



MINISTRY OF GENERAL EDUCATION

MUKUNTA PRIMARY SCHOOL

GRADE 7 MATHEMATICS SCHEME OF WORK. TERM ONE.



WEEK	TOPIC	LESSON	OUTCOMES	CONTENT	SKILLS	VALUES
1	FRACTIONS	1. Addition of fractions 2. fractions with different denominators 3. Mixed fractions	•Solve problems involving addition	•Addition of fractions	• Application of fractions to practical problems	• Awareness of the four operations as they relate to fractions.
2	FRACTIONS	4. Subtraction of fractions 5. Multiplication of fractions 6. Division of fractions 7. Practical problems involving fractions	•Solve problems involving subtraction, multiplication and division of fractions (as recap)	• subtraction of fractions •Multiplication and division of fractions •Practical problems involving four rules on fractions	• Application of fractions to practical problems	• Awareness of the four operations as they relate to fractions.
3	DECIMAL NUMBERS	1. Addition of decimals 2. Subtraction of decimals 3. Multiplication of decimals	•Solve problems involving addition, subtraction, and multiplication of decimal (recap)	•Addition, subtraction, multiplication of decimals up to 4 decimal places	• Conversion from fractions to decimals. • Computation involving decimals • Ordering fractions and decimals	• Accuracy in operating on fractions • Appreciation of the relationship between decimals and common fractions

4	DECIMAL NUMBERS	4. Division of decimals 5. Converting fractions to decimals 6. Converting decimals to fractions	•Solve problems division of decimal (recap) •Convert common fractions to decimals •Convert fractions to common decimals	• division of decimals up to 4 decimal places •Conversions of fractions to decimals and vice versa	•Conversion from fractions to decimals. •Computation involving decimals •Ordering fractions and decimals	•Accuracy in operating on fractions •Appreciation of the relationship between decimals and common fractions
5	DECIMAL NUMBERS	6. Ordering fractions 7. Ordering decimals 9. Using <, >, and =	•Order fractions and decimals	• Ordering vulgar and decimal fractions (either descending or ascending order) • Using the symbols (>, <, =) in comparing fractions	•Conversion from fractions to decimals. •Computation involving decimals •Ordering fractions and decimals	•Accuracy in operating on fractions •Appreciation of the relationship between decimals and common fractions
6	PERCENTAGES	1. describe percentage 2. Convert decimals to percentages 3. Covert percentages to decimals	•Describe a percentage •Convert decimals to percentages •Convert percentages to decimals	•Percentage (as fraction of hundred) • Converting decimals to percentages and vice versa	•Computation of percentage, decimals and fractions •Application of percentage, decimals and fractions in real life •Conversion between fractions, percentages and decimals	•Awareness of importance of percentage, fractions and decimals in real life •Curiosity in working with percentages, decimals and fractions in real life •Team work through cooperative learning

7	PERCENTAGES	4. Convert common fractions to percentages 5. Covert percentages to common fractions 6. Convert Fractions to decimals 7. Applications of percentages, fractions and decimals	•Convert common fractions to percentages •Convert percentages to common fractions •Solve problems involving percentages •Relate decimals, fractions and percentages to real life situation	• Conversion of common fractions to percentages and vice versa • Problems involving addition, subtraction, multiplication and division of percentages • Fractions, decimals and percentages in real life	•Computation of percentage, decimals and fractions •Application of percentage, decimals and fractions in real life •Conversion between fractions, percentages and decimals	•Awareness of importance of percentage, fractions and decimals in real life •Curiosity in working with percentages, decimals and fractions in real life •Team work through cooperative learning
8	RATIO AND PROPORTION	1. ratio and Proportion 2. Direct Proportion 3. Indirect/Inverse proportion	7.4.1 •Solve problems involving direct proportion (as recap) •Describe indirect proportion. •Solve problems involving indirect	direct proportion (as recap) •Describing indirect proportion •Indirect proportions using the fraction and proportional methods	•Interpretation of the meaning of indirect proportion •Computation of problems involving indirect proportion •Representation of quantities in indirect proportion •Application of direct and indirect proportion in solving real life problems	•Curiosity in the use of graphs •Team work through cooperative learning •Accuracy in computations

9	RATIO AND PROPORTION	4. Graphs illustrating direct proportion 5. Graphs illustrating Indirect/Inverse proportion	• Draw graphs to illustrate quantities in direct and indirect proportion.	•Drawing graphs to illustrate quantities in direct and indirect proportion •Problems involving ratio and proportion in real life situation	•Interpretation of the meaning of indirect proportion •Computation of problems involving indirect proportion •Representation of quantities in indirect proportion •Application of direct and indirect proportion in solving real life problems	•Curiosity in the use of graphs •Team work through cooperative learning •Accuracy in computations
10	SOCIAL AND COMMERCIAL ARITHMETIC	1. Conversion between local and foreign currency 2. Cost of goods priced in foreign currency 3. Buying and selling foreign currency	•Conversion of currencies •Calculate the cost of goods priced in foreign currency	•Buying and selling of foreign currency • Conversion of currencies (from local to foreign currency and vice versa).	•Computation of buying and selling of foreign currency. • Entrepreneurship involving cost of goods priced in foreign currency.	•Appreciation in conversions of currency. • Honest • Assertiveness in conversions of currency

11	INEQUATIONS	1. Open sentences 2. Solving equations in one variable 3. Inequations	•Describe an open sentence •Solve simple linear inequations in one variable	• Open sentences • Simple linear inequations in one variable.	• Representation of an open sentence..	• Appreciation of linear equations. • Awareness of open sentences
12	INEQUATIONS	4. Solving inequations in one variable 5. Showing solutions on a number line	•Solve simple linear inequations in one variable	• Simple linear inequations in one variable • Show the solutions on the number line.	• Computation of simple linear inequations in one variable.	• Appreciation of linear equations. • Awareness of open sentences
13	EXAMINATIONS	EXAMINATIONS	EXAMINATIONS	EXAMINATIONS	EXAMINATIONS	EXAMINATIONS



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GRADE 7 MATHEMATICS SCHEME OF WORK. TERM TWO.



WEEK	TOPIC	LESSON	OUTCOMES	CONTENT	SKILLS	VALUES
1	INTEGERS	1. Understanding integers 2. The number line 3. Ordering integers	• Understand integers • Illustrate positive and negative numbers using the number line. • Order integers	• Understanding positive and negative numbers • Relating integers with addition and subtraction of whole numbers using number line. • Ordering integers	• Representation of integers on the number line. • Accuracy of addition and subtraction of integers	• Appreciation of calculations using the number line • Awareness of ordering of integers
2	INTEGERS	4. Adding integers using a number line 5. Subtracting integers using a number line 6. Adding integers without using a number line	• Illustrate positive and negative numbers using the number line. • Order integers • Add integers • Subtract integers	• Relating integers with addition and subtraction of whole numbers using number line. • Illustrating positive and negative numbers on the number line • Ordering integers	• Representation of integers on the number line. • Accuracy of addition and subtraction of integers	• Appreciation of calculations using the number line • Awareness of ordering of integers

3	INTEGERS	7. Subtracting Integers without using a number line 8. Applications of integers	• Illustrate positive and negative numbers without using the number line. • Order integers • Add integers • Subtract integers	• Illustrating positive and negative numbers on the number line • Ordering integers	• Representation of integers on the number line. • Accuracy of addition and subtraction of integers	• Appreciation of calculations using the number line • Awareness of ordering of integers
4	NUMBER BASES	1. The base 10 numbering system 2. Base 8 3. Base 5	• Illustrate base ten numeration system • Describe other number bases • Convert from base 10 to Bases 2, 5 and 8	• Base ten numeration (place values) • Numeration in other bases (2, 5 and 8)	• Representation of numbers to other numeration systems • Conversions of bases from one base to the other. • Addition and subtraction of number bases.	• Accuracy in conversions of bases. • Logical thinking in conversions.
5	NUMBER BASES	4. Base 2 5. Converting from base 10 to bases 2, 5, and 8 6. Converting from bases 2, 5, and 8 to base 10	• Convert from bases 2, 5 and 8 to base 10 • Convert from base 2 to base 5 • Convert from base 5 to base 2	• Conversion from base 2 to base 5 and vice versa. • Addition and subtraction of numbers in Bases 2, 5 and 8	• Representation of numbers to other numeration systems • Conversions of bases from one base to the other. • Addition and subtraction of number bases.	• Accuracy in conversions of bases. • Logical thinking in conversions.

6	NUMBER BASES	7. Converting numbers from base 2 to 5 and vice versa 8. Addition of base 2 9. Addition of base 5	•Convert from base 2 to base 5 •Convert from base 5 to base 2 •Add in bases 2, 5 and 8 Subtract in bases 2, 5 and 8	• Conversion from base 2 to base 5 and vice versa. • Addition and subtraction of numbers in Bases 2, 5 and 8	•Representation of numbers to other numeration systems • Conversions of bases from one base to the other. •Addition and subtraction of number bases.	•Accuracy in conversions of bases. •Logical thinking in conversions.
7	NUMBER BASES	10. Addition of base 8 11. Addition of base 10 12. Subtraction of bases 2, 5, 8 and 10	•Add in bases 2, 5 and 8 Subtract in bases 2, 5 and 8	• Addition and subtraction of numbers in Bases 2, 5 and 8	•Representation of numbers to other numeration systems• Conversions of bases from one base to the other. •Addition and subtraction of number bases.	•Accuracy in conversions of bases. •Logical thinking in conversions.

8	NUMBER AND NUMBER SEQUENCES	1. perfect squares 2. squares and square numbers 3. sequences	• Describe perfect squares • Find squares of whole numbers	Square and squared whole numbers.	• Identification of Squared numbers • Computation of squared and cubed whole numbers. • Generation of sequence and series.	• Accuracy in identifying the sequence • Prediction of a series or sequence. • Appreciation of Fibonacci series.
9	NUMBER AND NUMBER SEQUENCES	4. sequence with constant difference 5. sequence with constant ratio 6. Sequence with neither constant difference nor constant ratio	• Generate a sequence in a decreasing and increasing order. • Generate series	• Identification of sequences. • Generating a rule from given sequence and vice versa • Generation of series (use ideas such as Fibonacci series).	• Identification of squared and cubed numbers • Computation of squared and cubed whole numbers. • Generation of sequence and series.	• Accuracy in identify the sequence • Prediction of a series or sequence. • Appreciation of Fibonacci series.
10	NUMBER AND NUMBER SEQUENCES	7. Generating a rule from a given sequence 8. Generating a sequence from a given rule 9. Series 10. Cubes and perfect cubes	- Find cubes of whole numbers. - Generate a sequence in a decreasing and increasing order. - Generate series	• Cubes and Cubed whole numbers. • Generating a rule from given sequence and vice versa • Generation of series (use ideas such as Fibonacci series).	• Identification of squared and cubed numbers • Computation of squared and cubed whole numbers. • Generation of sequence and series.	• Accuracy in generating a rule • Prediction of a series or sequence. • Appreciation of Fibonacci series.

11	PLANE SHAPES	1. Symmetry of squares and rectangles. 2. lines of symmetry of special triangles 3. Drawing/Sketching plane shapes showing lines of symmetry	•Describe line symmetry •Draw lines of symmetry of plane shape	•Describing line symmetry through demonstration (paper folding) • Completing symmetrical shapes (folded along line of symmetry) • Drawing lines of symmetry of plane shape (e.g. square, rectangle, circle)	Identification of line of symmetry. Interpretation of relationship between diameter and circumference	•Curiosity of finding lines of symmetry. •Awareness of relationship between diameter and circumference. •Teamwork in finding relationship between diameter and circumference
12	PLANE SHAPES	4. Elements of a circle 5. Circumference, Diameter, Radius and Pie 6. Circumference of a circle	•Establish the relationship between circumference and diameter	• Establishing the relationship between circumference and diameter (using experiment with cylindrical objects) [constant pi ($\pi= 3.14$)]	•Identification of line of symmetry. •Interpretation of relationship between diameter and circumference	•Curiosity of finding lines of symmetry. •Awareness of relationship between diameter and circumference. •Teamwork in finding relationship between diameter and circumference
13	EXAMINATIONS	EXAMINATIONS		EXAMINATIONS	EXAMINATIONS	EXAMINATIONS



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GRADE 7 MATHEMATICS SCHEME OF WORK. TERM THREE.



WEEK	TOPIC	LESSON	OUTCOMES	CONTENT	SKILLS	VALUES
1	MEASUREMENT	1. Circumference of a circle 2. Area of a circle 3. Applications of measurements in regard to circle elements	1. Calculate circumference, using radius or diameter of the circle. 2. Calculate the area of a circle	•Circumference, using radius or diameter of the circle [constant pi ($\pi=3.14$)]. • Establishing the formula for the area of circle (by demonstration) • Calculating the area of a circle[constant pi ($\pi=3.14$)]	•Computation of circumference and area of circle.	•Curiosity in establishing the formula of area of circle.
2	SOLID SHAPES	1. Cylinders 2. Triangular prisms 3. Drawing/sketching cylinders.	•Identify a cylinder and triangular prism •Draw nets of cylinder and triangular prism •Draw/Sketch cylinder and triangular prism	•Identifying a cylinder and triangular prism •Drawing of nets of cylinder and triangular prism •Draw/sketch cylinder and triangular prism	•Identification of cylinder and triangular prism. •Drawing of cylinders and prisms and their nets	•Curiosity of drawing nets of cylinders and prisms. •appreciation of Appreciation of drawing of cylinders and prisms.

3	SOLID SHAPES	4. Drawing/sketching triangular prisms 5. Application of cylinders and triangular prisms	•Identify a cylinder and triangular prism •Draw nets of cylinder and triangular prism •Draw/Sketch cylinder and triangular prism	•Identifying a cylinder and triangular prism •Drawing of nets of cylinder and triangular prism •Draw/sketch cylinder and triangular prism	•Identification of cylinder and triangular prism. •Drawing cylinders and prisms and their nets.	•Curiosity of drawing nets of cylinders and prisms. •appreciation of Appreciation of drawing of cylinders and prisms.
4	STATISTICS	<u>A. DATA INTERPRETATIONS</u> 1. pie chart 2. pictograph 3. Line graph	•Interpret data on charts (pie chart, line graph, bar/line graph, frequency table)	•Data Interpretation on pictograph, pie chart, bar chart, line graph and frequency tables	•Interpretation of data in a charts and graphs •Presentation of data in a charts and graphs.	•Accuracy in the computation of data interpretations
5	STATISTICS	4. frequency tables 5. Bar graph <u>B. DATA PRESENTATIONS</u> 6. Frequency tables	•Interpret data on charts (pie chart, line graph, bar/line graph, frequency table)	•Data Interpretation • Data collection • Data presentation on pictograph, pie chart, bar chart, line graph and frequency tables presentation	•Interpretation of data in a charts and graphs •Presentation of data in a charts and graphs.	•Accuracy in the computation of data interpretation and data representations

6	STATISTICS	7. Pie chart 8. Bar graph 9. Pictograph	•Represent data on charts (pie chart, line graph, bar/line graph, frequency table) •Collect And present data on a pictograph, pie chart, bar chart, line graph and frequency tables.	• Data collection • Data presentation on pictograph, pie chart, bar chart, line graph and frequency tables presentation	Presentation of data in a charts and graphs..	•Accuracy in the Representation of data on graphs
7	STATISTICS	10. Line graph 11. Measures of central tendency (Mean Median and Mode). 12. Stem and Leaf plots	•Collect and present data on a pictograph, pie chart, bar chart, line graph and frequency tables. •Calculate Mean, Mode and Median •Calculate averages as applied to mass, money, time, temperature and speed	• Data collection • Data presentation on pictograph, pie chart, bar chart, line graph and frequency tables presentation • Mean, Mode, Median as applied in real life situations • Averages as applied to mass, money, time, temperature and speed.	•Presentation of data in a charts and graphs. •Computation of Mean, Mode and Median.	•Accuracy in the computation of Mean, Mode and Median •Logical thinking in the application of averages in measures.

8	REVISION FOR THE EXAMINATIONS	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions
9	REVISION FOR THE EXAMINATIONS	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions
10	REVISION FOR THE EXAMINATIONS	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions
11	REVISION FOR THE EXAMINATIONS	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions	To get prepared for the Examinations through Revisions
12	EXAMINATIONS	FINAL EXAMINATIONS	FINAL EXAMINATIONS	FINAL EXAMINATIONS	FINAL EXAMINATION S	FINAL EXAMINATIONS
13	EXAMINATIONS	FINAL EXAMINATIONS	FINAL EXAMINATIONS	FINAL EXAMINATIONS	FINAL EXAMINATION S	FINAL EXAMINATIONS