

**ALSAGOFF ARAB SCHOOL  
ACQUIRED KNOWLEDGE DEPARTMENT  
PRIMARY 5 MATHEMATICS SCHEME OF WORK 2016**

**Term 1: Monday 4 January to Friday 11 March**

School Holidays/Functions:

Week # 0	New Year's Day	Friday 1 January
Week # 1	First Day of School	Monday 4 January
Week # 3	Maulid Celebrations	Saturday 23 January
Week # 4	Maulid (In-Lieu)	Monday 25 January
Week # 5	Haflah Celebrations	Saturday 6 February
Week # 6	Chinese New Year	Monday 8 February & Tuesday 9 February
Between Term 1 & 2		Saturday 12 March - Sunday 20 March

<b>*Week(s)</b>	<b>Chapter/Topic</b>	<b>Instructional Objectives</b>	<b>Period</b>
1 & 2	<u>Chapter 1:</u> Whole Numbers (1)	<u>Numbers To 10 Million</u> Count on in ten thousands to 1 hundred thousand Count on in hundred thousands to 1 million state that 10 ten thousands = 1 hundred thousand and that 10 hundred thousands = 1 million Translate place value models of numbers up to 10 million to numerals and words Read and write 6-digit and 7-digit numbers up to 10 million in numerals and words Use a calculator to key in 6 to 7-digit numbers <u>Place And Value</u> Identify the value and place of each digit in a 6-digit and 7-digit number Represent a number as the sum of the values of each digit in the number <u>Comparing Numbers Within 10 Million</u> State which number is greater or smaller using the strategy of comparing the values of their digits from the left Arrange a set of numbers in order Identify the pattern in a number sequence <u>Rounding Off To The Nearest Thousand And Estimation</u> Round off numbers to the nearest thousand Recognise and use the symbol '≈' Mark the approximate position of a number on a given number line Use rounding off to estimate answers in addition, subtraction, multiplication and division <i>Chapter Assessment</i>	20

*Week(s)	Chapter/Topic	Instructional Objectives	Period
3 & 4	Chapter 2: Whole Numbers (2)	<p><u>Using a Calculator</u> Key in whole numbers Add, subtract, multiply and divide whole numbers</p> <p><u>Multiplying By Tens, Hundreds Or Thousands</u> Multiply a number by 10, 100 or 1000 by: (i) moving each digit 1, 2 or 3 places to the left respectively in the place value table (ii) adding 1, 2 or 3 zeroes respectively at the back of the number Multiply numbers up to 4-digits by tens, hundreds or thousands Use rounding off and approximation to estimate answers in multiplication</p> <p><u>Dividing By Tens, Hundreds Or Thousands</u> Divide a number by 10, 100 or 1000 by: (i) moving each digit 1, 2 or 3 places to the right respectively in the place value table (ii) dropping 1, 2 or 3 zeroes respectively from the back of the number Divide numbers up to 6 digits by tens, hundreds or thousands Use rounding off and approximation to estimate answers in division</p> <p><u>Order Of Operations</u> State the order of operations in a number sentence with two or three operations and use a calculator to compute it State the order of operations in a number sentence which has brackets and two or three operations, and use a calculator to compute it</p> <p><u>Word Problems (1)</u> Solve multi-step word problems.</p> <p><u>Word Problems (2)</u> Use a number of heuristics such as 'model drawing', 'make a systematic list', 'guess and check', 'unitary method', 'before and after strategy', to solve multi-step word problems.</p> <p><i>Chapter Assessment</i></p>	20

<b>*Week(s)</b>	<b>Chapter/Topic</b>	<b>Instructional Objectives</b>	<b>Period</b>
5, 6 & 7	<b>Chapter 3:</b> Fractions (1)	<u>Like And Unlike Fractions</u> Identify two or more like fractions and two or more unlike fractions Differentiate a like fraction from an unlike fraction <u>Adding Unlike Fractions</u> List the multiples of the denominators of two unlike fractions and find the first common multiple from the lists Add two unlike fractions using the above strategy Draw a model to show equivalent fractions in the addition of unlike fractions <u>Subtracting Unlike Fractions</u> List the multiples of the denominators of two unlike fractions and find the first common multiple from the lists Subtract two unlike fractions without regrouping Draw a model to show equivalent fractions in the subtraction of unlike fractions <u>Fractions And Division</u> Associate fractions with division Use 'conversion of improper fraction to mixed number' to express division as a mixed number Use long division method to express an improper fraction as a mixed number <u>Converting Fractions To Decimals</u> Convert proper fractions, improper fractions and mixed numbers by changing the denominators to 10, 100 or 1000 Convert proper fractions, improper fractions and mixed numbers using long division Convert proper fractions, improper fractions and mixed numbers using a calculator <u>Adding Mixed Numbers</u> Add two mixed numbers with or without regrouping Add two mixed numbers using a calculator <u>Subtracting Mixed Numbers</u> Subtract a mixed number from another mixed number with or without regrouping Subtract a mixed number from another mixed number using a calculator <u>Word Problems</u> Solve word problems by relating to concepts in addition and subtraction Solve word problems using models <i>Chapter Assessment</i>	28
8 & 9	Review: Chapters 1 – 3	Review chapters 1 – 3 to allow pupils to recall and prepare for Continual Assessment 1.	20
10	Continual Assessment 1	Administer pen and paper assessment. Go through answers and ensure that corrections are done.	10

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**Term 2: Monday 21 March to Friday 27 May**

School Holidays/Functions:

Week # 7 Labour Day (In-lieu)

Monday 2 May

Between Semesters 1 & 2

Saturday 28 May to 12 June

*Week(s)	Chapter/Topic	Instructional Objectives	Period
1, 2 & 3	Chapter 4: Fractions (2)	<p><u>Product Of Proper Fractions</u>            Conceptualise the meaning of multiplying two proper fractions with concrete representation            Use cancellation (simplification) method to compute product of two proper fractions            Explore and compare the product of two whole numbers and the product of two proper fractions</p> <p><u>Word Problems (1)</u>            Solve up to 2-step word problems involving fractions using:            Model drawing and unitary method product of two fractions</p> <p><u>Product Of An Improper Fraction And A Proper Or Improper Fraction</u>            Conceptualise the meaning of multiplying an improper fraction by another proper or improper fraction with concrete representation            Use cancellation (simplification) method to compute product of two fractions            Use a calculator to compute the above</p> <p><u>Product Of A Mixed Number And A Whole Number</u>            Conceptualise the meaning of multiplying a mixed number by a whole number            Use regrouping process to compute product of a mixed number and a whole number            Use a calculator to compute a mixed number with a whole number</p> <p><u>Word Problems (2)</u>            Solve up to 2-step word problems by applying the concept of multiplication and product of a whole number and a mixed number.</p> <p><u>Dividing A Fraction By A Whole Number</u>            Understand the meaning of dividing a fraction by a whole number            Use 3 different methods to divide a fraction by a whole number</p> <p><u>Word Problems (3)</u>            Solve up to 2-step word problems with the use of multiplication and division in fractions.</p> <p><i>Chapter Assessment</i></p>	27

*Week(s)	Chapter/Topic	Instructional Objectives	Period
3 & 4	<u>Chapter 5:</u> Area of Triangle	<u>Base And Height Of A Triangle</u> Pupils will be able to identify the base and corresponding height of a triangle. <u>Finding The Area Of A Triangle</u> State that the area of a triangle is half that of its related rectangle State the area of a triangle in terms of its base and corresponding height Find the area of a triangle given its base and corresponding height <i>Chapter Assessment</i>	13
5 & 6	<u>Chapter 6:</u> Ratio	<u>Finding Ratio</u> Understand the concept of ratio as a way to show the relative sizes of two quantities Understand that a given ratio does not indicate the actual size of the quantities involved Draw a comparison model to represent two quantities given the ratio Solve simple word problems involving ratio using model drawing <u>Equivalent Ratios</u> Express equivalent ratios given two quantities Write a given ratio $x : y$ in its simplest form Find the missing number(s) in equivalent ratios <u>Word Problems (1)</u> Solve up to 2-step word problems involving ratio of two quantities using: (i) the concept of equivalent ratios (ii) model drawing and unitary method <u>Comparing Three Quantities</u> Use ratio to show the relative sizes of three quantities Express equivalent ratios given three quantities Write a given ratio $x : y : z$ in its simplest form Find the missing number(s) in equivalent ratio <u>Word Problems (2)</u> Solve up to 2-step word problems involving ratio of three quantities using: (i) the concept of equivalent ratios (ii) model drawing and unitary method <i>Chapter Assessment</i>	20

<b>*Week(s)</b>	<b>Chapter/Topic</b>	<b>Instructional Objectives</b>	<b>Period</b>
7	MYE: Paper 1, Oral & LC only		
6 & 8	Revision	Review chapters 1 - 8 to prepare for Mid-Year Examination	
9 & 10	Mid-Year Written Examination	Administer pen & paper assessment	

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**Term 3: Monday 13 June to Friday 25 June, Monday 11 July to Friday 2 September**

School Holidays/Functions:

Last 10 days of Ramadhan	Saturday 25 June to 10 July
Week # Youth Day (In-lieu)	Monday 4 July
Hari Raya Puasa	Wednesday 6 July
Week # 6 Family Day (In-lieu)	Monday 1 August
Week # 7 National Day	Tuesday 9 August & Wednesday 10 August
Week # 10 Teachers' Day	Friday 2 September

<b>*Week(s)</b>	<b>Chapter/Topic</b>	<b>Instructional Objectives</b>	<b>Period</b>
1 & 2	<u>Chapter 7:</u> Decimals	<u>Converting Decimals To Fractions</u> Convert tenths, hundredths and thousandths to fractions or mixed numbers in their simplest forms <u>Multiplying By Tens, Hundreds And Thousands</u> Multiply a decimal up to 3 decimal places by 10, 100 and 1000 by: (i) moving each digit 1, 2 or 3 places respectively to the left in the place value table (ii) shifting the decimal point 1, 2 or 3 places respectively to the right multiply a decimal up to 3 decimal places by tens, hundreds and thousands <u>Dividing By Tens, Hundreds And Thousands</u> Divide a decimal up to 3 decimal places by 10, 100 and 1000 Divide a decimal by tens, hundreds and thousands <u>Using A Calculator</u> Key in decimals Add and subtract decimals Multiply and divide decimals by a whole number <u>Word Problems</u> Solve multi-step word problems involving decimals and: - use rounding off for answers - estimate or check reasonableness of answers <i>Chapter Assessment</i>	20
3	<u>Chapter 8:</u> Measurement	<u>Converting A Measurement From A Larger Unit To A Smaller Unit</u> Convert measurements of length, mass and volume from a larger unit to a smaller unit: (i) from metres to centimetres (ii) from kilometres to metres (iii) from kilograms to grams (iv) from litres to millilitres <u>Converting A Measurement From A Smaller Unit To A Larger Unit</u> Convert measurements of length, mass and volume from a smaller unit to a larger unit: (i) from centimetres to metres (ii) from metres to kilometres (iii) from grams to kilograms (iv) from millilitres to litres <i>Chapter Assessment</i>	10

*Week(s)	Chapter/Topic	Instructional Objectives	Period
4	<u>Chapter 9:</u> Average	<u>Understanding Average</u> Interpret average as the total amount divided by the number of items in a group Find the average number or quantity of a group Find the total amount given the average and the number of items in a group <u>Word Problems</u> Solve up to 3-step word problems involving average. <i>Chapter Assessment</i>	10
5 & 6	<u>Chapter 10:</u> Percentage	<u>Per cent</u> Understand the concept of percentage as a special type of fraction and decimal Express a part of a whole as a percentage Express a fraction with denominator 100 or 10 as a percentage Express a decimal as a percentage Express a percentage as a fraction in its simplest form Express a percentage as a decimal <u>Converting More Fractions To Percentages</u> Express a fraction as a percentage: - by converting the denominator of - the fraction to 100 - using the unitary method - using the multiplication method <u>Percentage Of A Quantity</u> Find the value of a percentage part of a whole using: - the unitary method - the multiplication method <u>Word Problems</u> Solve up to 2-step word problems: Find the percentage for a part of a whole and the percentage of a quantity involving discount, GST and annual interest <i>Chapter Assessment</i>	18
7	<u>Chapter 11:</u> Angles	<u>Angles On A Straight Line</u> Identify and name angles on a straight line Recognise that the sum of angles on a straight line is $180^\circ$ Recognise that if the sum of two or more angles is $180^\circ$ , then they can form angles on a straight line find unknown angles on a straight line <u>Angles At A Point</u> Identify and name angles at a point Recognise that the sum of angles at a point is $360^\circ$ Recognise that if the sum of three or more angles is $360^\circ$ , then they can form angles at a point find unknown angles at a point <u>Vertically Opposite Angles</u> Recognise and name vertically opposite angles Recognise that vertically opposite angles are equal Find unknown angles using the property of vertically opposite angles <i>Chapter Assessment</i>	9
8 & 9	Review: Chapters 7 – 11	Review chapters 7 – 11 to allow pupils to recall and prepare for Continual Assessment 2.	20
10	Continual Assessment 2	Administer pen and paper assessment. Go through answers and ensure that corrections are done.	10



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**Term 4: Monday 12 September to Friday 18 November**

School Holidays/Functions:

Week # 1 Hari Raya Haji

Monday 12 September & Tuesday 13 September

Week # 4 Children's Day

Friday 7 October

*Week(s)	Chapter/Topic	Instructional Objectives	Period
1 & 2	<u>Chapter 12:</u> Properties of Triangles & Four-Sided Figures	<u>Angles Of A Triangle</u> Recognise that the sum of the angles of a triangle is $180^\circ$ find the unknown angle of a triangle given the other two angles <u>Right-angles, Isosceles and Equilateral Triangles</u> Define a right-angled triangle State that in a right-angled triangle, the other two angles add up to $90^\circ$ Find unknown angle(s) using the properties of a right-angled triangle <u>Isosceles Triangles</u> Define an isosceles triangle State that the angles opposite the equal sides of an isosceles triangle are equal Find unknown angle(s) using the properties of an isosceles triangle <u>Equilateral Triangles</u> Define an equilateral triangle State that each angle of an equilateral triangle is $60^\circ$ Find unknown angle(s) using the properties of an equilateral triangle <u>Parallelograms, Rhombuses and Trapeziums</u> Define a parallelogram State that the opposite sides and angles of a parallelogram are equal State that each pair of angles between two parallel sides of a parallelogram add up to $180^\circ$ Find unknown angles using the properties of a parallelogram <u>Rhombuses</u> Define a rhombus State that opposite angles of a rhombus are equal State that each pair of angles between the parallel sides of a rhombus add up to $180^\circ$ Find unknown angles using the properties of a rhombus <u>Trapeziums</u> Define a trapezium State that each pair of angles between the parallel sides add up to $180^\circ$ Find unknown angles using the properties of a trapezium <i>Chapter Assessment</i>	20

<b>*Week(s)</b>	<b>Chapter/Topic</b>	<b>Instructional Objectives</b>	<b>Period</b>
3	Chapter 13: Geometrical Construction	<u>Drawing Triangles</u> Draw a triangle, given two angles and the side adjacent to the given angles Draw a triangle, given two sides and the included angle using a ruler, protractor and set squares <u>Drawing 4-sided Figures</u> Draw a rectangle, given its length and breadth Draw a rhombus, given one side and one angle Draw a parallelogram, given two adjacent sides and the included angle Draw a trapezium with the parallel sides indicated, given two adjacent sides, the included angle and the angle adjacent to the included angle using a ruler, protractor and set squares <i>Chapter Assessment</i>	17
4 & 5	Chapter 14: Volume	<u>Building Solids Using Unit Cubes</u> Build solids with unit cubes Count the number of unit cubes in a solid made up of unit cubes <u>Drawing Cubes And Cuboids</u> Draw a cube and a cuboid on an isometric grid / dot paper complete a partially drawn cube and cuboid on an isometric grid / dot paper <u>Understanding And Measuring Volume</u> State that the volume of an object is the amount of space it occupies State which object has a greater / smaller volume Find the volume of a solid in cubic units State that the volume of a 1-cm / 1-m cube is 1 cubic centimetre / 1 cubic metre ( $\text{cm}^3$ / $\text{m}^3$ ) Find the volume of a solid made up of 1-cm / 1-m cubes <u>Volume Of A Cuboid And Of Liquid</u> State that the volume of a cuboid is Length $\times$ Breadth $\times$ Height Find the volume of a cube and cuboid Recognise that 1 litre (1000 ml) is equal to 1000 $\text{cm}^3$ Find the volume of liquid in a rectangular container Solve word problems involving volume of solids / liquids <i>Chapter Assessment</i>	21
6	Review	Review chapters to allow pupils to recall and prepare for the End-of-Year Assessment.	10
7 & 8	End-of-Year Assessment	Administer pen and paper assessment.	
9 & 10	Post-Examination Activities		