

K to 12 BASIC EDUCATION CURRICULUM

GRADE 9

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
Grade 9- FIRST QUARTER					
Patterns and Algebra	demonstrates understanding of key concepts of quadratic equations, inequalities and functions, and rational algebraic equations.	is able to investigate thoroughly mathematical relationships in various situations, formulate real-life problems involving quadratic equations, inequalities and functions, and rational algebraic equations and solve them using a variety of strategies.	1. illustrates quadratic equations.	M9AL-Ia-1	<ol style="list-style-type: none"> 1. BEAM Second Year Module 4 (TG) 2. EASE Module Second Year Quadratic Equations Module 3 Chapter 2 Quadratic Equations pp.44-46 (LM) 3. NFE Accreditation and Equivalency Learning Material. Equation (Part 2). 2001. pp. 38-41
			2. solves quadratic equations by: (a) extracting square roots; (b) factoring; (c) completing the square; and (d) using the quadratic formula.	M9AL-Ia-b-1	<ol style="list-style-type: none"> 1. BEAM Second Year Module 4 (TG) 2. EASE Module Second Year Quadratic Equations, Module 3 Chapter 2 Quadratic Equations pp.47-53(LM) 3. DLM 2 – Unit 2 Lesson 2.2: Special Factoring Techniques 4. DLM 2 – Unit 2 Lesson 2.3: Solving Quadratic Equations by Extracting Square Roots 5. DLM 2 – Unit 2 Lesson 2.4: Solving Quadratic Equations by Factoring 6. DLM 2 – Unit 2 Lesson 2.5: Solving Quadratic Equations by

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
					Completing the Squares 7. DLM 2 – Unit 2 Lesson 2.6: Solving Quadratic Functions by the Quadratic Formula 8. DLM 4 – Module 3: Quadratic Functions 9. Advanced Algebra, Trigonometry, and Statistics IV. 2003. pp. 88-90* 10. Integrated Mathematics III. 2001. pp. 100-108* 11. NFE Accreditation and Equivalency Learning Material. Equation (Part 2). 2001. p. 38-42
			3. characterizes the roots of a quadratic equation using the discriminant.	M9AL-Ic-1	1. BEAM Second Year, Module 4 (TG) 2. EASE Module Second Year Quadratic Equations, Module 3 Chapter 2 Quadratic Equations pp.53-59 (LM) 3. Advanced Algebra, Trigonometry, and Statistics IV. 2003. pp. 103-104* 4. Integrated Mathematics III. 2001. pp. 116-119*

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
			4. describes the relationship between the coefficients and the roots of a quadratic equation.	M9AL-Ic-2	<ol style="list-style-type: none"> 1. BEAM Second Year Module 4 (TG) 2. EASE Module Second Year Quadratic Equations, Module 3 Chapter 2 Quadratic Equations pp.53-59 (LM) 3. Integrated Mathematics III. 2001. pp. 120-121*
			5. solves equations transformable to quadratic equations (including rational algebraic equations).	M9AL-Ic-d-1	<ol style="list-style-type: none"> 1. BEAM Second Year Module 4 (TG) LM 2. EASE Module Second Year Quadratic Equations, Module 3 Chapter 2 Quadratic Equations pp.53-59 (LM)
			6. solves problems involving quadratic equations and rational algebraic equations.	M9AL-Ie-1	<ol style="list-style-type: none"> 1. BEAM Second Year Module 4 (TG) 2. EASE Module Second Year Quadratic Equations, Module 3 Chapter 2 Quadratic Equations pp.61-64 (LM) 3. DLM 2 – Unit 2 Lesson 2.9: Application of Quadratic Equations 4. Integrated Mathematics III. 2001. pp. 109-115* 5. Advanced Algebra, Trigonometry, and Statistics IV. 2003. pp. 95-99*

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
					6. Advanced Algebra, Trigonometry, and Statistics IV. 2009. pp. 79-83* 7. NFE Accreditation and Equivalency Learning Material. Equations (Part 2). 2001. pp. 42-44
			7. illustrates quadratic inequalities	M9AL-If-1	1. Advanced Algebra, Trigonometry, and Statistics IV. 2003. p. 100* 2. Advanced Algebra, Trigonometry, and Statistics IV. 2009. p. 84*
			8. solves quadratic inequalities.	M9AL-If-2	APEX Chapter 3 Quadratic Functions Lessons 18-19 pp.203-217 (LM)
			9. solves problems involving quadratic inequalities.	M9AL-If-g-1	APEX Chapter 3 Quadratic Functions Lessons 18-19 pp.203-217 (LM)
			10. models real-life situations using quadratic functions.	M9AL-Ig-2	1. BEAM Fourth Year, Module 3
			11. represents a quadratic function using: (a) table of values; (b) graph; and (c) equation.	M9AL-Ig-3	1. BEAM Fourth Year Module 3 (TG) 2. EASE Module Fourth Year Quadratic Equations, Module 1 (LM)
			12. transforms the quadratic function defined by $y = ax^2 + bx + c$ into the	M9AL-Ih-1	1. BEAM Fourth Year Module 3

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
			$\text{form } y = a(x - h)^2 + k.$		2. Math IV: Advanced Algebra, Trigonometry and Statistics (Lesson Plans) 2002 BEC (Week 8) pp.31-32 (TG) 3. EASE Module Fourth Year Quadratic Equations, Module 1 4. APEX Chapter 3 Quadratic Functions Lesson 2 pp.101-105 (LM) 5. DLM 4 – Module 1: Quadratic Functions 6. Integrated Mathematics III. 2001. pp. 79-87* 7. Advanced Algebra, Trigonometry and Statistics IV. 2003. pp. 69-70* 8. Advanced Algebra, Trigonometry and Statistics IV. 2009. pp. 55-56*
			13. graphs a quadratic function: (a) domain; (b) range; (c) intercepts; (d) axis of symmetry; (e) vertex; (f) direction of the opening of the parabola.	M9AL-Ig-h-i-1	1. BEAM Fourth Year, Module 3 (TG) 2. EASE Module Fourth Year Quadratic Equations, Module 1 (LM) 3. Integrated Mathematics III. 2001. p. 78 4. Advanced Algebra, Trigonometry and Statistics IV. 2003. pp. 70-73*

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	The learner...	The learner...	The learner...		
					5. Advanced Algebra, Trigonometry and Statistics IV. 2009. pp. 56-59*
			14. analyzes the effects of changing the values of a, h and k in the equation $y = a(x - h)^2 + k$ of a quadratic function on its graph.***	M9AL-Ii-2	1. BEAM Fourth Year 2. Math IV: Advanced Algebra, Trigonometry, and Statistics (Lesson Plans) 2002 BEC (Week 8-9) pp.37-41 (TG) 3. EASE Module Fourth Year, Module 2 4. APEX Chapter 3 Quadratic Functions Lesson 2 pp.120-125 (LM) 5. DLM 4 – Module 2: Quadratic Functions 6. Advanced Algebra, Trigonometry and Statistics IV. 2003. pp. 76-82* 7. Advanced Algebra, Trigonometry and Statistics IV. 2009. pp. 62-68*
			15. determines the equation of a quadratic function given: (a) a table of values; (b) graph; (c) zeros.	M9AL-Ij-1	1. EASE Module Fourth Year Quadratic Functions, Modules 3 and 4 2. APEX Chapter 3 Quadratic Functions Lesson 1 pp.92-100, Lesson 13 pp.165-171(LM) 3. Integrated Mathematics

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	The learner...	The learner...	The learner...		
					III. 2001. pp. 96-99* 4. Advanced Algebra, Trigonometry and Statistics IV. 2003. pp. 75-79* 5. Advanced Algebra, Trigonometry and Statistics IV. 2009. pp. 91-95*
			16. solves problems involving quadratic functions.	M9AL-Ii-j-2	1. Math IV: Advanced Algebra, Trigonometry, and Statistics (Lesson Plans) 2002 BEC (Week 8-9) pp.37-41 (TG) 2. EASE Module Fourth Year Quadratic Functions, Modules 3 and 4 3. APEX Chapter 3 Quadratic Functions Lesson 14 pp.172-183 (LM) 4. DLM 4 – Module 4: Quadratic Functions
Grade 9- SECOND QUARTER					
Patterns and Algebra	demonstrates understanding of key concepts of variation and radicals.	is able to formulate and solve accurately problems involving radicals.	17.illustrates situations that involve the following variations: (a) direct; (b) inverse; (c) joint; (d) combined.	M9AL-IIa-1	1. BEAM Second Year, Module 8 (TG) 2. EASE Module Second Year Variations Modules 1-3 Chapter 4 Variation pp.102-121 (LM) 3. DLM 2 – Unit 6 Lesson 6.1: Direct Variation 4. DLM 2 – Unit 6 Lesson 6.3: Inverse Variation

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
					5. DLM 2 – Unit 6 Lesson 6.4: Joint Variation 6. DLM 2 – Unit 6 Lesson 6.5: Combined Variation 7. Integrated Mathematics III. 2001. pp. 126-128, 131-132, 134-135, 138-140*
			18.translates into variation statement a relationship between two quantities given by: (a) a table of values; (b) a mathematical equation; (c) a graph, and vice versa.	M9AL-IIa-b-1	1. BEAM Second Year, Module 8 (TG) 2. EASE Module Second Year Variations, Modules 1-3 Chapter 4 Variation pp.102-121 (LM) 3. Integrated Mathematics III. 2001. pp. 126-128, 131-132, 134-135,138-140*
			19.solves problems involving variation.	M9AL-IIb-c-1	1. BEAM Second Year, Module 8 (TG) 2. EASE Module Second Year Variations, Modules 1-3 Chapter 4 Variation pp.102-(LM) 3. Integrated Mathematics III. 2001. pp. 129-130, 132-133, 136-137, 140-145*

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
			20.applies the laws involving positive integral exponents to zero and negative integral exponents.	M9AL-IIId-1	<ol style="list-style-type: none"> 1. BEAM Second Year, Module 9 (TG) 2. Ease Module Second Year Integral Exponents, Modules 2 Chapter 5 Integral Exponents pp.122-135 (LM) 3. Integrated Mathematics III. 2001. pp. 203-207*
			21.illustrates expressions with rational exponents.	M9AL-IIId-2	<ol style="list-style-type: none"> 1. BEAM Second Year, Module 9 (TG) 2. Ease Module Second Year Integral Exponents, Module 2 Chapter 6 Radical Expressions pp.149 (LM) 3. Advanced Algebra, Trigonometry and Statistics IV. 2003. pp. 154-157* 4. Advanced Algebra, Trigonometry and Statistics IV. 2009. pp. 308-311*
			22.simplifies expressions with rational exponents.	M9AL-IIe-1	<ol style="list-style-type: none"> 1. BEAM Second Year, Module 9 & 10 (TG) 2. EASE Module Second Year Radical Expressions, Module 2 Chapter 6 Radical Expressions pp.149-150 (LM) 3. DLM 2 – Unit 4 Lesson 4.4: Simplifying Rational

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
					Exponents 4. Integrated Mathematics III. 2001. pp. 223-224*
			23.writes expressions with rational exponents as radicals and vice versa.	M9AL-IIIf-1	1. BEAM Second Year, Module 10 Chapter 6 Radical Expressions pp.150-151 (TG) 2. Integrated Mathematics III. 2001. pp. 224-225*
			24.derives the laws of radicals.	M9AL-IIIf-2	1. BEAM Second Year, Module 10 (TG) 2. EASE Module Second Year Radical Expressions, Module 3 (LM)
			25.simplifies radical expressions using the laws of radicals.	M9AL-IIIf-1	1. BEAM Second Year, Module 10 (TG) 2. EASE Module Second Year Radical Expressions, Module 3 Chapter 6 Radical Expressions pp.152-156 (LM) 3. DLM 2 – Unit 5 Lesson 5.2: Simplifying Radicals 4. Integrated Mathematics III. 2001. pp. 226-228*
			26.performs operations on radical expressions.***	M9AL-IIIf-1	1. BEAM Second Year, Module 11 (TG) 2. EASE Module Second Year Radical Expressions Modules 4-5 Chapter 6 Radical Expressions pp.157-166 (LM)

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
					3. DLM 2 – Unit 5 Lesson 5.3: Addition/Subtraction of Radical Expressions 4. DLM 2 – Unit 5 Lesson 5.4: Multiplication and Division of Radical Expressions 5. Integrated Mathematics III. 2001. pp. 231-240*
			27.solves equations involving radical expressions.***	M9AL-IIIi-1	1. BEAM Second Year Module 11 (TG) 2. EASE Module Second Year Radical Expressions Module 6 Chapter 6 Radical Expressions pp.167-170 (LM) 3. Integrated Mathematics III. 2001. pp. 241-244*
			28. solves problems involving radicals.	M9AL-IIj-1	1. BEAM Second Year Module 11 (TG) 2. EASE Module Second Year Radical Expressions Module 6 Chapter 6 Radical Expressions pp.171 (LM) 3. Integrated Mathematics III. 2001. pp. 245-248*
Grade 9- THIRD QUARTER					
Geometry	demonstrates understanding of key concepts of parallelograms	is able to investigate, analyze, and solve problems involving	29. identifies quadrilaterals that are parallelograms.	M9GE-IIIa-1	1. BEAM Third Year Module 12 (TG) 2. APEX Lesson 1-7 Quadrilaterals Geometry

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
	and triangle similarity.	parallelograms and triangle similarity through appropriate and accurate representation.			Chapter 1 Geometry of Shape and Size, Quadrilaterals p.17 Chapter 4 Quadrilaterals, 4.1.3 The Parallelogram and its properties p.124 (LM)
			30. determines the conditions that make a quadrilateral a parallelogram.	M9GE-IIIa-2	1. BEAM Third Year Module 12 (TG), Geometry Chapter 4 Quadrilaterals 4.2. Conditions which guarantee that a quadrilateral is a parallelogram p.132 (LM) 2. DLM 3 – Module 2: Properties of Quadrilateral
			31. uses properties to find measures of angles, sides and other quantities involving parallelograms.	M9GE-IIIb-1	EASE Module Third Year Properties of Quadrilaterals Module 1 (LM)
			32. proves theorems on the different kinds of parallelogram (rectangle, rhombus, square).	M9GE-IIIc-1	
			33. proves the Midline Theorem.	M9GE-IIId-1	
			34. proves theorems on trapezoids and kites.	M9GE-IIId-2	
			35. solves problems involving parallelograms, trapezoids and kites.	M9GE-IIIE-1	EASE Module Third Year Properties of Quadrilaterals Module 1 (LM)

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
			36. describes a proportion.	M9GE-IIIIf-1	<ol style="list-style-type: none"> 1. BEAM Third Year Module 15 (TG) 2. EASE Module Third Year Similarity Module 1 3. APEX Math Triangles Unit 4 Lesson 1-10, Geometry Chapter 5 Similarity 5.1. Ratio and Proportion p.145 (LM)
			37. applies the fundamental theorems of proportionality to solve problems involving proportions.	M9GE-IIIIf-2	<ol style="list-style-type: none"> 1. BEAM Third Year Module 15 2. APEX Math Triangles Unit 4 Lesson 1-10, Geometry Chapter 5 Similarity 5.1. Ratio and Proportion p.145 3. DLM 3 – Module 1: Similarity
			38. illustrates similarity of figures.	M9GE-IIIg-1	<ol style="list-style-type: none"> 1. BEAM Third Year, Module 16 (TG) 2. EASE Module Third Year Similar Triangles, Module 2 3. APEX Math Triangles Unit 4 Lesson 1-10 Geometry Chapter 5 5.2. Similarity between triangles p.149 (LM)

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
			39. proves the conditions for similarity of triangles. *** 39.1 SAS similarity theorem 39.2 SSS similarity theorem 39.3 AA similarity theorem 39.4 right triangle similarity theorem 39.5 special right triangle theorems	M9GE-IIIg-h-1	1. BEAM Third Year, Module 16 (TG) 2. EASE Module Third Year Similar Triangles, Module 2 3. APEX Math Triangles Unit 4 Lesson 1-10 Geometry Chapter 5 Similarity, 5.2.4. Basic Similarity Theorems p.157 and 5.4. Similarities in Right Triangles p.166 (LM) 4. DLM 3 – Module 17: Similar Triangles
			40. applies the theorems to show that given triangles are similar.	M9GE-IIIi-1	1. BEAM Third Year, Module 16 (TG) 2. EASE Module Third Year Similar Triangles, Module 2 Geometry Chapter 5 Similarity 5.2.4. Basic Similarity Theorems p.157 and 5.4. Similarities in Right Triangles p.166 (LM)
			41. proves the Pythagorean Theorem.	M9GE-IIIi-2	1. APEX Math Similarity of Triangles Unit 4 Lesson 11-16 Geometry Chapter 5 Similarity 5.4.2. The Pythagorean Theorem p.169

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
			42. solves problems that involve triangle similarity and right triangles.***	M9GE-IIIj-1	<ol style="list-style-type: none"> 1. BEAM Third Year, Module 16 (TG) 2. EASE Module Third Year Similarity, Module 3 3. APEX Math Similarity of Triangles Unit 4 Lesson 11-16 Geometry Chapter 5 Similarity 5.5. Problems Involving Similar Triangles and Other Special Right Triangles p.175 (LM)
Grade 9- FOURTH QUARTER					
Geometry	demonstrates understanding of the basic concepts of trigonometry.	is able to apply the concepts of trigonometric ratios to formulate and solve real-life problems with precision and accuracy.	43. illustrates the six trigonometric ratios: sine, cosine, tangent, secant, cosecant, and cotangent.	M9GE-IVa-1	<ol style="list-style-type: none"> 1. BEAM Fourth Year, Module 13 (TG) 2. EASE Module Fourth Year Triangle Trigonometry, Module 1 (LM) 3. DLM 4 – Module 2: Circular Functions and Trigonometry
			44. finds the trigonometric ratios of special angles.	M9GE -IVb-c-1	
			45. illustrates angles of elevation and angles of depression.	M9GE-IVd-1	<ol style="list-style-type: none"> 1. BEAM Fourth Year, Module 13 (TG) 2. EASE Module Fourth Year Triangle Trigonometry, Module 2 (LM)
			46. uses trigonometric ratios to solve real-life problems involving right triangles.***	M9GE-IVe-1	<ol style="list-style-type: none"> 1. BEAM Fourth Year, Module 13 (TG) 2. EASE Module Fourth Year Triangle

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
					Trigonometry, Module 2 (LM)
			47. illustrates laws of sines and cosines.	M9GE-IVf-g-1	1. BEAM Fourth Year, Module 13 (TG) 2. EASE Module Fourth Year Triangle Trigonometry, Module 2 Math IV: Advanced Algebra. Trigonometry, and Statistics (Lesson Plans) 2002 EBEC (Week 6-7) pp.50-56 (LM) 3. DLM 4 – Module 2: Triangle Trigonometry
			48. solves problems involving oblique triangles.	M9GE-IVh-j-1	1. BEAM Fourth Year, Module 13 (TG) 2. EASE Module Fourth Year 3. Triangle Trigonometry, Module 2 (LM)

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

GRADE 10

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
Grade 10- FIRST QUARTER					
Patterns	demonstrates	is able to formulate and	1. generates patterns.***	M10AL-Ia-1	1. Integrated Mathematics
			2. illustrates an arithmetic sequence	M10AL-Ib-1	

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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	meaningful acquisition of concepts that include memorizing and recalling of facts and procedures
Mathematical Problem 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.

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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).

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Code Book Legend

Sample: **M7AL-IIg-2**

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

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REFERENCES

- Akihiko Takahashi, Ted Watanabe, and Makoto Yoshida. *English Translation of the Japanese Mathematics Curricula in the course of Study*, (Madison: Global Education Resources L.L.C., 2008). http://ncm.gu.se/media/kursplaner/andralander/Japanese_COS2008Math.pdf
- "Australian Math Curriculum," Australian Curriculum, Assessment and Reporting Authority, accessed May 23, 2013, <http://www.australiancurriculum.edu.au/mathematics/curriculum/f-10?layout=1&y=1&y=2&y=3&y=4&y=5&y=6&s=NA&s=MG&s=SP>
- Bureau of Elementary Education, *2002 Basic Education Curriculum*, (Pasig City: Department of Education, 2002)
- Bureau of Secondary Education, Department of Education. *Basic Education Curriculum*. Pasig City, 2002.
- Bureau of Secondary Education, Department of Education Culture and Sports. *Desired Learning Competencies New Secondary Education Curriculum* Pasig City, 1991.
- Bureau of Secondary Education, Department of Education Culture and Sports. *Desired Learning Competencies Philippine Secondary Schools Learning Competencies*. Pasig City, 1998.
- Bureau of Secondary Education, Department of Education. *Secondary Education Curriculum*. Pasig City, 2010.
- California Department of Education, *California Common Core States Standard: Mathematics (Electronic Edition)*, (California: Department of Education, 2013, 2014), <http://www.cde.ca.gov/be/st/ss/documents/ccssmathstandardaug2013.pdf>
- Ministry of Education Singapore, *Mathematics Syllabus Primary*, (Singapore: Ministry of Education, 2006). <https://www.moe.gov.sg/docs/default-source/document/education/syllabuses/sciences/files/2007-mathematics-%28primary%29-syllabus.pdf>
- South Africa Math Curriculum, *Curriculum and Policy Statement*, (South Africa: Department of Basic Education, 2011), <file:///C:/Users/BLimuaco/Downloads/CAPS%20IP%20%20MATHEMATICS%20GR%204-6%20web.pdf>