



Unit Name and Number	Week No.	Content Headings	Key Sub-Topics / Context / Vocabulary	Projects / Graded Assignments	Question Style for Exam	Justification for Exam Content: Bloom's Taxonomy	Government Objectives
Unit 1. Numbers and operations	1	Numbers	A. Numbers more than 100,000 B. Comparing and ordering numbers	Textbook: pages 6-9, 12-14, 17-18, 21-23	Multiple choice: (i) Number written in words and hindu-arabic numerals, place value, expanded form (ii) Compare and ordering numbers	Understand	MA 1.1/1 Read and write whole numbers ore than 100,000 in Hindu-Arabic numerals, Thai numerals and words to represent quantities.
		Activities: Work in groups. Each group will be given numeral card from 0 to 9. Shuffle the cards and place them face down. Take turns to pick seven cards and make a 7-digit number. Ask other group members to read and write the number in words. Do not start the number with "0".	Vocabulary: number, million,ten thousand, thousands, hundreds, ten, ones, hindu-arabic numeral, expanded form, compare, greater than, less than, equal to, order number, increasing, decreasing	n/a	Additional activity: Test: (i) Writing number in hindu-arabic numerals and words. (ii) Comparing and ordering numbers	Students will be able to read and write numbers up to palce in Hindu-Arabic numerals, Thai numerals and in English word. Be able to idenify differences in values of numbers and ordering numbers.	MA 1.1/2 Compare and order whole numbers more than 100,000 in given situations.
Unit 1. Numbers and operations	2	Numbers	C. Rounding numbers D. Estimation	Textbook: 27-29, 32-33, 35-36, 40-42, 46-47	Multiple choice: Rounding numbers into tens hundreds, thousands, ... etc.	Apply	
		Activities: Put students into groups. Brainstorm 6 to 7 digit numbers of each member of the groups and underlined one digit number and exchange to each other to round off to the nearest ... (tens, hundreds, ...etc)	Vocabulary: round off ..., lower, upper, nearest, estimation, reasonable answer	Spelling test (10 points for objectives)	Additional activity: Textbook: Performance task pages 49-52	Students will be able to apply their knowledge to real-life situations where they are required to round off numbers to the nearest tens, hundreds, ..etc.	



1st Semester grade 4 Curriculum - Math (2018-19)

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Unit 1. Numbers and operations	3	Addition and subtraction	A. Addition more than 100,000 B. Subtraction more than 100,000 C. Finding the unknowns in addition and subtraction	Textbook: pages 58-59, 63-65, 68-69	Solving addition and subtraction.	Understand	MA 1.1/7 Estimate the answers to addition, subtraction, multiplication, and division problems reasonably in various situations.
		Activities: Put students into groups to brainstorm ideas on real-life situations where they can add and subtract large numbers. Ask volunteers to present the workings and answers to the class.	Vocabulary: add, sum, total, altogether, greatest, subtract, smallest	n/a	Additional activity: Test: Fill in the missing numbers. (Addition and subtraction)	Students will be able to perform the addition and subtraction method and also they can apply such method to their daily lives.	MA 1.1/8 Find the unknowns in addition and subtraction sentences of whole numbers more than 100,000 and 0.
Unit 1. Numbers and operations	4	Addition and subtraction	D. Solving word problem E. Creating word problem	Textbook: pages 72-74, 78-79	Writing: Create word problems	Create	MA 1.1/11 Solve 2 step word problems of whole numbers more than 100,000 and 0.
		Activities: Each student create their own word problem and exchange to each classmate; Solve and present the solution to the class.	Vocabulary: understand, plan, solve, check, question, given information, number sentence, create,	Spelling test (10 points for objectives)	Additional activity: Textbook: Performance task pages 81-84	Students will be able to create word problems involving addition and subtraction.	MA 1.1/12 Create 2 step word problems of whole numbers and 0 and solve them.



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Unit 1. Numbers and operations	5	Multiplication	A. Multiplication of more than 4 digit number by a 1 digit number B. Multiplication by a 2 digit number C. Multiplication by a 3 digit number	Textbook: pages 88-89, 95-97, 100-102	Find the product of 2-3 digit numbers	Understand	MA 1.1/7 Estimate the answers to addition, subtraction, multiplication, and division problems reasonably in various situations.
		Activities: Put students into groups. Each group brainstorm on the ideas of real-life situation where they can apply the multiplication problem.	Vocabulary: multiplication, multiply, product, estimate, reasonable	n/a	Additional activity: Test: Find the product and check if each answer is reasonable.	Students should be able to perform multiplications of 2 digit numbers and 3 digit numbers correctly to obtain valid answers.	
Unit 1. Numbers and operations	6	Multiplication	D. Multiplication of multi-digit numbers and finding unknowns	Textbook: pages 105-108	(i) Solve the multi digit numbers of multiplication (ii) Fill in the missing number of multiplication	Understand	MA 1.1/9 Find the unknown in multiplication of 2 multi digit numbers whose product is up to 6 digits. Find the unknown in division sentences whose dividend is up to 6 digits and divisor is up to 2 digits.
		Activities: Put students into groups to create and solve their own multiplication problem of multi digit numbers and explain their solutions to the class.	Vocabulary: multiply, multiplied, product, reverse, unknown	n/a	Additional activity: Test: Solve the following multiplication	Students should be able to perform multiplications of multi digit numbers correctly to obtain valid answers.	



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Unit 1. Numbers and operations	7	Multiplication	E. Solving word problem F. Creating word problem	Textbook: pages 112-114, 117-119	(i) Solve the following word problem (ii) Create own problem from the given information	Create	MA 1.1/11 Solve 2-step word problems of whole numbers more than 100,000 and 0.
		Activities: Let students create their own word problem and exchange to their classmate. Solve and explain to the class.	Vocabulary: understand, question, given information, plan, solve, number sentence, check, estimate, create	Spelling test (10 points for objectives)	Additional activity: Textbook: Performance Task pages 121-124	Students will be able to create mathematically word problems involving multiplication.	MA 1.1/12 Create 2 step word problems of whole numbers and 0 and solve them.
Unit 1. Numbers and operations	8	Division	A. Division by a 1 digit number B. Division by a 2 digit number C. Division by a 3 digit number and finding unknowns	Textbook: pages 131-133, 137-139, 144-146	Solve the following division involving remainders.	Understand	MA 1.1/7 Estimate the answers to addition, subtraction, multiplication and division problems reasonably in various situations.
		Activities: Put students into groups. Each group will brainstorm oral-life situations where they will divide 4 or 5 digit dividend by 2-3 digit divisor and create 2 questions based on these ideas. Groups exchange and solve.	Vocabulary: division, divided by, dividend, divisor, quotient, remainder, unknown, reverse	n/a	Additional activity: Test: Solve the following division	Students will know math terms associated with division, understand the division process, and can relate the multiplication and division operations to each other.	MA 1.1/9 Find the unknown in multiplication of 2 multi digit numbers whose product is up to 6 digits. Find the unknown in division sentences whose dividend is up to 6 digits and divisor is up to 2 digits.



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Unit 1. Numbers and operations	9	Division	D. Solving word problem E. Creating word problem	Textbook: pages 150-152, 155-158	Solve and create word problem using division.	Create	MA 1.1/11 Solve 2 step word problems of whole numbers more than 100,000 and 0.
		Activities: Put students into groups to brainstorm on real-life situations and create division word problems based on their ideas. Groups exchange and solve the word problems.	Vocabulary: understand, question, given information, plan, solve, number sentence, check, estimate, create	Spelling test (10 points for objectives)	Additional activity: Performance task: pages 159-162	Students will be able to create mathematically word problems involving division.	MA 1.1/12 Create 2 step word problems of whole numbers and 0 and solve them.
Unit 1. Numbers and operations	10	Number patterns	A. Multiplication number patterns B. Division number patterns	Textbook: pages 165-167, 160-172	Fill in the correct number in each pattern	Understand	MA 1.2/1 Multiply and divide number patterns.
		Activities: Each student make their own number pattern either multiplication or division number pattern. Exchange to their classmate. Solve and explain to the class.	Vocabulary: number pattern, next, previous, different, missing, describe the number pattern	Spelling test (10 points for objectives)	n/a	Students will be able to apply the previous lesson involving multiplication and division including number patterns.	
Midterm Exam	11	A. Numbers B. Addition and subtraction C. Multiplication and Division E. Number Patterns	1. Multiple choice: (numbers, comparing, ordering, rounding off, number pattern) {20 items (10 points)} 2. Solve the given problem: (addition, subtraction, multiplication, division) {4 items (4 points)} 3. Solve word problem: {2 problems (4 points)} 4. Fill in the missing number pattern: {4 items (2 points)}				



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Unit 2. Geometry	12	Geometry	A. Points, line segment, rays, lines, intersections, planes and symbols	Textbook: pages 182-183	Draw and identify the geometric figures.	Understand	MA 2.1/1 Identify kind, name and components of angles and write symbols
		Activities: Put students into groups. Each group brainstorm to make a collage using point, line segment, rays...etc. And present to the class.	Vocabulary: point, line segment, ray, line, plane, surface, intersection, direction, arrowheads, location	n/a	Additional activity: Test: Fill in the blanks.(Names of geometric figures)	Students will be able to write linear points, rays, parts of straight lines and symbols.	
Unit 2. Geometry	13	Geometry	B. Naming angles C. Measuring angles in degrees	Textbook: pages 189-190, 194-196	(i) Name the given angles and their arms. (ii) Measure each angle	Understand	MA 2.2/1 Distinguish types of angles. Identify angles and components of angles. Write symbols representing angles.
		Activities: Students work in pair, draw a picture of everyday objects that they can see in their houses, schools, ...etc.	Vocabulary: angles, right angles, acute angles, obtuse angles, straight angles, reflex angles, vertex, arms, protractor, degrees, outer scale, inner scale, center, base line	Spelling test wk. 12-13 (10 points for objectives)	n/a	Students will be able to know and understand the names and how to measure different kinds of angles.	MA 2.1/2 Measure and construct angles using protractor.



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Unit 2. Geometry	14	Geometry	D. Drawing angles	Textbook: pages 198-200	(i) Draw and label the missing line to show the given angle. (ii) Use protractor to draw the angles.	Apply	MA 2.1/2 Measure and construct angles using protractor.
		Activities: Students will work individually. Draw a collage using different kinds of angles and measure each angle. Show and present to the class.	Vocabulary: protractor, ruler, pencil, base line, measure, degrees, angle	n/a	Additional activity: Test: Draw the following angles.	Students will be able to apply how to draw different kinds of angles using protractor accurately.	
Unit 2. Geometry	15	Geometry	E. Quarter, half, three quarter and complete turns	Textbook: pages 202-204	Write the size of each angle.	Understand	MA 2.2/1 Distinguish types of angles. Identify angles and components of angles. Write symbols representing angles.
		Activities: Work in pairs. Count the number of quarter turns made and state if the turns made are clockwise or anti-clockwise.	Vocabulary: geostrips, clockwise, anti-clockwise, quarter, half, three-quarter, full, complete, direction	Spelling test wk. 14-15 (10 points for objectives)	Additional activity: Performance task: pages 205-208	Students will be able to understand how to draw a circle involving clockwise and anti-clockwise direction.	



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Unit 2. Geometry	16	Squares and rectangles	A. Squares of properties and rectangles B. Drawing squares and rectangles	Textbook: pages 210, 214-215, 217-218, 221-222	(i) Fill in the blanks and answer the questions. (properties of square and rectangle) (ii) Draw and label the squares and rectangles on the grids.	Understand	MA 2.2/2 Construct rectangles and squares when the length of side is given.
		Activities: Work in groups. Answer the questions and share explanations with the class. (i) Is a square related to a rectangle? (ii) Is a square a special rectangle? Why?	Vocabulary: square, rectangle, quadrilateral, property, diagonal, opposite equal side, angle, figure, grid	n/a	Additional activity: Test: Drawing squares and rectangles.	Students will be able to understand the properties of square and rectangles. And be able to apply the steps how to draw squares and rectangles accurately.	
Unit 2. Geometry	17	Squares and rectangles	C. Finding unknown sides and angles	Textbook: pages 224-225, 227-228	Find each unknown angle. (Show the working clearly in the space provided)	Apply	MA 2.2/2 Construct rectangles and squares when the length of side is given.
		Activities: Work in groups. You may use the cut-outs of a squares and rectangles (different sizes). Find each unknown angles and sides.	Vocabulary: unknown sides, unknown angles, length	Spelling test wk 16-17 (10 points for objective)	Additional activity: Performance task: pages 231-234	Students will be able to find the unknown sides and angles involving squares and rectangles.	



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Unit 2. Geometry	18	Perimeter and Area	A. Perimeter and area of squares and rectangles B. Word problems	Textbook: page 238-240, 243-244, 251-252, 256-257, 263-264	(i) Find the perimeter of square and rectangles. (ii) Find the area of squares and rectangles. (iii) Solve the word problems.	Understand	MA 2.1/3 Solve word problems involving perimeters and areas of squares and rectangles.
		Activities: Work in groups. Draw and cut out squares of different areas. Find the area of each square based on length of their sides. Record and memorize the areas of each length	Vocabulary: perimeter, distance, area, square, rectangle, measure, shortest, longest, unknown sides, same area	n/a	Additional activity: Test: (i) Find the length or width of each square or rectangle. (ii) Find the area and perimeter of the square and rectangle.	Students will be able to find the perimeter and area of squares and rectangles correctly	
Unit 2. Geometry	19	Perimeter and Area	C. Composite figure D. Word problems	Textbook: pages 266-269, 272-274, 278-280	(i) Find the perimeter and area of each composite figure. (ii) Solve the word problem	Analyse	MA 2.1/3 Solve word problems involving perimeters and areas of squares and rectangles.
		Activities: Work in pairs. Draw to show how you would arrange the furniture in a 6cm by 6cm square bedroom. Find the area of the floor that is not taken up by furniture. Then check and explain the solution to your classmates.	Vocabulary: composite figure, L-shaped figure, shaded part, rectangular	Spelling test: Wk 18-19 (10 points for objectives)	Additional activity: Performance task pages 281-284	Students will be able to solve word problems involving perimeter and area of composite figure.	
Final	20	A. Geometry B. Squarea and rectangles C. Perimeter and area	1. Multiple choice: (identify geometric figures, naming angles, area and perimeter) 20 items (10 points) 2. Measuring and drawing angles (using protractor) 8 items (4 points) 3. Solve the area and perimeter of each composite figure. {4 items (8 points)} 4. Solve the word problem involving area and perimeter. {2 problems (8 points)}				
		Activities:					