CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner…	The learner…	The learner…		
Grade 8- FIRST QUARTER					
Patterns and Algebra	demonstrates understanding of key concepts of factors of polynomials, rational algebraic expressions, linear equations and inequalities in two variables, systems of linear equations and inequalities in two variables and linear functions.	is able to formulate real-life problems involving factors of polynomials, rational algebraic expressions, linear equations and inequalities in two variables, systems of linear equations and inequalities in two variables and linear functions, and solve these problems accurately using a variety of strategies.	1. factors completely different types of polynomials (polynomials with common monomial factor, difference of two squares, sum and difference of two cubes, perfect square trinomials, and general trinomials).	**M8AL-Ia-b-1**	1. Elementary Algebra I. 2000. pp. 200-211* 2. Moving Ahead With Mathematics II. 1999. pp. 194-209 3. NFE Accreditation and Equivalency Learning Material. Special Products and Factoring. 2001. pp. 11-18 4. BEAM I – Module 16: Factoring
			2. solves problems involving factors of polynomials.	**M8AL-Ib-2**	1. Elementary Algebra I. 2000. pp. 212-216*
			3. illustrates rational algebraic expressions.	**M8AL-Ic-1**	1. Elementary Algebra I. 2000. pp. 78-79* 2. EASE II – Module 1: Rational Algebraic Expressions
			4. simplifies rational algebraic expressions.	**M8AL-Ic-2**	1. Elementary Algebra I. 2000. p. 80* 2. NFE Accreditation and Equivalency Learning Material. Understanding Rational Expressions Part 1. 2001. pp. 4-9, 22-24 3. BEAM II – Module 5: Simplifying Rational Algebraic Expressions 4. DLM 2 – Unit 3: Rational Expressions and

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner…	The learner…	The learner…		
					Rational Equations 5. EASE II – Module 1: Rational Algebraic Expressions
			5. performs operations on rational algebraic expressions.	**M8AL-Ic-d-1**	1. Elementary Algebra I. 2000. p. 81* 2. NFE Accreditation and Equivalency Learning Material. Understanding Rational Expressions Part 1. 2001. pp. 10-13, 16-19, 27-30, 33-37 3. NFE Accreditation and Equivalency Learning Material. Understanding Rational Expressions Part 2. 2001. pp. 17-21, 23-26, 29-32 4. BEAM II – Module 6: Operations on Rational Algebraic Expressions 5. DLM 1 – Unit 4: Rational Algebraic Expressions 6. DLM 2 – Unit 3: Rational Expressions and Rational Equations 7. EASE II – Module 2: Rational Algebraic Expressions 8. EASE II – Module 3: Rational Algebraic Expressions
			6. solves problems involving rational algebraic expressions.	**M8AL-Id-2**	1. Elementary Algebra I. 2000. p. 82* 2. NFE Accreditation and

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner…	The learner…	The learner…		
					Equivalency Learning Material. Understanding Rational Expressions Part 1. 2001. pp. 8-9, 13-15, 20-25, 31-32, 38-41 3. NFE Accreditation and Equivalency Learning Material. Understanding Rational Expressions Part 2. 2001. pp. 21-22, 27-28, 32-34 4. DLM 1 – Unit 4: Rational Algebraic Expressions 5. EASE II – Module 4: Rational Algebraic Expressions
			7. illustrates the rectangular coordinate system and its uses.***	**M8AL-Ie-1**	1. Moving Ahead With Mathematics II. 1999. pp. 1-4 2. BEAM I – Module 1: Rectangular Coordinate System
			8. illustrates linear equations in two variables.	**M8AL-Ie-3**	1. Elementary Algebra I. 2000. pp. 146-151* 2. Moving Ahead With Mathematics II. 1999. pp. 6-7* 3. DLM 1 – Unit 6: Linear Equations and Inequalities in Two Variables
			9. illustrates the slope of a line.	**M8AL-Ie-4**	1. Elementary Algebra I. 2000. pp. 157-159* 2. Moving Ahead With Mathematics II. 1999.

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
					pp. 32-34*
			10. finds the slope of a line given two points, equation, and graph.	**M8AL-Ie-5**	1. Elementary Algebra I. 2000. pp. 159, 162-164, 167-169* 2. Moving Ahead With Mathematics II. 1999. pp. 36-37*
			11. writes the linear equation $ax+by=c$ in the form $y=mx+b$ and vice versa.	**M8AL-If-1**	1. Elementary Algebra I. 2000. pp. 160-162* 2. DLM 1 – Unit 6: Linear Equations and Inequalities in Two Variables
			12. graphs a linear equation given (a) any two points; (b) the x – and y – intercepts; (c) the slope and a point on the line.***	**M8AL-If-2**	1. Elementary Algebra I. 2000. pp. 162-164* 2. DLM 1 – Unit 6: Linear Equations and Inequalities in Two Variables
			13. describes the graph of a linear equation in terms of its intercepts and slope.***	**M8AL-If-3**	1. Elementary Algebra I. 2000. p. 159* 2. BEAM I – Module 2: Graphs of Linear Equations in Two Variables
			14. finds the equation of a line given (a) two points; (b) the slope and a point; (c) the slope and its intercepts.	**M8AL-Ig-1**	1. Elementary Algebra I. 2000. p. 169* 2. Moving Ahead With Mathematics II. 1999. pp. 39-45* 3. DLM 1 – Unit 6: Linear Equations and Inequalities in Two Variables

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
			15. solves problems involving linear equations in two variables.	**M8AL-Ig-2**	1. Elementary Algebra I. 2000. pp. 170-172* 2. NFE Accreditation and Equivalency Learning Material. Equations (Part 1). 2001. pp. 29-35 3. DLM 1 – Unit 6: Linear Equations and Inequalities in Two Variables
			16. illustrates a system of linear equations in two variables.	**M8AL-Ih-1**	1. Moving Ahead With Mathematics II. 1999. p. 55* 2. NFE Accreditation and Equivalency Learning Material. Equation (Part 2). 2001. pp. 4-9
			17. graphs a system of linear equations in two variables.***	**M8AL-Ih-2**	1. Moving Ahead With Mathematics II. 1999. p. 58* 2. BEAM II – Module 1: Graphs of the Systems of Linear Equations 3. EASE II – Module 1: Systems of Linear Equations and Inequalities
			18. categorizes when a given system of linear equations in two variables has graphs that are parallel, intersecting, and coinciding.	**M8AL-Ih-3**	1. Moving Ahead With Mathematics II. 1999. pp. 56-58* 2. BEAM II – Module 1: Graphs of the Systems of Linear Equations 3. EASE II – Module 1: Systems of Linear

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner…	The learner…	The learner…		
					Equations and Inequalities
			19. solves a system of linear equations in two variables by (a) graphing; (b) substitution; (c) elimination.***	**M8AL-Ii-j-1**	1. Moving Ahead With Mathematics II. 1999. pp. 55-63* 2. NFE Accreditation and Equivalency Learning Material. Equation (Part 2). 2001. pp. 4-19 3. BEAM II – Module 2: Solution Set of the Systems of Linear Equations 4. DLM 2 – Unit 1: Systems of Linear Equations and Inequalities 5. EASE II – Module 2: Systems of Linear Equations and Inequalities
			20. solves problems involving systems of linear equations in two variables.	**M8AL-Ij-2**	1. Moving Ahead With Mathematics II. 1999. pp. 65-66* 2. NFE Accreditation and Equivalency Learning Material. Equation (Part 2). 2001. pp. 20-37 3. EASE II – Module 3: Systems of Linear Equations and Inequalities

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner…	The learner…	The learner…		
Grade 8- SECOND QUARTER					
Patterns and Algebra	demonstrates key concepts of linear inequalities in two variables, systems of linear inequalities in two variables and linear functions.	is able to formulate and solve accurately real-life problems involving linear inequalities in two variables, systems of linear inequalities in two variables, and linear functions.	21. illustrates linear inequalities in two variables.	**M8AL-IIa-1**	Moving Ahead With Mathematics II. 1999. pp. 66-69*
			22. differentiates linear inequalities in two variables from linear equations in two variables.	**M8AL-IIa-2**	
			23. graphs linear inequalities in two variables.	**M8AL-IIa-3**	1. Moving Ahead With Mathematics II. 1999. p. 70* 2. BEAM II – Module 3: Systems of Linear Inequalities 3. DLM 1 – Unit 6: Linear Equations and Inequalities in Two Variables
			24. solves problems involving linear inequalities in two variables.	**M8AL-IIa-4**	
			25. solves a system of linear inequalities in two variables.***	**M8AL-IIb-1**	Moving Ahead With Mathematics II. 1999. p. 70*
			26. solves problems involving systems of linear inequalities in two variables.	**M8AL-IIb-2**	1. Moving Ahead With Mathematics II. 1999. p. 71* 2. NFE Accreditation and Equivalency Learning Material. Inequalities. 2001. pp. 24-28
			27. illustrates a relation and a function.	**M8AL-IIc-1**	1. Moving Ahead With Mathematics II. 1999. pp. 13-18* 2. Advanced Algebra, Trigonometry and Statistics IV. 2003.

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner...	The learner...	The learner...		
					pp.5-6* 3. NFE Accreditation and Equivalency Learning Material. Relations and Functions. 2002. pp. 6-13 4. BEAM IV – Module 1: Functions Generally
			28. verifies if a given relation is a function.	**M8AL-IIc-2**	1. Moving Ahead With Mathematics II. 1999. pp. 15-16* 2. Advanced Algebra, Trigonometry and Statistics IV. 2003. p. 6, 9* 3. NFE Accreditation and Equivalency Learning Material. Relations and Functions. 2002. pp. 19-23
			29. determines dependent and independent variables.	**M8AL-IIc-3**	Moving Ahead With Mathematics II. 1999. p. 13*
			30. finds the domain and range of a function.	**M8AL-IId-1**	1. Moving Ahead With Mathematics II. 1999. p. 20* 2. NFE Accreditation and Equivalency Learning Material. Relations and Functions. 2002. pp. 23-32
			31. illustrates a linear function.	**M8AL-IId-2**	1. Advanced Algebra, Trigonometry and Statistics IV. 2003. pp. 30-31*

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner…	The learner…	The learner…		
					2. Advanced Algebra, Trigonometry and Statistics IV. 2009. pp. 30-31* 3. BEAM I – Module 1: Rectangular Coordinate System 4. DLM 4 – Module 1: Linear Functions 5. EASE IV – Module 1: Linear Functions
			32. graphs a linear function's (a) domain; (b) range; (c) table of values; (d) intercepts; and (e) slope.	**M8AL-IId-e-1**	1. Advanced Algebra, Trigonometry and Statistics IV. 2003. pp. 36-38* 2. Advanced Algebra, Trigonometry and Statistics IV. 2009. pp. 39-41* 3. BEAM IV – Module 2: Linear Functions and their Graphs 4. DLM 4 – Module 1: Linear Functions 5. EASE IV – Module 1: Linear Functions
			33. solves problems involving linear functions.	**M8AL-IIe-2**	1. Advanced Algebra, Trigonometry and Statistics IV. 2003. p. 58* 2. Advanced Algebra, Trigonometry and Statistics IV. 2009. pp. 46-48* 3. BEAM IV – Module 2:

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner…	The learner…	The learner…		
					Linear Functions and their Graphs
Geometry	demonstrates understanding of key concepts of logic and reasoning.	is able to communicate mathematical thinking with coherence and clarity in formulating and analyzing arguments.	34. determines the relationship between the hypothesis and the conclusion of an if-then statement.	**M8GE-IIf-1**	Geometry III. 2009. p. 59*
			35. transforms a statement into an equivalent if-then statement.	**M8GE-IIf-2**	Geometry III. 2009. p. 61*
			36. determines the inverse, converse, and contrapositive of an if-then statement.	**M8GE-IIg-1**	
			37. illustrates the equivalences of: (a) the statement and its contrapositive; and (b) the converse and inverse of a statement.	**M8GE-IIg-2**	
			38. uses inductive or deductive reasoning in an argument.	**M8GE-IIh-1**	
			39. writes a proof (both direct and indirect).	**M8GE-IIi-j-1**	
Grade 8- THIRD QUARTER					
Geometry	demonstrates understanding of key concepts of axiomatic structure of geometry and triangle congruence.	1. is able to formulate an organized plan to handle a real-life situation.	40. describes a mathematical system.	**M8GE-IIIa-1**	
			41. illustrates the need for an axiomatic structure of a mathematical system in general, and in Geometry in particular: (a) defined terms; (b) undefined terms; (c) postulates; and (d) theorems.	**M8GE-IIIa-c-1**	Geometry III. 2009. pp. 3-4*
		2. is able to communicate mathematical	42. illustrates triangle congruence.***	**M8GE-IIId-1**	1. Moving Ahead With Mathematics II. 1999. pp. 112-114*

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner…	The learner…	The learner…		
		thinking with coherence and clarity in formulating, investigating, analyzing, and solving real-life problems involving congruent triangles using appropriate and accurate representations.			2. Geometry III. 2009. pp. 88-91*
			43. illustrates the SAS, ASA and SSS congruence postulates.***	**M8GE-IIId-e-1**	1. Moving Ahead With Mathematics II. 1999. pp. 115-120* 2. Geometry III. 2009. pp. 91-97* 3. BEAM III – Module 10: Triangle Congruence – Triangles: Different and yet the same 4. DLM 3 – Module 1: Triangle Congruence
			44. solves corresponding parts of congruent triangles	**M8GE-IIIf-1**	1. Moving Ahead With Mathematics II. 1999. pp. 114-115*
			45. proves two triangles are congruent.	**M8GE-IIIg-1**	1. Moving Ahead With Mathematics II. 1999. pp. 121-123* 2. Geometry III. pp. 98-100*
			46. proves statements on triangle congruence.	**M8GE-IIIh-1**	
			47. applies triangle congruence to construct perpendicular lines and angle bisectors.	**M8GE-IIIi-j-1**	
Grade 8- FOURTH QUARTER					
Geometry	demonstrates understanding of key concepts of inequalities in a triangle, and parallel and perpendicular lines.	is able to communicate mathematical thinking with coherence and clarity in formulating, investigating, analyzing, and solving real-	48. illustrates theorems on triangle inequalities (Exterior Angle Inequality Theorem, Triangle Inequality Theorem, Hinge Theorem).***	**M8GE-IVa-1**	
			49. applies theorems on triangle inequalities.	**M8GE-IVb-1**	

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCY	CODE	LEARNING MATERIALS
	The learner…	The learner…	The learner…		
		life problems involving triangle inequalities, and parallelism and perpendicularity of lines using appropriate and accurate representations.	50. proves inequalities in a triangle.	**M8GE-IVc-1**	
			51. proves properties of parallel lines cut by a transversal.***	**M8GE-IVd-1**	
			52. determines the conditions under which lines and segments are parallel or perpendicular.	**M8GE-IVe-1**	
Statistics and Probability	demonstrates understanding of key concepts of probability.	is able to formulate and solve practical problems involving probability of simple events.	53. illustrates an experiment, outcome, sample space and event.***	**M8GE-IVf-1**	
			54. counts the number of occurrences of an outcome in an experiment: (a) table; (b) tree diagram; (c) systematic listing; and (d) fundamental counting principle.***	**M8GE-IVf-g-1**	
			55. finds the probability of a simple event.	**M8GE-IVh-1**	
			56. illustrates an experimental probability and a theoretical probability.	**M8GE-IVi-1**	
			57. solves problems involving probabilities of simple events.	**M8GE-IVi-j-1**	

***** 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	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.

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	
First Entry	Learning Area and Strand/ Subject or Specialization	Mathematics	**M7**
	Grade Level	Grade 7	
Uppercase Letter/s	Domain/Content/ Component/ Topic	Patterns and Algebra	**AL**
			-
Roman Numeral **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**
			-
Arabic Number	Competency	Solves problems involving algebraic expressions	**2**

DOMAIN/ COMPONENT	CODE
Number Sense	NS
Geometry	GE
Patterns and Algebra	AL
Measurement	ME
Statistics and Probability	SP

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