  TG b7Pg | Written exercise |  |
| 7 |  |  | **.** By the end of this topic, the  pupils should be able to **work out problems involving scale drawing** | Explanation  -Discussion  -Working out  -Conversion  -Observation | Explanation  -Discussion  -Working out  -Conversion  -Observation |  | PM PB7 Pg143  TG 7Pg97  NPM PB7 Pg143  TG b7Pg95 | Matching exercise |  |
| 7 | MID TERM EXAMINATION | | | | | | | | |  |
| 8 | 1 |  | Mixed exercise | By the end of the lesson the learner should be able to do **a revision exercise on the work covered** | Explanation  -Discussion  -Working out  -answering | Explanation  -Discussion  -Working out  -answering |  | PM PB7 Pg162  TG 7Pg  NPM PB7 Pg162  TG b7Pg97 |  |  |
| 2 | **Ratio and proportion** | Ratio as a fraction | By the end of this topic, the  pupils should be able to **recognize and identify ratio as a fraction** | Explanation  -Discussion  -Working out  -Conversion | Explanation  -Discussion  -Working out  -Conversion |  | PM PB7 Pg163  TG 7Pg98  NPM PB7 Pg161  TG b7Pg99 |  |  |
| 3 | Fraction | Ratio sharing | By the end of this topic, the  pupils should be able to **interpret and use ratio on sharing** | -Explanation  -Discussion  -Working out  -Conversion | -Explanation  -Discussion  -Working out  -Conversion |  | PM PB7 Pg163  TG 7Pg103  NPM PB7 Pg161  TG b7Pg99 |  |  |
| 4 |  |  | By the end of this topic, the  pupils should be able to **interpret and use ratio on sharing** |  |  |  | PM PB7 Pg164  TG 7Pg  NPM PB7 Pg162  TG b7Pg100 | Filling in blanks spaces |  |
| 5 |  |  | By the end of this topic, the  pupils should be able to **work out problems involving ratio using unitary method** | -Explanation  -Discussion  -Working out  -Conversion | -Explanation  -Discussion  -Working out  -Conversion |  | PM PB7 Pg  TG 7Pg  NPM PB7 Pg163  TG b7Pg102 | Written excises |  |
| 6 |  | Ratio increase | By the end of this topic, the  pupils should be able to **interpret and use ratio in increase** |  |  |  | PM PB7 Pg163  TG 7Pg  NPM PB7 Pg162  TG b7Pg | Written exercise |  |
| 7 |  |  | By the end of this topic, the  pupils should be able to **interpret and use ratio in increase** | -Explanation  -Discussion  -Working out  -Conversion | -Explanation  -Discussion  -Working out  -Conversion |  | PM PB7 Pg164  TG 7Pg  NPM PB7 161Pg102  TG b7Pg | Matching exercise |  |
| 9 | 1 |  | Ratio decrease | By the end of this topic, the  pupils should be able to **interpret and use ratio in decrease** |  |  |  | PM PB7 Pg163  TG 7Pg  NPM PB7 Pg163  TG b7Pg103 | Filling in blanks spaces |  |
| 2 |  |  | By the end of this topic, the  pupils should be able to **interpret and use ratio in decrease** | -Explanation  -Discussion  -Working out  -Conversion | -Explanation  -Discussion  -Working out  -Conversion |  | PM PB7 Pg164  TG 7Pg  NPM PB7 Pg162  TG b7Pg | Filling in blanks spaces |  |
| 3 |  |  | By the end of the lesson the learner should be able to do **a revision exercise on the work covered**. |  |  |  | PM PB7 Pg  TG 7Pg  NPM PB7 Pg163  TG b7Pg104 | Written excises |  |
| 4 |  | Direct proportion | By the end of the lesson the learner should be able to **recognize and identify simple direct proportion** | -Explanation  -Discussion  -Working out  -Conversion | -Explanation  -Discussion  -Working out  -Conversion |  | PM PB7 Pg  TG 7Pg  NPM PB7 Pg164  TG b7Pg103 |  |  |
| 5 |  |  | By the end of the lesson the learner should be able to **work out problems involving simple direct proportion** |  |  |  | PM PB7 Pg  TG 7Pg  NPM PB7 Pg165  TG b7Pg |  |  |
| 6 |  | Indirect proportion | By the end of the lesson the learner should be able to **recognize and identify indirect proportion** | -Explanation  -Discussion  -Working out  -Conversion | -Explanation  -Discussion  -Working out  -Conversion |  | PM PB7 168Pg162  TG 7Pg  NPM PB7 Pg106  TG b7Pg105 |  |  |
| 7 |  |  | By the end of the lesson the learner should be able to **work out problems involving simple indirect proportion** | -Explanation  -Discussion  -Working out  -Conversion | -Explanation  -Discussion  -Working out  -Conversion |  | PM PB7 Pg160  TG 7Pg  NPM PB7 160Pg169  TG b7Pg106 |  |  |
| 10 | REVISION | | | | | | | | |  |
| 11 | EXAMINATIONS | | | | | | | | |  |
| 12 | MARKING | | | | | | | | |  |