

Grade6

TERM 1

Major Topics	Sub Topics		Learner Outcomes	Lessons		
1	Number Concepts	1	Read and write a number	B01 Read and write up to 7-digit numbers; use expressions 'half a million', 'quarter million', '3-quarter million'.	1	17
		2	Expanded Notation	B02 Identify the place value of any digit in a 7-digit number.	2	
		B03 Determine the total value of any digit in a 7-digit number.				
		A01 Read, write and expand 6-digit numbers.				
		B04 Write a number in expanded form.				
	3	Number Sequence	B05 Identify patterns involving operations on odd and even numbers.	1		
			B13 Complete a given sequence in which terms increase or decrease by 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 as well as by 20s, 25s, 50s.			
			B14 Complete a given sequence based on an implied number operation or description of numbers.			
	4	Round off	B15 Round off numbers to the nearest 10, 100, 1000.	1		
	5	Roman Number	B16 Write Roman Numerals 1 through 50.	1		
	6	Prime and Composite numbers	B06 Recognize the prime and composite numbers between 1 and 100	3		
			B07 Write the prime factorization of any 2-digit number			
			B17 Express whole numbers and product of their factors using indices			
			B08 Distinguish between prime and composite numbers			
	7	Square Number	B12 Identify square numbers and their square root (square numbers between 0 and 150).	2		
	8	Average	B18 Calculate the average of a set of numbers or scores.	2		
			C07 Calculate the midpoint between two whole numbers where the midpoint is a whole number.			
B19 Find the total when the average and number of items are given.						
B20 Find the missing number when average and some numbers are given.						
B21 Find the new average when a number is added or subtracted.						
9	H.C.F.	B09 Identify the Highest Common Factor of a pair of numbers	2			
10	L.C.M.	B10 Identify the Least Common Multiple of a set of numbers	2			
2	Whole Number Operations	1	Addition	C01 Add sets of whole numbers.	2	11
		2	Subtraction	C02 Subtract a pair of whole number.	2	
		3	Multiplication	B11 Recite multiplication and division of tables up to 12.	2	
				C03 Multiply by a 2-digit number.		
			A02 State the multiplication and division facts for tables up to 9.			
4	Division	C04 Divide a whole number by: (a) a 1-digit number. (b) a 2-digit number with and without remainder.	2			
5	Problem Solving BOMDAS	A03 Solve simple problems mentally involving the four operations.	3			

			C05	Solve 1-step, 2-step, 3-step word problems involving addition, subtraction, multiplication and division.				
			C06	Interpret terms, such as 'sum', 'total', 'altogether', 'in all', 'less than', 'more than', 'times', 'share equally', 'increase', 'decrease', 'ratio', 'product', 'difference', <u>each in context.</u>				
			C08	Interpret and solve mixed operations with or without brackets.				
3	Time	1	Reading Time and Time Notation	A07	Tell time on the hour, half-hour, quarter-hour, 5 minute intervals.	1	8	
				G01	Tell time on the hour, half-hour, quarter-hour, one-minute intervals.			
				G02	Write time notation correctly.			
		2	Language associated with time	G07	Express the time using the 24-hour clock vocabulary: 1:00 p.m. is 13 hours not 13 hundred hours as it is sometimes called; 5:30 p.m. is 17 hours 30 minutes or 17:30 hours.	1		
				G03	Calculate the duration of an event in terms of (a) hours and minutes. (b) days only. (c) months and days. (d) years.			
		3	Addition and Subtraction of time	G04	Calculate the finishing time of an event given the time started and the duration of the event.	2		
				G05	Calculate the time taken to complete an event/journey given the distance and the average speed.			
		4	Average Speed	G06	Calculate the average speed, the distance or the time taken given any two of them.	3		
				G08	Use the terms B.C. and A.D. correctly			
		5	B.C. and A.D.			1		
4	Fractions	1	Comparing Fractions	E01	Arrange a set of fractions in ascending or descending order.	2	12	
				Addition of Fraction	E02			Add fractions where: (a) the denominators are alike. (b) the denominators are unlike but related. (c) <u>the denominators are unlike and unrelated.</u>
				E03	Add mixed numbers with and without grouping.	2		
			3	Subtraction of Fraction	E04			Subtract any two fractions or mixed numbers.
			4	Multiplication of Fraction	E05	Multiply: (a) two fractions. (b) a whole number and a fraction. (c) two mixed numbers. (d) <u>a fraction and a mixed number.</u>		2
						E06		
			5	Division of Fraction	E07	Calculate the remainder when a whole number is subtracted from a fraction of a whole or a fraction of a fraction.		3
					E08	Solve word problems involving fractions of sets or fractions of money.		
	6	Solving word problems of fraction			1			

TERM 2

Major Topics		Sub Topics		Learner Outcomes		Lessons	
5	Decimals	1	Concept of decimals	E09	Read and write decimal numbers including tenths, hundredths, thousandths.	1	16

			E10	Identify the place value and the total value of any digit in a decimal number.		
		2	Relationship between decimal	E11 Express a decimal number as a fraction E12 Express a fraction as a decimal	2	
		3	Addition and subtraction of decimal	E13 Add sets of decimal numbers E14 Subtract a pair of decimal numbers	3	
		4	Multiplication of decimal	E15 Multiply a decimal number by 10, 100, 1000 Multiply a decimal number by a whole number E16 Multiply a decimal number by another decimal	4	
		5	Division of decimal	E17 Divide a decimal number by a whole number including 10, 100, 1000	4	
		6	Calculation of fraction and decimal	A06 Perform simple operations with fractions and decimals (excluding division)	2	
6	Percentage	1	Concept of Percentage	E18 Identify the whole as 100% E19 Explain the meaning of percent as out of 100 E20 Write the symbol for percent(%)	1	12
		2	Relationship between percentage and decimal. fraction	E21 Express a percentage as a decimal number and vice versa E22 Use the concept of 100% as a whole to express a fraction as a percentage	4	
		3	Finding a Percent of a Number	E23 Calculate a given percentage of a number	1	
		4	Expressing a Number as a Percentage of the other	E24 Express one number as a percentage of another number	2	
		5	Finding a Number, Given a Percent of it	E26 Determine the number given a percentage of it	2	
		6	Problem Solving	E25 Solve word problems involving percentages only examples involving whole numbers	2	
7	Money	1	Reading and Writing sums of money	D01 Read and write sums of money up to ten million	1	8
		2	Bills -Change	A04 Use rulers to measure accurately D02 Make bills and calculate the change D07 Use vocabulary related to buying and selling 'expensive', 'cheap', 'reasonable', 'current price', 'sale', 'wholesale price'	1	
		3	Bills -Discount	D05 Solve problems involving discount D07 Use vocabulary related to buying and selling 'expensive', 'cheap', 'reasonable', 'current price', 'sale', 'wholesale price'	2	
		4	Bills -Profit and Loss	D03 Calculate profit or loss made on a buying/selling transaction D04 Calculate profit or loss percent incurred in selling an items	2	
		6	Hire-purchase	D06 Solve problems involving hire-purchase transactions	1	
		5	Exchange		1	
8	Geometry	1	Properties of Plane shapes	H02 Identify right angles in plane figures and in physical constructions A05 State/explain properties of plane figures and solids H01 Describe properties of plane figures	5	8

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			H04	Define the terms radius, diameter, circumference, chord and arc of a circle		
			H05	Describe the relationship between diameter and circumference using the concept of pi?? $\pi = 22/7$ or 3.142		
			F14	Calculate the circumference of a circle given (a) the radius (b) the diameter		
		2	Lines of Symmetry	H06	Use paper folding to identify lines of symmetry in circles, squares, rectangles and other polygons	1
		3	Solids	A05	State/explain properties of plane figures and solids	2
				H03	Describe properties of the following solids in terms of the number of surfaces, edges, vertices: cone, cuboid, sphere, cylinder, pyramid	
				A04	Use rulers to measure accurately.	2
9	Measurement 1	1	Length	F01	Measure, record and estimate lengths of objects in: (a) metres (b) centimetres (c) millimetres Use the kilometre, centimetre and metre in calculating and describing distances	5
				F02	Apply the measures miles, yards, feet and inches in everyday situations	
		2	Distance	F15	Calculate the actual distance between two points given the scale drawing on a map or diagram	1
		3	Perimeter	F11	Calculate the perimeter of squares, rectangles and other polygons made from squares, rectangles and triangle.	2

TERM 3

Major Topics Sub Topics			Learner Outcomes		Lesson	
10	Measurement 2	4	Area	F09	Calculate the area of squares and rectangles by using the formula lengthwidth.	4
				F10	Calculate the area of triangles given the base and the perpendicular height.	
		5	Mass	F03	Measure, record and estimate the mass of objects in:	2
				F04	Apply the measures pounds and ounces in everyday situations	
		6	Capacity and Volume	F05	Measure, record and estimate the capacity of containers in: (a) litres (b) millilitres (c) centilitres	4
				F12	Recall the measures of certain well-known items	
				F06	Apply the measures gallons, quarts and pints to everyday situations	
				F13	Calculate the volume of cubes and cuboids.	
		7	Select of appropriate units of measurement	F07	Select the most appropriate unit of length, mass and capacity for measuring an items	1
				F08	Express the measurement of an object in a corresponding unit of measure	
11	Ratio, Proportion, Rate and Unequal	1	Ratio	J01	Calculate total shares from a given ratio	3
				J02	Write a set of equivalent ratios (proportion)	
				J03	Calculate amount allotted to each recipient (given the total amount) based on ratio sharing	

	Sharing	2	Problem Solving	J04	Solve problems based on ratio sharing	3	
				J05	Calculate the total number of items for an event given the basic rate of the event		
				J06	Calculate the share of each recipient given the total number of shares, where one share is n more or less than another share and n is a whole number		
		3	Proportion	J07	Solve simple problems involving proportion	2	
12	Graph	1	Collecting data			2	8
		2	Bar Graph	A08	Interpret simple graphs	1	
				B18	Calculate the average of a set of numbers or scores		
				B19	Find the total when the average and number of items are given		
				I01	Read information from a bargraph, a pictograph, a pie chart, a line graph or a table		
				I02	Solve problems using the information presented in a graph or table		
				I03	Use the information given in a table to construct a bar-graph and vice-versa		
				I04	Collect and present data in the form of a table or bar-graph		
		3	Pictograph	A08	Interpret simple graphs	1	
				B18	Calculate the average of a set of numbers or scores		
				B19	Find the total when the average and number of items are given		
				I01	Read information from a bargraph, a pictograph, a pie chart, a line graph or a table		
				I02	Solve problems using the information presented in a graph or table		
				I03	Use the information given in a table to construct a bar-graph and vice-versa		
				I04	Collect and present data in the form of a table or bar-graph		
		4	Line Graph	A08	Interpret simple graphs	1	
				B18	Calculate the average of a set of numbers or scores		
				B19	Find the total when the average and number of items are given		
				I01	Read information from a bargraph, a pictograph, a pie chart, a line graph or a table		
				I02	Solve problems using the information presented in a graph or table		
		I03		Use the information given in a table to construct a bar-graph and vice-versa			
		I04		Collect and present data in the form of a table or bar-graph			
	5	Pie Graph	A08	Interpret simple graphs	3		
13	Review	1	Review			12	12

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[1] Number Concepts

Sub Topic	Lesson No.	Specific Objective of the plan	Related Pages in the Math Text Book	Unit / Chapter Number	Teaching Materials
	Pre				
1	Read and write a number	1	Read and write up to 7-digit numbers; use expressions 'half a million', 'quarter million', '3-quarter million'.	5, 7	Ch.1
2	Expanded Notation	2	Identify the place value of any digit in a 7-digit number. Determine the total value of any digit in a 7-digit number.	6	Ch.1
		3	Read, write and expanded 6-digit numbers. Write a number in expanded form.	6	Ch.1
3	Number Sequence	4	Complete a given sequence based on an implied number operation or description of numbers.	16	Ch.2
4	Approximation	5	Round off numbers to the nearest 10, 100, 1000.	7, 8, 9	Ch.1
5	Roman Number	6	Write Roman Numerals 1 through 50.	9	Ch.1
	Post				
	Pre				
6	Prime and Composite numbers	7	Recognize the prime and composite numbers between 1 and 100	10	Ch.2
		8	Write the prime factorization of any 2-digit number	11	Ch.2
		9	Express whole numbers and product of their factors using indices	6, 11	Ch.1 Ch.2
7	Square Number	10 11	Identify square numbers and their square root (square numbers between 0 and 150).	15	Ch.2
8	Average	12	Calculate the average of a set of numbers or scores and find the new average when a number is added or subtracted. Calculate the midpoint between two whole numbers where the midpoint is a whole number.	25	Ch.3
		13	Find the missing number when average and some numbers are given.	25	Ch.3
9	H.C.F.	14 15	Identify the Highest Common Factor of a pair of numbers	11, 14	Ch.2
10	L.C.M.	16 17	Identify the Least Common Multiple of a set of numbers	12, 13, 14	Ch.2
	Post				

[2] Whole Number Operations

Sub Topic	Lesson No.	Specific Objective of the plan	Related Pages in the Math Text Book	Unit / Chapter Number	Teaching Materials
	Pre				
1	Addition	1	Add sets of whole numbers.	17	Ch.3
		2	Practice Addition problems	18	
2	Subtraction	3	Subtract a pair of whole number.	19	Ch.3
		4	Practice Subtraction problems	20	
3	Multiplication	5	Recite multiplication and division of tables up to 12. State the multiplication and division facts for tables up to 9.	21	Ch.3
		6	Practice Multiplication problems	22	
4	Division	7	Divide a whole number by a 1-digit number or a 2-digit number with and without remainder.	23	Ch.3
		8	Practice Division problems	24	
5	Problem Solving BOMDAS	9 10 11	Interpret and solve mixed operations with or without brackets.	26	Ch.3 M1
	Post				

[3] Time

Sub Topic	Lesson No.	Specific Objective of the plan	Related Pages in the Math Text Book	Unit / Chapter Number	Teaching Materials
	Pre				
1 Reading Time and Time Notation	1	Tell and write the notation for time on the hour, half-hour, quarter-hour, five-minute and one-minute intervals.	108C	Ch.15	M1
2 Language associated with time	2	Express time using the vocabulary "international time" or "24-hours clock time".	109	Ch.15	
3 Addition and Subtraction of time	3 4	Calculate the duration of an event in terms of 'hours and minutes', 'days only', 'months and days', 'years' Calculate the finishing time of an event given the time started and the duration of the event.	108AB, 110 111, 112	Ch.15	
4 Average Speed	5 6 7	Calculate the time taken to complete an event/journey given the distance and the average speed. Calculate the average speed, the distance or the time taken given any two of them. Problem solving	113		
5 B.C. and A.D.	8	Use the terms B.C. and A.D. correctly.			M2
	Post				

[4] Fractions

Sub Topic	Lesson No.	Specific Objective of the plan	Related Pages in the Math Text Book	Unit / Chapter Number	Teaching Materials
	Pre				
1 Comparing Fractions	1 2	Review of LCD. Arrange a set of fractions in ascending or descending order.	28, 29 30	Ch.4 Ch.4	
2 Addition of Fraction	3 4	Add a pair of fractions using the L.C.D.. Add mixed numbers with and without regrouping.	31 31	Ch.4 Ch.4	
3 Subtraction of Fraction	5 6	Subtract any two fractions using the L.C.D.. Subtract any two mixed numbers.	32 32	Ch.4 Ch.4	
4 Multiplication of Fraction	7 8	Multiply two fractions or a whole number and a fraction. Multiply two mixed numbers or a fraction and a mixed number.	33 33	Ch.4 Ch.4	
5 Division of Fraction	9 10 11	Divide a mixed number by a whole number. Divide two fractions using the reciprocal of the second Practice problem solving in fractions of remainders	34 34, 35	Ch.4 Ch.4	
6 Solving word problems of fraction	12	Solve word problems involving fractions.	31, 32, 33 34, 35	Ch.4	M1
	Post				

[5] Decimals

Sub Topic		Lesson No.	Specific Objective of the plan	Related Pages in the Math Text Book	Unit / Chapter Number	Teaching Materials
		Pre				
1	Concept of decimals	1	Read and write decimal numbers including tenths, hundredths, thousandths. Identify the place value and the total value of any digit in a decimal number.	36	Ch.5	
2	Relationship between decimal	2	Express a decimal number as a fraction.	36, 38	Ch.5	
		3	Express a fraction as a decimal.	36, 38	Ch.5	
3	Addition and subtraction of decimal	4	Add sets of decimal numbers.	39, 40, 41	Ch.5	
		5				
		6	Subtract a pair of decimal numbers.	39, 40, 41	Ch.5	
4	Multiplication of decimal	7	Multiply a decimal number by 10, 100, 1000.	42	Ch.5	
		8	Multiply a decimal number by a whole number.	44	Ch.5	
		9	Multiply a decimal number by another decimal number.	45	Ch.5	
		10				
5	Division of decimal	11	Divide a decimal number by 10, 100, 1000.	43	Ch.5	
		12	Divide a decimal number by a whole number.	46	Ch.5	
		13				
		14	Divide decimals in long division.	47	Ch.5	
6	Calculation of fraction and decimal	15 16	Calculate simple operations with fractions and decimals (excluding division)			M1
		Post				

[6] Percentage

Sub Topic		Lesson No.	Specific Objective of the plan	Related Pages in the Math Text Book	Unit / Chapter Number	Teaching Materials
1	Concept of percentage	1	Identify the whole as 100% Explain the meaning of percent as 'out of 100' Write the symbol for percent(%)	48	Ch.6	
2	Relationship between percentage and decimal, fraction	2	Express a percentage as a decimal number.	50	Ch.6	
		3	Express a decimal number as a percentage.	50	Ch.6	
		4	Express a percentage as a fraction.	49	Ch.6	
		5	Express a fraction as a percentage.	49	Ch.6	
3	Finding a Percent of a Number	6	Calculate a given percentage of a number	51	Ch.6	
4	Expressing a Number as a Percentage of the other	7 8	Express one number as a percentage of another number	51	Ch.6	
5	Finding a Number, Given a Percent of it	9 10	Calculate the number given a percentage of it	51, 53	Ch.6	
6	Problem Solving	11 12	Practice problem solvings.	52, 53	Ch.6	
		Post				

[7] Money

Teaching Materials	Sub Topic	Lesson No.	Specific Objective of the plan	Related Pages in the Math Text Book	Unit / Chapter Number	Teaching Materials
		Pre				
	1 Reading and Writing sums of money	1	Read and write sums of money up to ten million	59	Ch.8	
	2 Bills (Change)	2	Make bills and calculate the change Use vocabulary related to buying and selling: 'expensive', 'cheap', 'reasonable', 'current price', 'sale', 'wholesale price', 'retail price', 'profit', 'loss', 'installments', 'deposit', 'cost price', 'selling price'.	60	Ch.8	
	3 Bills (Discount)	3 4	Solve problems involving discount Use vocabulary related to buying and selling: 'expensive', 'cheap', 'reasonable', 'current price', 'sale', 'wholesale price', 'retail price', 'profit', 'loss', 'installments', 'deposit', 'cost price', 'selling price'.	61	Ch.8	
	4 Bills (Profit and Loss)	5 6	Calculate profit or loss made on a buying/selling transaction Calculate profit or loss percent incurred in selling an items	62	Ch.8	
	5 Hire-purchase	7	Solve problems involving hire-purchase transactions	63B	Ch.8	
	6 Exchange	8	Identify the money from different countries	63AC	Ch.8	
		Post				

[8] Geometry

Teaching Materials	Sub Topic	Lesson No.	Specific Objective of the plan	Related Pages in the Math Text Book	Unit / Chapter Number	Teaching Materials
		Pre				
	1 Properties of plane shapes	1	Identify right angles in plane figures and in physical constructions.	73,74	Ch.10	
		2	Describe properties of plane figures-circle, squares rectangles, triangles, pentagons, hexagon	75,76,77 78	Ch.11	
		3	Define the terms radius, diameter, circumference, chord and arc of a circle.	79	Ch.11	M1
		4	Describe the relationship between diameter and circumference.	80	Ch.11	
		5	Measure and Calculate the circumference using the concept of pi.	80,81	Ch.11	
	2 Lines of symmetry	6	Identify the symmetry of circles, squares, rectangles and other polygons.	82	Ch.11	G5:P82
	3 Solids	7	Describe solids - cube, cuboid, sphere, cone, cylinder, pyramid in terms of number of surfaces, edges, vertices	83	Ch.12	
		8	Draw and cut out nets of the solids.	86,87,88	Ch.12	
		Post				

[9] Measurements

Sub Topic	Lesson No.	Specific Objective of the plan	Related Pages in the Math Text Book	Unit / Chapter Number	Teaching Materials
	Pre				
1 Length	1	Measure, record and estimate lengths of objects in metres, centimetres, millimetres and kilometres. Apply the measures miles, yards, feet and inches.	91	Ch.13	M1
	2	Change the units of length.	94	Ch.13	
2 Distance	3	Calculate the actual distance between two points given the scale drawing on a map or diagram.	92, 93	Ch.13	
3 Perimeter	4	Calculate the perimeter of squares, rectangles and other polygons made from squares, rectangles, triangle and circle.	80, 98, 99	Ch.11 Ch.14	
	5	Solve problems involving perimeter.	100	Ch.14	
4 Area	6	Calculate the area of squares, rectangles and other polygons	101, 106	Ch.14	
	7	Calculate the area of triangles.	105	Ch.14	
	8	Solve problems involving perimeter and area.	102, 103, 104	Ch.14	
	9				
	Pos.				
5 Mass	10	Measure, record and estimate the mass of objects in grams, kilograms and tonnes. Apply the measures pounds and ounces.	95	Ch.13	M1
	11	Change the units of mass.	96	Ch.13	
6 Capacity & Volume	12	Measure, record and estimate the capacity of containers in litres, millilitres and centimetres. Apply the measures gallons, quarts and pints to everyday situations	118, 119	Ch.16	M1
	13	Explain the concept of volume.	116, 117	Ch.16	
	14	Calculate the volume of cubes and cuboids.	117	Ch.16	
	15	Change the units of capacity	118	Ch.16	
7 Selection of appropriate units	16	Select the most appropriate unit of length, weight / mass and capacity for measuring an item.			M2
	Pos.				

[11] Ratio and Proportion

Sub Topic	Lesson No.	Specific Objective of the plan	Related Pages in the Math Text Book	Unit / Chapter Number	Teaching Materials
	Pre				
1 Ratio	1	Calculate total shares from a given ratio		Ch.7	
	2	Write a set of equivalent ratios (proportion)	55	Ch.7	
	3	Calculate amount allotted each recipient (given the total amount) based on ratio sharing			M1
2 Problem solving	4	Solve problems based on ratio sharing		Ch.7	
	5	Calculate the total number of items for an event given the basic rate of the event.	54,55, 56	Ch.7	
	6	Calculate the share of each recipient given the total number of shares, where one share is n more or less than another share and n is a whole number.	57	Ch.7	
3 Proportion	7	Practice simple problem solving involving proportion	58	Ch.7	
	8	Practice simple problem solving involving inverse proportion.			M2
	Pos.				

[12] Graph

Sub Topic	Lesson No.	Specific Objective of the plan	Related Pages in the Math Text Book	Unit / Chapter Number	Teaching Materials
	Pre				
1 Collecting data	1	Interpret co-ordinate systems.	120,121	Ch.17	
	2	Collect data using a variety of methods.	122,123,124,125	Ch.17	
2 Bar graphs	3	Read information from a bar graph or a table and solve problems using the information presented in a graph or a table. Collect and present data in the form of a table or a bar graph. Use the information given in a table to construct a bar graph and vice-versa.	126,127,128,129,130	Ch.17	
3 Pictographs	4	Read information from a pictograph or a table and solve problems using the information presented in a graph or a table. Collect and present data in the form of a table or a pictograph. Use the information given in a table to construct a pictograph and vice-versa.	131,132,133	Ch.17	
4 Line graphs	5	Read information from a line graph and solve problems using the information presented in a graph. Collect and present data in the form of a table or a line graph. Use the information given in a table to construct a pie chart.	136	Ch.17	
5 Pie charts	6	Read information from a pie chart and solve problems using information presented in a graph. Use the information given in a table to construct a pie chart.	134,135	Ch.17	
	7				
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