#### **GRADE 7**

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner	The learner	The learner		
Grade 7- FIRST	QUARTER				
Numbers and Number Sense	demonstrates understanding of key concepts of sets and the	is able to formulate challenging situations involving sets and real	<ol> <li>describes well-defined sets, subsets, universal sets, and the null set and cardinality of sets.</li> </ol>	M7NS-Ia-1	NFE Accreditation and Equivalency Learning Material. Sets, Sets and Sets. 2001. pp. 5-18
	real number system.	numbers and solve these in a variety of strategies.	2. illustrates the union and intersection of sets and the difference of two sets.	M7NS-Ia-2	NFE Accreditation and Equivalency Learning Material. Sets, Sets and Sets. 2001. pp. 20-25
			<ol> <li>uses Venn Diagrams to represent sets, subsets, and set operations.</li> </ol>	M7NS-Ib-1	NFE Accreditation and Equivalency Learning Material. Sets, Sets and Sets. 2001. pp. 27-30
			4. solves problems involving sets.	M7NS-Ib-2	NFE Accreditation and Equivalency Learning Material. Sets, Sets and Sets. 2001. pp. 18-19, 26, 31-38, 40-41
			5. represents the absolute value of a number on a number line as the distance of a number from 0.	M7NS-Ic-1	<ol> <li>Elementary Algebra I. 2002. pp. 32-33*</li> <li>Moving Ahead With Mathematics II. 1999. p. 46*</li> <li>NFE Accreditation and Equivalency Learning Material. Real Numbers. 2000. pp. 15-17</li> <li>BEAM I – Module 2: Operations on Numbers</li> </ol>
			<ol> <li>performs fundamental operations on integers.</li> </ol>	M7NS-Ic-d-1	<ol> <li>Elementary Algebra I. 2002. pp. 34-45*</li> <li>NFE Accreditation and Equivalency Learning Material. Real Numbers. 2000. pp. 12-20</li> <li>OHSP Math 1 – Quarter 1,</li> </ol>

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner	The learner	The learner		
					<ul> <li>Module 1.4: Properties of Addition</li> <li>4. OHSP Math 1 – Quarter 1, Module 1.5: Addition &amp; Subtraction of Integers</li> <li>5. OHSP Math 1 – Quarter 1, Module 1.6: Multiplication of Integers</li> <li>6. OHSP Math 1 – Quarter 1, Module 1.7: Division of Integers</li> <li>7. BEAM I – Module 2: Operations on Numbers</li> <li>8. DLM 1 – Unit 1: Real Number System, Measurement and Scientific Notation</li> </ul>
			<ol> <li>illustrates the different properties of operations on the set of integers.</li> </ol>	M7NS-Id-2	<ol> <li>NFE Accreditation and Equivalency Learning Material. Real Numbers. 2000. pp. 21-25</li> <li>EASE I – Module 4: Up and Down The Line</li> </ol>
			8. expresses rational numbers from fraction form to decimal form and vice versa.	M7NS-Ie-1	<ol> <li>Elementary Algebra I. 2002. pp. 45-50*</li> <li>EASE I – Module 5: Part of It</li> <li>DLM 1 – Unit 1: Real Number System, Measurement and Scientific Notation</li> </ol>
			9. arranges rational numbers on a number line.	M7NS-Ie-2	<ol> <li>Elementary Algebra I. 2002. pp. 51-53*</li> <li>DLM 1 – Unit 1: Real Number System, Measurement and Scientific Notation</li> </ol>
			10. 10. performs operations on rational numbers	M7NS-If-1	<ol> <li>Elementary Algebra I. 2002. pp. 54-61*</li> <li>OHSP Math 1 – Quarter 2,</li> </ol>

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner	The learner	The learner	-	
					<ul> <li>Module 2.3: Polynomials</li> <li>3. DLM 1 – Unit 1: Real Number System, Measurement and Scientific Notation</li> <li>4. DLM 1 – Unit 4: Rational Algebraic Expressions</li> <li>5. DLM 2 – Unit 3: Rational Expressions and Rational Equations</li> </ul>
			11. describes principal roots and tells whether they are rational or irrational.	M7NS-Ig-1	<ol> <li>Elementary Algebra I. 2002. pp. 68-69*</li> <li>OHSP Math 1 – Quarter 2, Module 2.3: Polynomials</li> </ol>
			12. determines between what two integers the square root of a number is.	M7NS-Ig-2	Elementary Algebra I. 2002. pp. 70-71*
			13. estimates the square root of a whole number to the nearest hundredth.	M7NS-Ig-3	OHSP Math 1 – Quarter 2, Module 2.3: Polynomials
			14. plots irrational numbers (up to square roots) on a number line.***	M7NS-Ig-4	
			15. illustrates the different subsets of real numbers.	M7NS-Ih-1	<ol> <li>Elementary Algebra I. 2002. pp. 24-26*</li> <li>Integrated Mathematics III. 2001. pp. 248-249*</li> </ol>
			16. arranges real numbers in increasing or decreasing order.	M7NS-Ih-2	<ol> <li>EASE 1 – Module 3: The Real Thing</li> <li>DLM 1 – Unit 1: Real Number System, Measurement and Scientific Notation</li> </ol>
			17. writes numbers in scientific notation and vice versa.	M7NS-Ii-1	<ol> <li>Integrated Mathematics III. 2001. pp. 208-209*</li> <li>OHSP Math 1 – Quarter 1, Module 1.10: Expressing Numbers in Scientific Notation</li> </ol>

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner	The learner	The learner		
					<ul> <li>and its Application in Different Disciplines</li> <li>3. BEAM I – Module 5: Scientific Notation</li> <li>4. DLM 1 – Unit 2: Measurements and Scientific Notation</li> </ul>
			<ol> <li>represents real-life situations which involve real numbers.</li> </ol>	M7NS-Ii-2	
			<ol> <li>solves problems involving real numbers.</li> </ol>	M7NS-Ij-1	
Grade 7- SECO	ND QUARTER				
Measurement	demonstrates	is able to formulate real-life	20. illustrates what it means to measure.	M7ME-IIa-1	
	understanding of the key concepts of measurement.	f the key problems involving isurement. measurements and solve these using a variety of strategies.	21. describes the development of measurement from the primitive to the present international system of units.	M7ME-IIa-2	<ol> <li>Elementary Algebra I. 2002. pp. 2-4*</li> <li>DLM 1 – Unit 2: Measurements and Scientific Notation</li> </ol>
			22. approximates the measures of quantities particularly length , weight/mass, volume, time, angle and temperature and rate.	M7ME-IIa-3	<ol> <li>OHSP Math 1 – Quarter 1, Module 1.9: Measuring Devices and Conversion of Units of Measure</li> <li>BEAM 1 – Module 1: Measurement</li> <li>EASE I – Module 1: Be Precise and Accurate</li> <li>DLM 1 – Unit 2: Measurements and Scientific Notation</li> </ol>
			23. converts measurements from one unit to another in both Metric and English systems.***	M7ME-IIb-1	<ol> <li>Elementary Algebra I. 2002. pp. 5-15*</li> <li>NFE Accreditation and Equivalency Learning Material. Measuring Length. 2001. pp. 29-33</li> <li>EASE I – Module 1: Be Precise and Accurate</li> </ol>

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner	The learner	The learner		
					4. DLM 1 – Unit 2: Measurements and Scientific Notation
			24. solves problems involving conversion of units of measurement.***	M7ME-IIb-2	<ol> <li>Elementary Algebra I. 2002. pp. 21-23*</li> <li>NFE Accreditation and Equivalency Learning Material. Measuring Length. 2001. pp. 34-45</li> </ol>
Patterns and Algebra	demonstrates understanding of key concepts of algebraic expressions, the properties of real numbers as applied in linear equations, and inequalities in one variable.	is able to model situations using oral, written, graphical, and algebraic methods in solving problems involving algebraic expressions, linear equations, and inequalities in one variable.	25. translates English phrases to mathematical phrases and vice versa.	M7AL-IIc-1	<ol> <li>Elementary Algebra I. 2002. pp. 82-84*</li> <li>NFE Accreditation and Equivalency Learning Material. Equations (Part 1). 2002. pp. 6-10</li> <li>EASE I – Module 6: Express, Translate and Evaluate</li> <li>DLM 1 – Unit 3: Algebraic Expressions</li> </ol>
			26. interprets the meaning of $a^n$ where $n$ is a positive integer.	M7AL-IIc-2	1. Integrated Mathematics III. 2001. p. 195*
			27. differentiates between constants and variables in a given algebraic expression.	M7AL-IIc-3	<ol> <li>Elementary Algebra I. 2002. p. 79*</li> <li>NFE Accreditation and Equivalency Learning Material. Studying Polynomials. 2001. pp. 4-13</li> <li>OHSP Math 1 – Quarter 2, Module 2.1: Algebraic Expressions</li> <li>BEAM I – Module 1: Contants, Variables and Algebraic Expressions and Simplifying Numerical Expressions</li> <li>EASE I – Module 6: Express, Translate and Evaluate</li> </ol>

\*These materials are in textbooks that have been delivered to schools.

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner	The learner	The learner		
			28. evaluates algebraic expressions for given values of the variables.	M7AL-IIc-4	<ol> <li>Elementary Algebra I. 2002. pp. 85-86*</li> <li>NFE Accreditation and Equivalency Learning Material. Studying Polynomials. 2001. pp. 4-11</li> <li>OHSP Math 1 – Quarter 2, Module 2.1: Algebraic Expressions BEAM 1 – Module 3: Evaluating Algebraic Expressions</li> <li>EASE I – Module 6: Express, Translate and Evaluate</li> </ol>
			29. classifies algebraic expressions which are polynomials according to degree and number of terms.	M7AL-IId-1	<ol> <li>NFE Accreditation and Equivalency Learning Material. Studying Polynomials. 2001. pp. 4-13</li> <li>EASE I – Module 8: Power of 0</li> </ol>
			30. adds and subtracts polynomials.	M7AL-IId-2	<ol> <li>Moving Ahead With Mathematics II. 1999. pp. 166-168*</li> <li>NFE Accreditation and Equivalency Learning Material. Studying Polynomials. 2001. pp. 14-19, 21-23</li> <li>BEAM I – Module 6: Polynomials</li> <li>EASE I – Module 8: Power of 0</li> <li>DLM 1 – Unit 3: Algebraic Expressions</li> </ol>

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner	The learner	The learner		
			31. derives the laws of exponent.	M7AL-IId-e- 1	<ol> <li>Integrated Mathematics III. 2001. pp. 195-202*</li> <li>BEAM I – Module 4: Laws of Exponents</li> <li>DLM 1 – Unit 3: Algebraic Expressions</li> </ol>
			32. multiplies and divides polynomials.	M7AL-IIe-2	<ol> <li>Moving Ahead With Mathematics II. 1999. pp. 170-182*</li> <li>NFE Accreditation and Equivalency Learning Material. Studying Polynomials. 2001. pp. 25-40</li> <li>EASE I – Module 8: Power of 0</li> <li>DLM 1 – Unit 3: Algebraic Expressions</li> </ol>
			<ul> <li>33. uses models and algebraic methods to find the: (a) product of two binomials; (b) product of the sum and difference of two terms; (c) square of a binomial; (d) cube of a binomial; (e) product of a binomial and a trinomial.***</li> </ul>	M7AL-IIe-g- 1	<ol> <li>Moving Ahead With Mathematics II. 1999. pp. 183-188*</li> <li>Elementary Algebra I. 2002. pp. 186-190*</li> <li>NFE Accreditation and Equivalency Learning Material. Special Products and Factoring. 2001. p. 36</li> </ol>
			34. solves problems involving algebraic expressions.	M7AL-IIg-2	<ol> <li>NFE Accreditation and Equivalency Learning Material. Studying Polynomials. 2001. pp. 16-17, 19-20, 22-24, 26, 29, 32-33, 36-37, 41-43, 45</li> </ol>
			35. differentiates between algebraic expressions and equations.	M7AL-IIh-1	
			36. translates English sentences to mathematical sentences and vice versa.	M7AL-IIh-2	<ol> <li>Elementary Algebra I. 2002. pp. 82-84*</li> <li>NFE Accreditation and</li> </ol>

Page **212** *of 257* **\*These materials are in textbooks that have been delivered to schools.** 

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner	The learner	The learner		
					Equivalency Learning Material. Equations (Part 1). 2001. pp. 6-10
			37. differentiates between equations and inequalities.	M7AL-IIh-3	<ol> <li>Elementary Algebra I. 2002. p. 117*</li> <li>DLM 1 – Unit 5: First Degree Equations and Inequalities in One Variable</li> </ol>
			38. illustrates linear equation and inequality in one variable.	M7AL-IIh-4	1. NFE Accreditation and Equivalency Learning Material. Equations (Part 1). 2001. pp. 10-12
			39. finds the solution of linear equation or inequality in one variable.	M7AL-IIi-1	<ol> <li>NFE Accreditation and Equivalency Learning Material. Equations (Part 1). 2001. pp. 13-14</li> <li>NFE Accreditation and Equivalency Learning Material. Inequalities. 2001. pp. 11-18</li> <li>EASE I – Module 10: Guess, Try and Check</li> <li>DLM 1 – Unit 5: First Degree Equations and Inequalities in One Variable</li> </ol>
			40. solves linear equation or inequality in one variable involving absolute value by: (a) graphing; and (b) algebraic methods.	M7AL-IIi-j-1	<ol> <li>Elementary Algebra I. 2002. pp. 120-125</li> <li>NFE Accreditation and Equivalency Learning Material. Inequalities. 2001. pp. 18-23</li> <li>OHSP Math 1 – Quarter 2, Module 2.6: Solving First Degree Equations and Inequalities in Variables</li> <li>DLM 2 – Unit 1: System of Linear Equations and Rational</li> </ol>

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner	The learner	The learner		
			41. solves problems involving equations and inequalities in one variable.	M7AL-IIj-2	Equations 1. NFE Accreditation and Equivalency Learning Material. Equations (Part 1). 2001. pp. 24-28, 38-39 2. EASE I – Module 10: Guess, Try and Check
Grade 7- THIRD	<b>QUARTER</b>				
Geometry	demonstrates understanding of key	is able to create models of plane figures and formulate	42. represents point, line and plane using concrete and pictorial models.	M7GE-IIIa-1	<ol> <li>Geometry III. 2013. pp. 3-4*</li> <li>BEAM I – Module 1: Points, Lines, Planes and Angles</li> </ol>
understanding of key concepts of geometry of shapes and sizes, and geometric relationships	concepts of geometry of shapes and sizes, and geometric relationships.	and solve accurately authentic problems involving sides and angles of a polygon	43. illustrates subsets of a line.	M7GE-IIIa-2	<ol> <li>BEAM I – Module 1: Points, Lines, Planes and Angles</li> <li>EASE III – Module 1: Geometry of Shape and Size</li> <li>OHSP Modules – Module 1: Geometry of Shape and Size</li> <li>DLM 3 – Module 1: Geometry of Shapes</li> </ol>
			44. classifies the different kinds of angles.	M7GE-IIIa-3	<ol> <li>Moving Ahead With Mathematics II. 1999. pp. 78- 84*</li> <li>NFE Accreditation and Equivalency Learning Material. Trigonometric Functions I. 2000. pp. 3-11</li> <li>BEAM I – Module 1: Points, Lines, Planes and Angles</li> <li>EASE III – Module 1: Geometry of Shape and Size</li> <li>OHSP Modules – Module 1: Geometry of Shape and Size</li> <li>DLM 3 – Module 1: Geometry of Shapes</li> </ol>

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner	The learner	The learner		
			45. derives relationships of geometric figures using measurements and by inductive reasoning; supplementary angles, complementary angles, congruent angles, vertical angles, adjacent angles, linear pairs, perpendicular lines, and parallel lines.***	M7GE-IIIb-1	<ol> <li>NFE Accreditation and Equivalency Learning Material. Trigonometric Functions I. 2000. pp. 7-8</li> <li>EASE III – Module 1: Geometric Relations</li> <li>DLM 3 – Module 1: Geometric Relations</li> </ol>
			46. derives relationships among angles formed by parallel lines cut by a transversal using measurement and by inductive reasoning.	M7GE-IIIc-1	
			47. uses a compass and straightedge to bisect line segments and angles and construct perpendiculars and parallels.	M7GE-IIId- e-1	
			48. illustrates polygons: (a) convexity; (b) angles; and (c) sides.	M7GE-IIIe-2	<ol> <li>BEAM I – Module 2: Geometry of Shape and Size: Types of Polygons</li> <li>EASE III – Module 2: Geometry of Shape and Size</li> <li>OHSP Modules – Module 2: Geometry of Shape and Size</li> <li>DLM 3 – Module 2: Geometry of Shape and Size</li> </ol>
			49. derives inductively the relationship of exterior and interior angles of a convex polygon.	M7GE-IIIf-1	<ol> <li>BEAM I – Module 3: Angles of Polygons</li> </ol>
			50. illustrates a circle and the terms related to it: radius, diameter chord, center, arc, chord, central angle, and inscribed angle.	M7GE-IIIg-1	<ol> <li>Geometry III. 2013. p. 22*</li> <li>BEAM I – Module 18: Circle and their Properties</li> <li>EASE III – Module 1: Circles</li> <li>DLM 3 – Module 1: Circles</li> </ol>
			51. constructs triangles, squares, rectangles, regular pentagons, and	M7GE-IIIh-i- 1	Geometry III. 2013. pp. 11- 15*

*K to 12 Mathematics Curriculum Guide August 2016* Learning Materials are uploaded at <u>http://lrmds.deped.gov.ph/</u>.

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS		LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner	The learner		The learner		
				regular hexagons.		
			52.	solves problems involving sides and angles of a polygon.	M7GE-IIIj-1	
Grade 7- FOUR	TH QUARTER					
Statistics and Probability	demonstrates understanding of key concepts, uses and importance of Statistics, data collection/gathering and the different forms of data representation, measures of central tendency, measures of variability, and probability.	is able to collect and organize data systematically and compute accurately measures of central tendency and variability and apply these appropriately in data analysis and interpretation in different fields.	53.	explains the importance of Statistics.	M7SP-IVa-1	<ol> <li>Moving Ahead With Mathematics II. 1999. pp. 215-216*</li> <li>Advanced Algebra, Trigonometry and Statistics IV. 2003. pp. 264-265*</li> <li>Advanced Algebra, Trigonometry and Statistics IV. 2009. pp. 232-233*</li> <li>BEAM I – Module 14: Basic Statistics</li> <li>EASE IV – Module 11: Statistics</li> <li>DLM 4 – Module 11: Statistics</li> </ol>
			54.	poses problems that can be solved using Statistics.	M7SP-IVa-2	
			55.	formulates simple statistical instruments.	M7SP-IVa-3	
			56.	gathers statistical data.	M7SP-IVb-1	<ol> <li>Advanced Algebra, Trigonometry and Statistics IV. 2003. pp. 266-272*</li> <li>Advanced Algebra, Trigonometry and Statistics IV. 2009. pp. 233-240*</li> </ol>
			57.	organizes data in a frequency distribution table.	M7SP-IVc-1	<ol> <li>Advanced Algebra, Trigonometry and Statistics IV. 2003. pp. 273-275*</li> <li>Advanced Algebra, Trigonometry and Statistics</li> </ol>

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner	The learner	The learner		
					<ul> <li>IV. 2009. pp. 241-243*</li> <li>BEAM I – Module 14: Basic Statistics</li> <li>EASE IV – Module 1: Statistics</li> <li>DLM 4 – Module 1: Statistics</li> </ul>
			58. uses appropriate graphs to represent organized data: pie chart, bar graph, line graph, histogram, and ogive.***	M7SP-IVd-e- 1	<ol> <li>Advanced Algebra, Trigonometry and Statistics IV. 2003. pp. 276-285*</li> <li>Advanced Algebra, Trigonometry and Statistics IV. 2009. pp. 244-253*</li> </ol>
			59. illustrates the measures of central tendency (mean, median, and mode) of a statistical data.	M7SP-IVf-1	<ol> <li>BEAM I – Module 14: Basic Statistics</li> <li>EASE IV – Module 1: Statistics</li> <li>DLM 4 – Module 1: Statistics</li> <li>BALS Video – Mean, Median and Mode</li> </ol>
			60. calculates the measures of central tendency of ungrouped and grouped data.	M7SP-IVf-g- 1	<ol> <li>Integrated Mathematics III. 2001. pp. 257-269*</li> <li>Advanced Algebra, Trigonometry and Statistics IV. 2003. pp. 290-301*</li> <li>Advanced Algebra, Trigonometry and Statistics IV. 2009. pp. 258-269*</li> <li>EASE IV – Module 2: Statistics</li> <li>DLM 4 – Module 2: Statistics</li> </ol>
			61. illustrates the measures of variability (range, average deviation, variance, standard deviation) of a statistical data.	M7SP-IVh-1	<ol> <li>Advanced Algebra, Trigonometry and Statistics IV. 2003. p. 302*</li> <li>Advanced Algebra, Trigonometry and Statistics IV. 2009. p. 270*</li> </ol>

K to :	<b>12 BASIC</b>	<b>EDUCATION</b>	CURRICULUM
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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS	
	The learner The learner		The learner			
			62. calculates the measures of variability of grouped and ungrouped data.	M7SP-IVh-i- 1	<ol> <li>Advanced Algebra, Trigonometry and Statistics IV. 2003. pp. 302-307*</li> <li>Advanced Algebra, Trigonometry and Statistics IV. 2009. pp. 270-275*</li> <li>BEAM I – Module 15: Measures of Variability</li> </ol>	
			63. uses appropriate statistical measures in analyzing and interpreting statistical data.	M7SP-IVj-1	<ol> <li>Advanced Algebra, Trigonometry and Statistics IV. 2003. pp. 308-311*</li> <li>Advanced Algebra, Trigonometry and Statistics IV. 2009. pp. 276-278*</li> </ol>	
			64. draws conclusions from graphic and tabular data and measures of central tendency and variability.	M7SP-IVj-2	1. BEAM I – Module 15: Measures of Variability	

\*\*\* Suggestion for ICT enhanced lesson when available and where appropriate

# GLOSSARY

Accuracy	the quality of being correct and precise.
Applying	the skill of using concepts, procedures, algorithms and other mathematical constructs in practical situations and phenomena.
Communicating	the use of notations, symbols, figures, equations and functions to convey mathematical ideas.
Computing	the skill of calculating using correct algorithms, procedures and tools to arrive at a final exact result.
Conjecturing	the skill of formulating mathematical theories that still need to be proven.
Connecting	the skill of integrating mathematics to other school subjects and other areas in life.
Constructivism	the theory that knowledge is constructed when the learner is able to draw ideas from his/her own experiences and connects them to new ideas that are encountered.
Context	a locale, situation, or set of conditions of students that may influence their study and use of mathematics to develop critical thinking and problem solving skills.
Cooperative Learning	learning that is achieved by working with fellow learners as they all engage in a shared task.
Creativity	the skill of using available procedures in Mathematics and non-conventional methods to solve a problem and produce answers.
Critical Thinking	the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action (Scriven& Paul, 1987).
Decision-making	the skill of arriving at a choice or decision based on sound, logical procedures and mathematical analyses.
Discovery Learning	learning that is achieved by allowing students to discover new ideas using their experiences (Bruner, 1961).
Estimating	the skill of roughly calculating or judging a numerical value or quantity.
Experiential Learning	learning that occurs by making sense of direct everyday experiences (Kolb, 1984)
Inquiry-based Learning	learning that focuses on students asking questions and finding answers to their questions using their personal experiences.
Knowing and Understanding Mathematical Broklam	meaningful acquisition of concepts that include memorizing and recalling of facts and procedures
Solving	finding a solution to a problem that is unknown (Polya, 1945 & 1962).
Modeling	the use of functions and graphs to represent relationships between and among quantities in a phenomenon.
Objectivity	the quality of judging, evaluating and making decisions based on mathematical facts and results without being influenced by subjective conditions.

### GLOSSARY

Perseverance	firmness in finishing a task despite difficulties and obstacles.			
Productivity	the quality of pursuing an activity to arrive at a meaningful and useful result or product.			
Proving	the skill of demonstrating the truth or falsity of a theory using reasoning and arguments.			
Reasoning	the process of explaining using sound analyses, following the rules of logic.			
Reflective Learning	learning that is facilitated by deep thinking.			
Representing	the use of figures and shapes, variables, equations and functions to concretize and illustrate quantities and their relationships.			
Situated Learning	learning in the same context in which concepts and theories are applied.			
Solving	to find the answer to an algebraic or mathematical problem using any procedures and tools available.			
Visualizing	using one's creativity and imagination to produce images, pictures and other means to represent and understand mathematical concepts (MATHTED & SEI, 2010).			

# **Code Book Legend**

# Sample: M7AL-IIg-2

LEGEND		SAMPLE		DOMAIN/ COMPONENT	CODE
	Learning Area and Strand/ Subject or Specialization	Mathematics	M7	Number Sense	NS
First Entry	Grade Level	Grade 7		Geometry	GE
Uppercase Letter/s	Domain/Content/ Component/ Topic	Patterns and Algebra	AL		
			-	Patterns and Algebra	AI
<b>Roman Numeral</b> *Zero if no specific quarter	Quarter	Second Quarter	II		
Lowercase Letter/s *Put a hyphen (-) in between letters to indicate more than a specific week	Week	Week seven	g	Measurement	ME
			-		
Arabic Number	Competency	Solves problems involving algebraic expressions	2	Statistics and Probability	SP

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