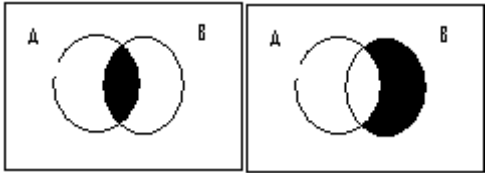


Ministry of Education
Secondary Sector
Mathematics
Grade 7
Christmas Term Schedule of Topics

Week	Topic	Sub-topics	Objectives	Content	Activities	Resources	Evaluation Strategies
1	Number Theory	Types of numbers: odd, even, prime, composite Integers:	1). Identifying the different set of numbers. 2). Ordering and comparing numbers on the number line. 3). Identifying patters in sequence	The set of integers includes: 1. Positive integers {1, 2, 3...} 2. Negative numbers {-1,-2,-3...} 3. Zero $Z = \{ \dots, -3, -2, -1, 0, 1, 2, 3 \dots \}$ Odd numbers are numbers when divided by two leaves a remainder of 1. Even numbers when divided by 2 leaves no remainder. Prime numbers are numbers with 2 distinct factors. 1 and itself. 1 is not a prime number; 2 is the only even prime number Composite numbers have more than two factors. E.g. 4, 6, 8, 9, ... Composite numbers can be expressed as a product of prime factors eg. $6 = 2 \times 3$	1. Defining factors, integers and multiples. 2. Listing integers 3. Listing prime and composite numbers. 4. Expressing composite numbers as the product of prime factors.	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Quiz Oral questions Written Exercise
2		Factors and multiples	4). Identifying multiples, factors (including negative multiples and factors) and prime factors of natural numbers 5). Recognizing that the multiple of a number has that number as a factor 6). Recognizing that a composite number can be expressed as a product of prime factors	If a number can be exactly divided by another number, the first number and the second number are factors of the given number. E.g. 3 and 5 are factors of 15. A multiple of a number has that number as a factor. E.g. The set of multiples of 3 can be denoted as $M = \{3, 6, 9, 12, \dots\}$	6. Listing factors and multiples 7. Differentiating between prime numbers and composite numbers. 8. Expressing numbers in index form	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	End of Unit Test
3		Highest Common Factor Lowest Common Multiple	7). Finding sets of factors 8). Stating multiples of numbers 9). Expressing numbers as repeated multiplication	The HCF of two or more whole numbers is the highest whole number that divides exactly into each of them. E.g.: the HCF of 12 and 16 is 4. The LCM of a set of numbers is the smallest number into which each of the given number will divide. E.g.: the LCM of 4, 5 and 10 is 20.	1. Determining the Highest common factor and the Lowest common multiple of numbers. 2. Small group activities finding HCF and LCM of given numbers.	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Quiz Oral questions Written Exercise
4		Properties of numbers: commutative, associative and distributive laws Indices	1). Investigating the meaning of the three properties of numbers 2). Writing the product of a number in index form 3). Expressing a number in index form	In the Commutative Law the order in which we add or multiply does not matter. E. g. $2 + 3 = 3 + 2$ In the Associative Law, the way in which numbers are added or multiplied in groups of two does not affect their sum or product. E. g. $2 + (3 + 4) = (4 + 2) + 3$ The Distributive Law, the method of multiplying each of the	3. Discussingthe Commutative, Associative, and Distributive Laws and their structures. 4. Using the Distributive law to simplify calculations 5. Finding the value of numbers written in index form.	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Quiz Oral questions

				<p>numbers inside of the brackets by the number outside the brackets e.g.</p> $4(3 + 2) = (4 \times 3) + (4 \times 2)$ <p>Write the product of numbers in index form e.g.</p> $2 \times 2 \times 2 = 2^3$ <p>Express numbers in index form e.g. $4 = 2^2$</p>			Written Exercise
5	Computation 1	Rational numbers	<p>1). Listing the set of numbers that make up rational numbers</p> <p>2). Adding and subtracting rational numbers</p> <p>3). Multiplying and dividing rational numbers</p>	<p>Decimals are added and subtracted the same way as whole numbers. When decimals are added or subtracted, decimal points are aligned vertically. The digit should be placed under each other according to their respective place value.</p> <p>E.g.:</p> $\begin{array}{r} 16.73 \\ 6.38 \\ + 1.4 \\ \hline \hline \end{array}$ <p>If both factors are decimals, do an ordinary multiplication and then locate the decimal point in the product with as many digits to the right of the point. E.g.:</p> $\begin{array}{r} 0.62 \text{ -----} 2 \text{ d.p.} \\ \times 0.04 \text{ -----} 1 \text{ d.p.} \\ \hline \text{-----} 3 \text{ d.p.} \end{array}$ <p>In division with decimals, first make the divisor a whole number. If there is one decimal place the divisor is multiplied by 10, if there are two decimal places the divisor is multiplied by 100 and so on. Whatever is done to the divisor must be done with the dividend. E.g.: $8 \div 0.5$</p> $(8 \times 10) \div (0.5 \times 10) = (80 \div 5) = 16$	<p>Solving mechanical problems</p> <p>Solving worded problems</p>	<p>A Compl. Mths. Crse for Sec Schools Bk 1</p> <p>Mathematics for Sec School in Guyana Bk 1</p>	<p>Quiz</p> <p>Oral questions</p> <p>Written Exercise</p>
6		Fractions and decimals	<p>4). Changing fractions to decimals.</p> <p>5). Changing decimals to fractions</p> <p>6). Adding and subtracting decimals and fractions</p>	<p>Converting fractions to decimals and vice versa</p> $\frac{3}{4} = 0.75 \quad ; \quad 0.35 = \frac{7}{20}$ $\frac{7}{8} + \frac{3}{4} \quad ; \quad \frac{7}{8} - \frac{3}{4}$	<p>Solving mechanical problems</p> <p>Solving worded problems</p>		<p>Quiz</p> <p>Oral questions</p> <p>Written Exercise</p>
7			<p>7). Multiplying and dividing a decimal by a decimal</p> <p>8). Multiplying and dividing fractions</p>	$123.8 \times 3.9 \qquad 23.48 \div 3.6$ $\frac{7}{8} \times \frac{10}{21} \quad \frac{15}{24} \div \frac{18}{72}$	<p>Solving problems orally and in written form</p> <p>Adding two to three terms</p> <p>Solving mechanical and worded problems</p>	<p>A Compl. Mths. Crse for Sec Schools Bk 1</p> <p>Mathematics for Sec School in Guyana Bk 1</p>	<p>Quiz</p> <p>Oral questions</p> <p>Written Exercise</p>

8	Language of Sets	Description of Sets	<p>1). Describing a set</p> <p>2). Describing and identifying a well-defined set</p> <p>3). Defining Members/Elements of a set</p> <p>4). Differentiating between \in and \notin</p> <p>5). Listing the elements of a set</p>	<p>In Mathematics, a collection of well-defined objects is called a set.</p> <p>The objects are called elements or members of the set. The symbol for element is \in.</p> <p>Description of set.</p> <p>Definition of “members” and “elements” of a set.</p> <p>When listing sets:</p> <ol style="list-style-type: none"> 1. Insert a comma between one element and the next. 2. An element is not repeated. 3. The elements are enclosed with a pair of curlybrackets. { 1, 2, 3 } <p>In a well-defined set, we must be able to identify or list all of its members. E.g. :</p> <p>(i) Set of all the letters of the English alphabet. = { a, b, c, d, e,.....y, z }</p> <p>(ii) Set of all even numbers between 0 and 13. = { 2, 4, 6, 8, 10, 12 }</p> <p>Some sets have no elements E.g.</p> <p>Days of the week that begins with the letter R.</p> <p>= { } or W</p>	<p>Discussion on the:</p> <p>Description of the sets</p> <p>Method used to identify the elements of a set</p> <p>Use of the symbols “\notin” and “\in”</p> <p>Specify elements of a given set by listing them.</p>	<p>A Compl. Mths. Crse for Sec Schools Bk 1</p> <p>Mathematics for Sec School in Guyana Bk 1</p>	<p>Quiz</p> <p>Oral questions</p> <p>Written Exercise</p>
9		Types of Sets	<p>6). Recognizing finite and infinite sets</p> <p>7). Differentiating between finite and infinite sets</p> <p>8). Describing and identifying equal and equivalent sets</p> <p>9). Describing and identifying the empty (W) or { } and Universal Sets</p> <p>10). Describing and identifying disjoint sets</p>	<p>A finite set is a set when all the elements can be listed. e.g. Days of the week = { Sun, Mon, Tue, Wed, Thu, Fri, Sat }</p> <p>An infinite set is when all the elements cannot be listed. E. g. The set of odd numbers.</p> $= \{ 1, 3, 5, 7, 9, \dots \}$ <p>Equal sets have the same number of elements that are identical. E. g. A = { 2, 4, 6, 8 }; B = { 6, 4, 8, 2 }</p> $A = B$ <p>Equivalent sets have the same number of elements. E. g. P = { 3, 5, 7, 9 }; Q = { b, c, d, e }</p> $P \Leftrightarrow Q$ <p>The empty set is a set with no elements and is represented by { } or \emptyset</p> <p>Disjoint sets have no common elements. E. g. M = { 1, 2, 3, 4, 5 }; N = { 7, 8, 9 }</p>	<p>Listing elements of finite, infinite, equal, equivalent, empty, disjoint and universal sets.</p> <p>Identify the various types of sets.</p> <p>Describing the sets listed above</p> <p>Showing on diagrams the above sets</p>	<p>A Compl. Mths. Crse for Sec Schools Bk 1</p> <p>Mathematics for Sec School in Guyana Bk 1</p>	<p>Oral questions</p> <p>Quiz</p> <p>Written exercises on types of sets.</p>
10		Subsets Set Operations	<p>1).Differentiating between a set and a subset of a set</p> <p>2). Listing/writing all subsets of a set</p> <p>3). Identifying the common elements in two sets</p> <p>4). Listing the elements of the intersection of two sets</p> <p>5). Recognizing that the intersection of two disjoint sets is the empty set</p> <p>6). Representing the Union of two or more sets</p> <p>7). Using the symbol of complement (A')</p>	<p>Subsets of a set, e.g. A = { a, b, c }</p> <p>Subsets of A are: { a, b, c }, { a }, { b }, { c }, { a, b }, { a, c }, { b, c }, { }.</p> <p>Common elements in two sets.</p> <p>The symbol that represents the intersection of sets is \cap.</p> <p>The elements in the intersection of two sets are those elements that can be found in both sets , e.g.</p> <p>S = { s, c, h, o, l }</p> <p>H = { h, o, l, y }</p> <p>$S \cap H = \{ h, o, l \}$</p> <p>Joining two sets to form a new set is called Union of sets.</p> <p>The symbol that represents the union of sets is \cup.</p>	<p>Writing the subsets of given sets.</p> <p>Observing the difference between a set and the subsets of a set.</p> <p>Showing on diagrams: common elements</p> <p>Listing the elements for the intersection, union and complement of sets.</p>	<p>A Compl. Mths. Crse for Sec Schools Bk 1</p> <p>Mathematics for Sec School in Guyana Bk 1</p>	<p>Write down all the subsets of a given set</p> <p>Differentiate between a set and subsets of the set</p> <p>Quiz</p> <p>Game</p>

			and writing the complement of a set	<p>The elements of the union of two sets, e.g. $S = \{s, c, h, o, l\}$ $H = \{h, o, l, y\}$ $S \cup H = \{c, h, l, o, s, y\}$ Complement of a set is those elements that are not found in the given set. $U = \{1, 2, 3, 4, 5, 6, 7\}$ $A = \{1, 3, 5, 7\} \quad A' = \{2, 4, 6\}$</p>	Using the correct symbol for intersection, union and complement		Written work
11		Venn Diagrams	<p>1). Drawing a Venn Diagram to represent two given sets</p> <p>2). Drawing a Venn Diagram showing disjoint and intersecting sets</p>	<p>Venn diagrams, e.g.</p>  <p style="text-align: center;">$A \cap B$ A'</p>	Drawing Venn Diagrams	<p>A Compl. Mths. Crse for Sec Schools Bk 1</p> <p>Mathematics for Sec School in Guyana Bk 1</p>	<p>Written work</p> <p>Games</p>
12	Algebra 1	<p>Addition of directed numbers</p> <p>Subtraction of directed numbers</p>	<p>1). Identifying absolute values of integers and characteristics of directed numbers</p> <p>2). Using the identity element for addition</p> <p>3). Adding directed numbers</p> <p>4). Subtracting directed numbers</p>	<p>When adding or subtracting two positive integers the answer is positive. E.g.: $+5 + 3 = +8$ $+10 + 5 = +5$</p> <p>When two negative integers are added or subtracted the answer is negative. E.g.: $-7 + (-3) = -10$ $-8 - 5 = -3$</p> <p>When a negative and a positive integer are added the answer takes the sign of the absolute value of the greater number. E.g.: $-10 + +5 = -5$ $+12 + -6 = +6$</p> <p>Identity element for addition is zero. The sum of an integer and its inverse (opposite) is equal to zero. E.g.: $-5 + 5 = 0$</p>	<p>1. Adding and subtracting positive and negative integers.</p> <p>2. Adding and subtracting negative and positive integers. Applying rules</p> <p>3. Identifying inverse (opposite) integers.</p> <p>4. Recognizing that sum of an integer and its inverse is equal to zero.</p> <p>5. adding directed numbers in any order</p>	<p>A Compl. Mths. Crse for Sec Schools Bk 1</p> <p>Mathematics for Sec School in Guyana Bk 1</p>	<p>Quiz</p> <p>Oral</p> <p>Game</p> <p>Written work</p>
13		<p>Use of symbols</p> <p>Addition and subtraction of Algebraic terms</p>	<p>1). Using symbols to represent ideas</p> <p>2). Expanding algebraic terms</p> <p>3). Identifying parts of a term: coefficient, variable, index, constant</p> <p>4). Adding and subtracting like algebraic terms</p>	<p>Use of symbols.</p> <p>Functions, Constants, Variables and Coefficient. E.g.: $5b + 4$ where b is the variable, 5 is the coefficient and 4 is the constant.</p> <p>Function of variables and coefficient. E.g.: 5b indicates the number of b's required where 'b' could vary in value. Expand: $3a = a + a + a$ or $3 \times a$ $5c = c + c + c + c + c$ or $5 \times c$ Addition and subtraction of algebraic expression with like terms. E.g.: $a + 3a + 5a = 9a$ Different coefficient and same variables</p> <p>Addition and subtraction of algebraic expression with like and unlike terms. E.g.: $a + b + b = a + 2b$</p>	<p>1. Using concrete object to show addition of two like sets. E.g.: 3 pens + 2 pens = 5 pens $3p + 2p = 5p$ where 'p' represents one pen Discussion on the value of p in terms of its coefficient.</p> <p>2. Discussion on the function of the terms in expression e.g. $a + b + 6$</p> <p>3. Discussion on the functions of variables in an expression e.g. $4b + 3b + 1$</p>	<p>A Compl. Mths. Crse for Sec Schools Bk 1</p> <p>Mathematics for Sec School in Guyana Bk 1</p>	<p>Oral questions</p> <p>Written exercises</p> <p>Quiz</p> <p>Games</p>




				$a + b + e + a + b = 2a + 2b + e$ $x + 2y + y = x + 3y$ $a - 6b - 2b = a - 8b$	4. Using the examples of $b = 4$ elements, explain the function of a co-coefficient and a variable 5. Discussion on the expansion of algebraic terms and vice versa. 6. Discussion on the relationship between an expanded and contracted term		
14		5). Multiplication and division of algebraic terms 6). Substitution	1). Multiplying and dividing algebraic terms 2). Replacing variables with numeric value 3). Expressing verbal statements in algebraic terms	Multiplication of algebraic expressions with like variables, e.g.: $a \times a \times a = a^3$, $2a \times a \times a = 2a^3$, $4b \times 3b = 12b^2$ Multiplication of algebraic expressions with unlike variables. e.g.: $a \times bc$; $3b \times 4c \times 4c$; $4x \times 5y \times 6c$ Division of algebraic terms e.g.: $x \div x = 1$; $a \div b = a/b$ Division of algebraic expression with unlike terms e.g.: $a \div 5b = \frac{a}{5b}$ Division of unlike terms by subtracting indices e.g.: $x^3 \div x^2 = x^1$ or x When variables are replaced with a numerical value, this is called substitution. E.g.: when $x = 2$, find the value of $4x$ and $3x^2$. $4x = 4 \times 2 = 8$; $3x^2 = 3 \times 2 \times 2 = 12$	1. Discussion on the steps to be taken to multiply algebraic expressions with like and unlike variables. 2. Demonstration of division of terms by expanding them before canceling. 3. Demonstration of division of unlike terms by subtracting indices. 4. Discussion on steps to be taken when substituting variables with numerical values. 5. determining value of an expression by replacing variables with numerical values	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Oral questions Written exercises Quiz Games
15			REVIEW AND DO REMEDIAL WORK ON TOPICS/CONCEPTS BASED ON WEAKNESSES AND NEEDS OF STUDENTS				

Note for all Teachers:

1. Use this termly schedule of topics, together with the Ministry of Education’s Curriculum Guides.
2. The recommended texts: Mathematics for Secondary Schools in Guyana Book 1 and Mathematics for Secondary School Book 1 are not the only text you can use to give students practice exercises.
3. Use any Mathematics textbook that is available to you and the students.
4. Seek out the topics with the appropriate content for the students to gain practice.
5. If teachers feel that their students are competent in the objectives specified for the given week, then they can move on or give students additional work on the objectives to test their skills

Ministry of Education
Secondary Sector
Mathematics
Grade 7
Easter Term Schedule of Topics

Week	Topic	Sub-topics	Objectives	Content	Activities	Resources	Evaluation Strategies
1	Algebra 2	1). Verbal statements and symbolic expressions 2). The distributive law	1). Expressing verbal statements in algebraic terms 2). Simplifying algebraic expressions using the distributive law	Conversion of verbal statements into symbolic expressions, e.g. if the length of a rectangle is x cm and the width is y cm, then an expression for the perimeter of the rectangle can be: Perimeter = $(x + x + y + y)$ cm = $(2x + 2y)$ cm = $2(x + y)$ cm The distributive laws: $(a \times b) + (c \times b) = b(a + c)$ $(a \times b) - (c \times b) = b(a - c)$	Converting verbal statements into symbolic expressions. Encouraging students to practice converting verbal statements into symbolic expressions Applying the distributive law to simplify algebraic expressions, e.g. $(3 \times y) + (4 \times y) = y(3 + 4) = 7y$	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Oral questions Written exercises Quiz
2		3). Equations 4). Inequations	3). Identifying and balancing equations 4). Using the symbols < and >	Solve Simple equations in one unknown: e. g $5x = 15$; $3y = 21$ $m + 9 = 17$; $2m - 7 = 29$	Solve simple equation by: i) inspection $p - 5 = 13$ ii) balancing $5p + 9 = 36$	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Oral questions Written exercises Worksheet
3		5). Inequations	5). Converting verbal statements to algebraic expressions highlighting inequality	Use the symbols < and > to convert verbal statements into algebraic expressions. e.g. If the length of a rectangle is b cm and the width 4 cm less than the length, then the statement can be expressed by the inequation $(b - 4) > b$ Inequations, e.g. $12 > 11$ or $11 < 12$.	Converting verbal statements into algebraic expressions using the inequality signs.	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Oral questions Written exercises
4		6). Indices	6). Identifying base and index of an expression 7). Multiplying expressions of like terms and writing the answer using indices 8). Dividing terms with same base	Identify the base and index of an expression $3d^2$: d is the base and 2 is the index. Write algebraic expressions in index form e. g. $3 \times a \times a \times a = 3a^3$ Multiply expressions of like terms and write the answer using indices $5 \times 5 \times 5 \times 5 = 5^{1+1+1+1} = 5^4$ $c^2 \times c^2 \times c^2 = c^{2+2+2} = c^6$ $9^5 \div 9^3 = 9^{5-3} = 9^2$ $16g^{10} \div 8g^6 = 2g^{10-6} = 2g^4$	Use the laws of indices to: ➤ Multiply ➤ Divide terms with the same base Prepare worksheet with problems on indices. Make and mount a chart with the rules of indices.		Quiz Worksheet

5	Geometry 1	1). Mathematical instruments 2). Lines	1) Identifying the four main Mathematical instruments and discussing the use of each instrument 2) Defining the terms: Geometry, point, line, surface, solids 3) Showing line segment as a set of points 4) Naming points and labeling line segments 5) Identifying and defining the types of lines 6) Drawing, naming and comparing lines	Identify Mathematical instruments Define the terms: Geometry, point, line, surface, solids Name points and label line segments Identify and define the types of lines Draw, name and compare lines	Display mathematical instruments Make a scrap book/dictionary with mathematical terms identified. Prepare worksheet on geometrical terms.	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Scrap book/dictionary Worksheet Quiz
6		3). Angles	7) Identifying , drawing, naming and measuring angles 8) Estimating angles 9) Classifying angles 10) Calculating angles	Identify, draw, name and measure angles. Classify angles according to size: <ul style="list-style-type: none"> ➤ Acute ➤ Obtuse ➤ Reflex ➤ Right-angle ➤ Straight Calculate angles: Complementary and supplementary.	Draw, name and measure angles Classify angles according to size Make a table/chart to show same Calculate angles from worksheets	.	Written exercises Practical
7		4). Polygons	11) Defining and recognizing polygons 12) Drawing and naming polygons 13) Classifying polygons	Define Polygons A polygon can be defined as a plane shape bounded by line segments. Polygons are classified into three types as follows: Convex: Each polygon  interior angle in a convex is less than 180°. Regular:  A regular polygon has all its sides of equal length and all its angles of equal size. Re-entrant:  In a re-entrant polygon, one or more of its interior angles is greater than 180° and less than 360°. Drawing, naming and classifying polygons. 1. Triangle: is a polygon with three sides. Triangles are classified as: <ul style="list-style-type: none"> ➤ Acute: All angles are acute; i.e. Each angle is less than 90⁰ ➤ Obtuse: One angle is obtuse; i. e. the angle is greater than 90⁰ but less than 180⁰. ➤ Right-angled: One angle is a right angle; i. 	Add definitions to scrap book/dictionary made in previous lesson. Use worksheet to name and classify polygons. Use solids to identify properties Use worksheet to calculate interior angles of polygons.	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Scrap book/dictionary Worksheet Quiz Oral questions

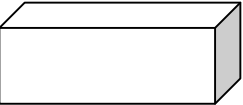
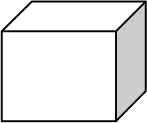
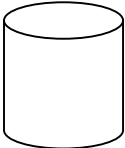
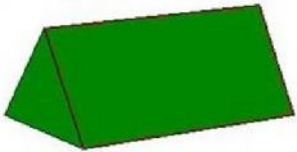
				<p>e. the angle is 90^0</p> <ul style="list-style-type: none"> ➤ Scalene: All sides are unequal. ➤ Isosceles: Two sides are equal. ➤ Equilateral: All three sides are equal. <p>2. Quadrilateral: A polygon with four sides. Quadrilaterals are classified as:</p> <ul style="list-style-type: none"> ➤ Parallelogram: Opposite sides are parallel and equal. ➤ Square: A square is a parallelogram with opposite sides parallel and equal. All four sides are equal and each angle is a right angle. ➤ Rectangle: Opposite sides are parallel and equal. Each angle is a right angle. <p>3. Pentagon: A polygon with five sides. 4. Hexagon:A polygon with six sides. 5. Heptagon: A polygon with seven sides 6. Octagon: A polygon with eight sides. 7. Nonagon: A polygon with nine sides. 8. Decagon: A polygon with ten sides. 9. Icosagon: A polygon with twenty sides.</p>			<p>Scrap book/dictionary</p> <p>Worksheet</p> <p>Quiz</p>
8		6). Construction	14) Constructing angles 15) Constructing triangles and rectangles	Construct given angles: 60^0 , 30^0 , 90^0 , 45^0 , 120^0 . Construct triangles and rectangles: Triangle: given two sides and an angle; three sides; three angles. Rectangle: two sides; two sides and an angle.	Use mathematical instruments to construct triangles and rectangles.	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Chart Worksheet Practical
9	Measurement 1	1. SI System of unit 2. Perimeter of regular shapes 3. Perimeter of irregular shapes 4. Area of polygons	1).Identifying SI units of length: mm, cm, m, km, etc 2). Drawing regular and irregular shapes 3). Calculating the perimeter of regular and irregular shapes 4). Calculating the area polygons– squares, rectangles, right-angled triangles, parallelograms	Identify SI unit of measurement for length. Draw regular and irregular shapes. Calculate perimeter of: regular, irregular and composite shapes. Calculate area of polygons.	Showing on chart the SI unit of measurement for length. Use graph paper to draw regular and irregular shapes. i. Measure to find the perimeter, ii. Use given measurements to find perimeter. iii. Count the number of squares within the shapes to find area. iv. Use formula to find area of given shapes	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Chart Worksheet
10	Computation 2	1. Percentage 2. Average 3. Ratio and Proportion	1. Finding percentage of a given quantity 2. Converting fractions to decimals to percentage 3. Identifying the symbol used for ratio and proportion 4. Expressing ratios and proportions as fractions and vice versa 5. Finding the average of given data	Find percentage of given quantities. Convert fractions to decimals to percentage and vice versa Express ratios and proportions as fractions and vice versa Problem solving using ratio and proportion Find average of given data	Make Ready Reckoner to find percentage of given quantities. Calculate percentage of given quantity. Express fractions to decimals to percentages and vice versa. Make charts to show fractions, decimals and percentages.	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Ready Reckoner Chart Worksheet

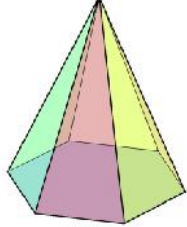
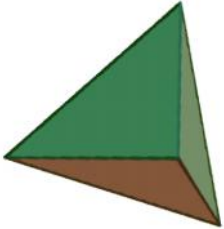



11	Consumer Arithmetic	1. Profit 2. Loss	1). Determining the unit price of a given item 2). Comparing prices for similar items 3). Finding cost price, selling price 4). Finding Profit or Loss	Find cost price and selling price Find profit or loss	Use news paper clippings, posters, etc to develop and solve problems on consumer arithmetic – cost price, selling price, profit, loss C.P = Profit – Selling Price S.P = Profit – Cost Price Profit = S.P – C.P Loss = C.P – S.P		Oral Written Clippings
12		EASTER TERM EXAMINATIONS					
13		EASTER TERM EXAMINATIONS AND REMEDIAL WORK ON WEAK AREAS IDENTIFIED FROM MATHEMATICS EXAMINATION					

Note for all Teachers:

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Ministry of Education
Secondary Sector
Mathematics
Grade 7
August Term Schedule of Topics

Week	Topic	Sub-topics	Objectives	Content	Activities	Resources	Evaluation Strategies
1	Geometry 2	1. Common solids	1) Identify common solids and define same 2) Draw nets of cubes, cuboids and cylinders, prisms, pyramids and cone. 3) Use nets of cubes, cuboids, cylinders, prisms, pyramids and cone to make solids. 4) Examine solids to identify properties and classify solids.	<p>Solid figures are three-dimensional.</p> <p>Types of common solids:</p> <p>Prism: A prism is a figure made of two parallel faces that are polygons of the same shape and sides that are parallelograms.</p> <p>Cuboid:A cuboid is a prism with rectangular faces.</p> <ul style="list-style-type: none">➤ It has six flat sides and all angles are <u>right angles</u>.➤ All of its faces are rectangles.➤ It is also a <u>prism</u> because it has the same cross-section along a length.➤ In fact it is a rectangular prism. <p>Cube:A cube is a prism with squares for sides and faces.</p> <ul style="list-style-type: none">➤ It has 6 Faces.➤ Each face has 4 edges, and is actually a square.➤ It has 12 Edges.➤ It has 8 Vertices (corner points) and at each vertex 3 edges meet. <p>Cylinder:A cylinder has two equal circular bases that are parallel.</p> <ul style="list-style-type: none">➤ It has a flat base and a flat top➤ The base is the same as the top, and also in-between➤ It has one curved side➤ Because it has a curved surface it is not a polyhedron. <p>Pyramid: A figure with a base that is a polygon and triangular sides.</p> <p>Triangular Pyramid:</p> <ul style="list-style-type: none">➤ It has 4 Faces➤ The 3 Side Faces are Triangles➤ The Base is also a Triangle➤ It has 4 Vertices (corner points)➤ It has 6 Edges➤ It is also a <u>Tetrahedron</u>	<p>Gather and identify common solids.</p> <p>Make nets and paste to form solids</p> <p>List the properties of common solids</p> <p>Prepare a chart to show the names of the solids and their properties.</p> <div><p>Cuboid</p><p>Cone</p><p>Cylinder</p></div>	<p>A Compl. Mths. Crse for Sec Schools Bk 1</p> <p>Mathematics for Sec School in Guyana Bk 1</p>	<p>Oral questioning</p> <p>Written exercises</p> <p>Chart</p> <p>Models</p>

				<p>Square Pyramid:</p> <ul style="list-style-type: none"> ➤ It has 5 Faces ➤ The 4 Side Faces are Triangles ➤ The Base is a Square ➤ It has 5 Vertices (corner points) ➤ It has 8 Edges <p>Cone:A cone has a circular base connected to a vertex.:</p> <ul style="list-style-type: none"> ➤ It has a flat base ➤ It has one curved side <p>Because it has a curved surface it is not a polyhedron.</p> <p>Sphere:A figure with a curved surface in which all points on the surface are equal distance from the centre.</p> <ul style="list-style-type: none"> ➤ It is perfectly symmetrical ➤ It has no edges or vertices (corners) ➤ It is not a polyhedron ➤ All points on the surface are the same distance from the centre 	<p>Triangular Prism</p>     		
2	Measurement 2	1. Volume 2. Mass	1) Calculating the volume of cubes and cuboids 2) Calculating the volumes of simple right prisms 3) Estimating the mass of an object 4) Measuring and calculating mass	Calculate volume of right prisms Estimate mass Calculate mass	Use prepared worksheets to solve problems on volume of prisms and finding mass of objects	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk1	Nets Worksheets Mobiles

3		3. Temperature 4. Time	5) Reading and writing temperature in SI unit 6) Reading and writing time using the 12 and 24-hour clock 7) Using units of time measurement to solve problems	Read and write temperature in SI units Read and write time using the 12-hour and 24-hour clocks Solve worded problems on time measurement	Make a table to show the unit of measurement Make clocks and use same to find time Solve problems involving time	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk1	Models Quiz Written
4	Relations	1. Relations	1). Recognizing the domain is the object of a relation 2). Recognizing the range is the image set of a relation	Arrow diagrams. The objects and image in any particular relation can be shown on an arrow diagram. The arrow always leaves the object in the domain and points to the image in the range	Listing the members of the domain for a set of ordered pairs. Listing the members of the range for a set of ordered pairs.	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Oral Written Worksheet
5		2. Arrow diagrams	3). Using arrow diagram to show relationships 4). Identifying that the object and the image form the components of the ordered pairs.	Types of relations: <ul style="list-style-type: none"> ➤ One-to-one - each object has only one image. ➤ Many-to-one - two or more objects have the same image. ➤ One-to-many - one object has more than one image. ➤ Many-to-many - one object has more than one image and also two or more objects 	Listing all the ordered pairs shown on an arrow diagram. Writing sets of ordered pairs that satisfy given relations. Writing the rule of a relation.		Oral questioning Written exercises Diagrams Worksheet
6		3. Ordered pairs 4. Coordinates	5). Stating ordered pairs from arrow diagrams and nets 6). Plotting points 7). Reading ordered pairs of coordinates	The co-ordinate plane is sometimes called a rectangular grid. Drawing a number line using 0 and positive integers from 1 to 6 and negative integers from -1 to 6. Up turning the paper and drawing another number line intersecting the first at right angles and using 0 and the positive integers from 1 to 6 and from -1 to -6. 0 remains at the same point. When the two lines come together this way they form a co-ordinate plane. x-co-ordinates, y-co-ordinates, origin. Points on a co-ordinate plane, e.g. (2, 3) (0,0)	Showing on chart: X = {-6, -5, -4, ...4, 5, 6} and Y = {-6, -5, -4, ... 4, 5, 6}. Pointing out that the elements of X are called the x-co-ordinates and the elements of Y are called the y-co-ordinates. The point at which the x and y are both 0 is called the origin. Guiding students in plotting points on a co-ordinate plane. Guiding students in locating given points on a co-ordinate plane	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Quiz Oral questioning Written exercises
7		5. Graphs	8). Plotting and connecting points	Graph of a relation represented by ordered pairs.	Small group activities: <ul style="list-style-type: none"> ➤ plotting ordered pairs of the given relation on a co-ordinate plane. ➤ joining the points corresponding to each ordered pair. 		Oral Written
8	Statistics	1. Pictograph 2. Pie Chart	1). Collecting information 2). Recording information accurately 3). Reporting and analyzing information from Pictographs and Pie Charts 4). Using the appropriate instrument to construct the charts	Pictographs: an attractive way of presenting numerical information. The pictures give a quick and easy meaning to statistical data Construction of pictographs. Interpretation of pictographs.	Using chart to show examples of pictographs. Guiding students in constructing pictographs to illustrate given information. Interpreting the information	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School	Chart Written exercises

				Pie Chart: a circle graph in which sections of the circle represent fractions, degrees, percentages. Construction of pie charts. Interpretation of pie charts.	illustrated on a pictograph. Discussing information illustrated on pictographs. Using chart to show examples of pie charts. Calculating each section of the circle in degrees or percentages from given information. Representing the information on the circle. Interpreting information represented on pie charts.	in Guyana Bk 1	Diagrams Written Oral
9		3. Bar Chart	1). Collecting information 2). Recording information accurately 3). Reporting and analyzing information from Bar Charts 4). Using the appropriate instrument to construct the charts	Bar Charts Another way of displaying information is on a bar chart. A bar chart has a heading. A scale is usually on the vertical axis. The bars do not touch. The length of the bars represents numerical information. Construction of bar charts. Interpretation of bar charts.	Guiding students in constructing bar charts to illustrate given information. Interpreting bar charts. Discussing information illustrated on bar charts. Using chart to show examples of bar charts.	A Compl. Mths. Crse for Sec Schools Bk 1 Mathematics for Sec School in Guyana Bk 1	Chart Oral questioning Written exercises
10			ANNUAL EXAMINATIONS				
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