

**7th grade Advanced Math Pacing Guide  
MathMatters 2, National Textbook Company  
5/10/2007**

**Correlated with Neufeld Learning Systems Inc. Understanding Math PLUS September 2007**

7<sup>th</sup> Advanced Math

Essential Questions for unit:

1. How can data be presented?
2. Why is it important to know how data was collected and analyzed?

Chapter 1 – Sample and Display			7 <sup>th</sup> Advanced Math			
Days	Topic, Benchmark	Textbook Section	Benchmarks	Vocabulary, Resources	Extensions	DW Test Item Numbers
10	Number sense, Study Skills Pre-algebra skills					
5	Review / Diagnostic Testing	Back of Textbook		Fractions, Decimals, Percents	<u><b>Understanding Math PLUS</b></u> <u><b>Understanding Fractions</b></u> <b>Topic 6.</b> <b>Percents, Fractions, Decimals</b> Expressing a Percent as a Fraction Introduction without Graphics Introduction with Graphics Expressing a Fraction in Simplest Form Greatest Common Factor Examples 1, 2 Simplifying Fractions	

1	Surveys and Sampling Methods	1-1	M.A.E.1.3.1	Population, sample, random sampling, Cluster sampling, convenience sampling, biased	<b><u>NEUFELD LEARNING SYSTEMS INC.</u></b> <b><u>Understanding Math PLUS Understanding</u></b>	
1	Measures of Central Tendency and Range	1-2	M.A.E.1.3.2 M.A.E.1.3.3	Measures of central tendency, mean, median, mode, range	CBL – Get a Grip	3634, 3584, 3734, 3737, 3678, 3732
1	Measures of central tendency, mean, median, mode, range	1-3	M.A.4.1.3.1	Frequency table, histogram, stem-and-leaf plots, stem, leaf, outliers, clusters, gaps		
1	Scatter Plots and Lines of Best Fit	1-4	M.A.E.1.3.1	Scatter plot, correlation, positive correlation, negative correlation, line of best fit (trend line)		
1	FLEX – mid chapter review/quiz					
Post FCAT	Problem Solving Skills, Coefficient of Correlation	1-5	M.A.E.1.3.3	Coefficient of correlation, guess and check		
1	Quartiles and Percentiles	1-6	M.A.E.1.3.1	Quartile, first, second, third quartiles, interquartile range, box-and-whisker plots, whiskers, outliers, percentile	<b><u>Understanding Math PLUS Understanding Graphing Topic 2. Statistics</u></b> Box and Whisker Plots Concepts Examples 1, 2	
1	Misleading Graphs and Statistics	1-7	M.A.E.1.3.3	Misleading Data	<b><u>Understanding Math PLUS Understanding Graphing Topic 2. Statistics</u></b> Data... What is it?	3590, 3641, 3691

					<p>Examples of Data</p> <p>Example 1... Fast Food Earnings</p> <p>Example 2... Infant's Walk</p> <p>Example 3... Canada and U.S.A. Forecast</p> <p>Example 4... King of the Strike Out</p> <p>Example 5... U.S.A. Stake in India</p> <p>Example 6... Allergy Troubles</p> <p>A Summary: Examples</p> <p>Statistics... What is it?</p> <p>Collecting Data</p> <p>Throw a Die</p> <p>Throw 2 Dice</p> <p>Voting</p> <p>Primary Data - Gathering Methods</p> <p>Secondary Data - Gathering Methods</p> <p>Misleading Statistics</p> <p>Examples 1, 2</p>	
2	Graph Project				Data collection and presentation project	
2	Review and Assessment/FLEX,					
26 Days						

7<sup>th</sup> Advanced Math

Essential Question(s) for unit:

3. How can numbers be used to represent information?

**Note: Beginning with Chapter 2, all tests are cumulative. For example, the test and review of Chapter 5 will include important problems and concepts from chapter 1-4 as well.**

Chapter 2 – Foundations of Algebra			7 <sup>th</sup> Advanced Math			
Days	Topic, Benchmark	Textbook Section	Benchmarks	Vocabulary, Resources	Extensions	DW Test Item Numbers
1`	Real Numbers	2-1	M.A.A.1.3. 1M.A.A.1.3 .2M.A.A.1. 3.4	Integers, opposites, rational numbers Terminating decimals, repeating decimals, irrational numbers, real numbers, coordinate of a point, graph of a number, absolute value, opposite of the opposite property	<b><u>Understanding Math PLUS Understanding Whole Numbers and Integers</u></b> <b>Topic 4. The Meaning of Integers</b> Integers Around Us Temperature Helicopter Submarine	3592, 3642

					<p>Elevator  The Integer Line  Opposite Integers  Examples 1, 2  Absolute Values  Examples 1, 2  Comparing Integers  Examples 1, 2, 3, 4  Example Questions  Examples 1, 2, 3,  4, 5, 6  Practice Questions  Topic Test</p> <p><b><u>Understanding</u></b>  <b><u>Fractions</u></b>  <b>Topic 5.</b>  <b>Introduction to</b>  <b>Decimals</b>  Ones, Tenths,  Hundreds,  Thousandths  Decimals to Tenths  Examples 1, 2,  Decimals to  Hundredths  Examples 1, 2, 3,  4, 5  Decimals to  Thousandths  Examples 1, 2, 3,  4, 5  Understanding  Place Value  Examples 1, 2, 3, 4</p>	
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					<p>Equivalent Decimals  Examples 1, 2, 3, 4  Comparing Decimals  Examples 1, 2, 3, 4  Ordering Decimals  Introduction  Examples 1, 2, 3, 4  Rounding Decimals  Examples 1, 2, 3, 4, 5  Special Case #1, #2  Summary  Practice Questions</p>	
2	Order of Operations	2-2	M.A.A.3.3.2	Numerical expressions, value, simplify, order of operations, variable, variable expressions, evaluate	<p><b><u>Understanding Math PLUS</u></b>  <b><u>Understanding Whole Numbers and Integers</u></b>  <b>Topic 9. Order of Operations</b>  Order in Addition  Trials 1, 2  Conclusion  Examples 1, 2  Order in Multiplication  Trials 1, 2  Conclusion  Examples 1, 2  Why use Order of Operations?  BEDMAS  Example Questions  Examples 1, 2, 3,</p>	3598, 3648, 3695

					<p>4, 5, 6, 7, 8, 9, 10  Word Problems  Shipping  Babysitting  Garbage  Practice Questions</p> <p><b><u>Understanding</u></b>  <b><u>Algebra</u></b>  <b>Topic 4. Patterns,  Formulas,  Substitution</b>  Expressions,  Terms, Variables  Definitions  Summary  Patterns to  Formulas  Example... Hockey  Standings  Example...  Counting Money  Example... Angles  in a Polygon  Substitution is...  Math Scrabble  Scrabble 1, 2, 3  Challenge  Substitution  Examples  Examples 1, 2, 3, 4  Practice Questions</p>	
1	Write Variable Expressions	2-3	M.A.D.2.3. 2	Translate expressions	<p><b><u>Understanding</u></b>  <b>Math PLUS</b>  <b><u>Understanding</u></b>  <b><u>Algebra</u></b>  <b>Topic 4. Patterns,  Formulas,</b></p>	

					<b>Substitution</b> Expressions, Terms, Variables Definitions Summary Patterns to Formulas Example... Hockey Standings Example... Counting Money Example... Angles in a Polygon Substitution is... Math Scrabble Scrabble 1, 2, 3 Challenge Substitution Examples Examples 1, 2, 3, 4 Practice Questions	
1	Add/Subtract Variable Expressions	2-4	M.A.A.3.3. 3	Like terms, unlike terms, simplify a variable expression, combining like terms	<b><u>Understanding</u></b> <b><u>Math PLUS</u></b> <b><u>Understanding</u></b> <b><u>Algebra</u></b> <b>Topic 5. Adding</b> <b>Expressions</b> Our Problem Adding Expressions with X and Y Tiles Examples 1, 2, 3 Adding Expressions with X- Squared Tiles Examples 1, 2, 3 Adding Expressions	

					<p>without Tiles  Examples 1, 2  Practice Questions  with Tiles  Practice Questions  without Tiles  Topic Test</p> <p><b>Topic 6.  Subtracting  Expressions</b>  Our Problem  Subtracting  Expressions with X  and Y Tiles  Concept  Examples 1, 2  Subtracting  Expressions with X-  Squared Tiles  Examples 1, 2  Subtracting  Expressions  without Tiles  Practice Questions  with Tiles</p>	
1	FLEX-Review/quiz					
1	Multiply/Divide Variable Expressions	2-5	M.A.A.3.3. 3	Property of the opposite of a sum	<p><b><u>Understanding  Math PLUS  Understanding  Algebra</u></b>  <b>Topic 7.  Multiplying  Expression</b>  Our Problem  Recall Tile  Concepts  Multiplying  Monomials  Like Terms</p>	

					<p>With Tiles Without Tiles Multiplying Monomials and Polynomials With Tiles... Examples 1, 2, 3, 4 Without Tiles Multiplying Binomials With Tiles... Examples 1, 2 Without Tiles Pattern Examples... True or False Examples 1, 2, 3 Practice Questions</p> <p><b>Topic 9. Dividing Expressions</b> Dividing a Monomial by a Monomial Examples 1, 2, 3, 4 Dividing a Polynomial by a Monomial Concept Examples 1, 2, 3 Summary Dividing a Polynomial by a Binomial Examples 1... Methods 1 Examples 1... Methods 2... Long Division Examples 2</p>	
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					<p>Examples 3...  Methods 1  Examples 3...  Methods 2... Long  Division  Examples 4...  Methods 1  Examples 4...  Methods 2... Long  Division  Combination  Questions  Examples 1, 2, 3, 4  Practice Questions</p>	
1	Simplify Variable Expressions	2-6	M.A.A.3.3. 2		<p><b><u>Understanding Math PLUS</u></b>  <b><u>Understanding Algebra</u></b>  <b>Topic 8. Factoring Expressions</b>  Our Problem  Common Factoring With Tiles  Examples 1, 2 –  Methods 1, 2  Without Tiles  GCF  Examples 1, 2  Factoring  Trinomials  With Tiles -  Examples 1, 2  The Pattern  Without Tiles –  Examples 1, 2, 3, 4</p>	

1	Properties of Exponents	2-7	M.A.A.1.3. 2	Exponential form, base, exponent, product rule, power rule, power of a product rule, quotient rule, power of a quotient rule	<b><u>Understanding Math PLUS Understanding Exponents</u></b> <b>Topic 3. The Exponent Rules</b> In This Topic Multiplication of Powers with the Same Base Expanding the Exponents The Pattern In General Division of Powers with the Same Base Expanding the Exponents The Pattern In General Raising a Power to an Exponent Expanding the Exponents The Pattern In General Raising a Product to an Exponent Expanding the Exponents In General	3543, 3545, 3548
2	Zero and Negative Exponents	2-8	M.A.A.1.3. 2	Zero property of exponents, property of negative exponents, standard form, scientific notation	<b><u>Understanding Math PLUS Understanding Exponents</u></b>	3693

					<p><b>Topic 3. The Exponent Rules</b>  A Power with Exponent 0  Explanation with <math>b</math>;  Explanation with <math>a</math>  Summary  A Power with a NEGATIVE Exponent  Method 1:  Explanation with <math>b</math>  Method 2:  Explanation with <math>k</math>  Method 3: Bacteria Doubling  Summary  Summary of Exponent Rules</p> <p><b>Topic 4. Scientific Notation</b>  Why Use Scientific Notation?  Scientific Notation for Large Numbers  Introduction  Chart  The Rule  The Steps  Scientific Notation for Small Numbers  Introduction  Chart  The Steps  Examples  1. Number Question  2. Park Question</p>	
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					3. Sun Question 4. Kitchen Question	
1	Problem Solving Skills, Find a Pattern	2-9	M.A.A.5.3. 1M.A.D.1.3 .1	Look for a pattern, sequence, term of a sequence	<b><u>Understanding Math PLUS Understanding Algebra</u></b> <b>Topic 3. Patterns, Patterns, Patterns</b> Introduction... Math is Patterns Geometric Patterns Examples 1, 2, 3, 4, 5, Number Patterns Examples 1, 2, 3, 4, 5, Number and Geometric Patterns Examples 1, 2 Patterns to Formulas Examples 1, 2, 3	
3	Review and Assess (CH. 1 and 2), FCAT, FLEX					
15 Days						

7<sup>th</sup> Advanced Math

Essential Questions for unit:

- 3 How is math used in daily life?

Chapter 3 Equations and Inequalities			7 <sup>th</sup> Advanced Math			
Days	Topic, Benchmark	Textbook Section	Benchmarks	Vocabulary, Resources	Extensions	DW Test Item Numbers
1	Equations and Formulas	3-1	M.A.A.1.3.2	Equation, solution of an equation, solve an equation, formula	<b><u>Understanding Math PLUS Understanding Equations</u></b> <b>Topic 1. Tiles, Balances, and Equations</b> The Meaning of "Solving an Equation"	3578

					Solve by Systematic Trials Recall Tile Concepts Balances... An Introduction Tiles, Balances and Equations Practice Questions Topic Test	
1	One Step Equations	3-2	M.A.A.3.3.2	Addition property of equality, multiplication property of equality	<b><u>Understanding Math PLUS Understanding Equations</u></b> <b>Topic 2. Solving One-Step Equations</b> Our Problem Concepts – Examples with Tiles Examples 1, 2, 3, 4 Concepts – Examples without Tiles Practice Questions Topic Test	
1	Problem Solving Skills: Model Operations	3-3	M.A.A.3.3.2 M.A.A.4.3.1	Model, Mathematical model, algebraic model		3580, 3608, 3628
2	Equations with Two or More Operations	3-4	M.A.A.3.3.2 M.A.A.3.3.3	Two-step equations	<b><u>Understanding Math PLUS Understanding Equations</u></b> <b>Topic 3. Solving Two-Step Equations</b> Our Problem	

					<p>Concepts – Examples with Tiles Examples 1, 2, 3, 4 Concepts – Examples without Tiles Examples 1, 2, 3, 4, 5, 6 Practice Questions Topic Test</p>	
1	Proportions	3-5	M.A.A.1.3. 2	Proportion, means, extremes, cross-products	<p><b><u>Understanding Math PLUS Understanding Percent</u></b> <b>Topic 4. Ratios and Proportions</b> What is a Proportion? Proportions Example 1 Example 2 – Lemonade Example 3 – Marbles Example 4 – Trout Example 5 – Tree Height Example 6 – Map Example 7 – Scale Drawing</p>	3558
1	Graph Inequalities on Number Line	3-6	M.A.D.2.3. 1	Inequality, solutions of an inequality	<p><b><u>Understanding Math PLUS Understanding Equations</u></b> <b>Topic 7. Solving Inequalities</b> Comparing Integers The Integer Line</p>	3629

					<p>Example 1... Greater Than; Example 2... Less Than Explanation Example 3... Greater Than; Example 4... Less Than Greater Than or Less Than Inequalities What Are They? Inequality vs. Equation Summary of Relationships Inequality on the Number Line Examples 1, 2, 3, 4</p>	
2	Solve Inequalities	3-7	M.A.D.2.3. 1M.A.D.1.3 .1	Solve an inequality, addition property of inequality, multiplication properties of inequality	<p><b><u>Understanding</u></b> <b><u>Math PLUS</u></b> <b><u>Understanding</u></b> <b><u>Understanding</u></b> <b><u>Equations</u></b> <b>Topic 7. Solving</b> <b>Inequalities</b> Solving Inequalities Examples 1, 2, 3, 4, 5, 6</p>	
4	Review/Assessment Ch. 1-3, FCAT Practice/FLEX					
13	Days					

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 Essential Questions for unit:

4 What does it take to win a game?

Chapter 4 Probability		7 <sup>th</sup> Advanced Math				
Days	Topic, Benchmark	Textbook Section	Benchmarks	Vocabulary, Resources	Extensions	DW Test Item Numbers
1	Experiments and Probabilities	4-1	M.A.E.2.3.1	Experiments, relative frequency, experimental probability	<u><b>Understanding Math PLUS</b></u> <u><b>Understanding Probability</b></u> <b>Topic 2. What's the Chance?</b> Probability What is it? Introduction 1 Introduction 2 Probability Examples 1. Coin Toss 2. Picking One Ball 3. Picking Two Balls 4. Travel Example 5. Number Example 6. Rabbit Example 7. Mailing Letters 8. Forest 9. Ahmed's Maze The Probability Scale Examples Summary Follow Up Soccer Example Experimental Probability Introduction Examples 1, 2 Practice Questions	3539

1	Sample Spaces and Theoretical Probabilities	4-3	M.A.E.2.3. 1	Event, sample space, tree diagram, theoretical probability, fundamental counting principle	<u><b>Understanding Math PLUS Understanding Probability</b></u> <b>Topic 1. An Introduction to Probability</b> Tree Diagrams Coin & Die Meals Socks Rabbits Forest  <b>Topic 3. Dice Probabilities</b> Roll One Die Your Experiment Computer's Experiment Theoretical Experiment Patterns Summary Roll Two Dice Your Experiment Computer's Experiment Theoretical Experiment Patterns Summary Practice Questions	3739, 3738, 3458, 3588, 3689
2	Probability of Compound Events	4-4	M.A.E.2.3. 2	Compound event, mutually exclusive		
1	Flex-review/quiz					

2	Independent and Dependent Events	4-5	M.A.E.2.3. 2	Independent, dependent	<p><b><u>Understanding Math PLUS</u></b>  <b><u>Understanding Probability</u></b>  <b>Topic 7.</b>  <b>Independent Events</b>  In This Topic  What Are They?  Examples  1. Toss Two Coins  2. Replacing Marbles  Probability  1. Coin and Die  2. Balls  3. Letter Tiles  Patterns and Summary  1. Summary  2. Spinner  3. Cards  Practice Questions  Topic Test</p> <p><b>Topic 8.</b>  <b>Dependent Events</b>  In This Topic  What Are They?  Independent Events  Dependent Events  Examples  1. Keep the First Marble  2. Choose the Flowers  Probability  1. Keep the First Ball</p>	
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					<ul style="list-style-type: none"> <li>2. Keep the First Tile</li> <li>3. Plant the First Flower</li> </ul> Patterns and Summary <ul style="list-style-type: none"> <li>1. Summary</li> <li>2. Money</li> <li>3. Socks</li> <li>4. Names</li> </ul> Practice Questions	
1 Post FCAT	Permutations of a Set	4-6	M.A.E.2.3.1	Permutation, factorial		
1 Post FCAT	Combinations of a Set	4-7	M.A.E.2.3.1	combination		
3	Review and Assess- CH. 1-4					
12	Days					

7<sup>th</sup> Advanced Math  
Essential Questions for unit:

5 How is geometry related to finding our way?

Chapter 5 Logic and Geometry			7 <sup>th</sup> Advanced Math			
Class days	Topic	Textbook Section	Benchmarks	Vocabulary, Resources	Extensions	DW Test Item Number
1	Elements of Geometry	5-1	M.A.C.2.3. 1M.A.C.2.3 .2	Geometry, point, line, space, collinear and noncollinear points, coplanar, noncoplanar, congruent line segments, midpoint of a segment, bisector of a segment		
1	Angles and Perpendicular Lines	5-2	M.A.C.2.3. 1M.A.C.2.3 .2	Ray, opposite rays, angle, vertex, degree, complementary and supplementary angles, congruent angles, adjacent angles, perpendicular lines, vertical angles, Bisector of an angle	<p><b><u>Understanding Math PLUS</u></b>  <b><u>Understanding Measurement and Geometry</u></b>  <b>Topic 7.</b>  <b>Constructions</b>            Before You Begin            In This Topic            Perpendicular            Bisector            Circumcircle            Centroid            Angle Bisector            Incircle            Perpendicular from Point on Line            Perpendicular from Point off the Line            Orthocenter</p>	3562, 3654, 3712

2	Parallel Lines and Transversals	5-3	M.A.C.2.3. 1M.A.C.2.3 .2	Parallel lines, parallel planes, skew lines, transversal, interior angles, exterior angles, alternate interior/exterior angles, same-side interior angles, corresponding angles	<b><u>Understanding Math PLUS Understanding Measurement and Geometry</u></b> <b>Topic 6. Angles and Polygons</b> In This Topic Parallel Lines Example with Parallel Lines Examples 1, 2 Angles in Polygons Methods 1, 2 Exterior Angles in a Polygon Practice Questions	3704
1	Properties of Triangles	5-4	M.A.C.2.3. 1M.A.C.2.3 .2	Triangles, vertex of a triangle, angle of a triangle, side of a triangle, congruent sides, congruent angles, exterior angle of a triangle	<b><u>Understanding Math PLUS Understanding Measurement and Geometry</u></b> <b>Topic 6. Angles and Polygons</b> Angles in Triangles Exploration An Explanation Exterior Angles – Example	
1	Review/Quiz					

1	Congruent Triangles	5-5	M.A.C.2.3. 1M.A.C.2.3 .2	Congruent triangles, corresponding sides, corresponding angles of congruent triangles, included side	<b><u>Understanding Math PLUS Understanding Measurement and Geometry</u></b> <b>Topic 6. Angles and Polygons</b> Angles in Triangles Exploration An Explanation Exterior Angles – Example	
1	Quadrilaterals And Parallelograms	5-6	M.A.C.2.3. 1M.A.C.2.3 .2	Quadrilateral, trapezoid, parallelogram, rectangle, rhombus, square, opposite angles, consecutive angles, opposite sides, consecutive sides		3502, 3612, 3613
1	Diagonal and Angles of Polygons	5-7	M.A.C.2.3. 1M.A.C.2.3 .2	Polygon, side of a polygon, convex polygon, concave polygon, vertex of a polygon, regular polygon, diagonal of a polygon	<b><u>Understanding Math PLUS Understanding Measurement and Geometry</u></b> <b>Topic 6. Angles and Polygons</b> Angles in Triangles Exploration An Explanation Exterior Angles – Example	
2	Properties of Circles	5-8	M.A.C.2.3. 1M.A.C.2.3 .2	Circle, center, radius(radii), chord, diameter, central angle, circumference, arc, semicircle, minor arc, major arc, inscribed angle	<b><u>Understanding Math PLUS Understanding Measurement and Geometry</u></b> <b>Topic 3. The Circle</b> Circles All Around	

					Us! Radius, Circumference, Diameter PI... A Special Number Introduction How do we Measure Circumference? Measuring Circles Summary Circumference of a Circle Circumference Example 1 – Egg Example 2 – The Well Example 3 – The Rolling Coin Example 4 – The Semi-Circle	
1	Problem Solving: Circle Graphs	5-9	M.A.E.1.3. 3	Use of a picture, diagram, model, circle graph, sector	<b><u>Understanding</u></b> <b><u>Math PLUS</u></b> <b><u>Understanding</u></b> <b><u>Graphing</u></b> <b>Topic 2. Statistics</b> Circle or Pie Graphs Example 1... Radio Station Example 2... Health Survey	3582, 3637
3	Review /Assessment Ch. 1- 5					
15	Days					

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Chapter 6 Functions and Graphs			7 <sup>th</sup> Advanced Math			
Days	Topic,	Textbook Section	Benchmarks	Vocabulary, Resources	Extensions	DW Test Item Number
3	Distance in the Coordinate Plane Slope of A Line	6-1/6-2	M.A.C.3.3.2	Coordinate plane, quadrant, x-axis, y-axis, ordered pair, origin, slope, rise, run	<b><u>Understanding Math PLUS Understanding Graphing</u></b> <b>Topic 3. Points on a Grid</b> Grids on Maps Ordered Pairs Axis Quadrants and Cartesian Plane Find a Point Order is Important Examples Shapes Battleship Topic Test	3672, 3721, 3720
2	Write and Graph Linear Equations	6-3	M.A.D.1.3. 2M.A.D.2.3 .1	y-intercept, slope-intercept form of a line, point-slope form of a line	<b><u>Understanding Math PLUS Understanding Graphing</u></b> <b>Topic 8. Equation of a Straight Line</b> Graph $y = mx + b$ Examples 1, 2, 3, 4 Patterns to Summary Examples 5, 6, 7 Slope y - intercept Equation Concept Examples 1, 2, 3, 4	3383, 3522, 3573, 3625, 3726, 3675

					<p>Parallel and Perpendicular Lines</p> <p>Concepts 1, 2</p> <p>Examples 1, 2, 3, 4</p> <p>Slope – Point Form of the Equation</p> <p>Example 1:</p> <p>Solutions 1, 2</p> <p>Example 2:</p> <p>Solutions 1, 2, 3, 4</p> <p>Special Cases</p> <p>Example 1 – Zero Slope</p> <p>Example 2 – Undefined</p> <p>Example to Summarize</p> <p>CBL - Graphing Your Motion</p>	
2	Write and Graph Linear Inequalities	6-4	M.A.D.1.3. 2M.A.D.2.3 .1M.A.D.2. 3.2	Open half-plane, closed half-plane, boundary line, graph of a linear inequality, graphic solution of an linear inequality	<p><b><u>Understanding Math PLUS Understanding Equations</u></b></p> <p><b>Topic 7. Solving Inequalities</b></p> <p>Solving Inequalities</p> <p>Examples 1, 2, 3, 4, 5, 6</p> <p>Solving Compound Inequalities</p> <p>Examples 1, 2</p> <p>Graphing Linear Inequalities in Two Variables</p> <p>Concepts 1, 2</p> <p>Examples 1, 2, 3</p> <p>Solving Systems of</p>	3729

					Linear Inequalities by Graphing Examples 1, 2	
1 Post FCAT	Direct and Inverse Variation	6-8/6-9	M.A.A.3.3. 1	Direct variation, inverse variation, constant of variation		
3	Review and Assessment for Chapter 1-6					
11	Days					

7<sup>th</sup> Advanced Math

Essential Questions for unit:

6 How do we describe changes in figures?

Chapter 7 Transformations			7 <sup>th</sup> Advanced Math			
Days	Topic, Benchmark	Textbook Section	Benchmark	Vocabulary, Resources	Extensions	DW Test Item Number
1	Translations in the Coordinate Plane	7-1	M.A.C.2.3.1	Translation, image, preimage, transformation	<b><u>Understanding Math PLUS Understanding Graphing Topic 4. Translations</u></b> Translations Object to Image We Say We Write Reflection Mapping Rule Examples Examples 1, 2, 3	3324, 3669
1	Reflections in the Coordinate Plane	7-2	M.A.C.2.3.1	Reflection, line of reflection	<b><u>Understanding Math PLUS Understanding Graphing Topic 4. Translations</u></b> Reflections - An Introduction Flip #1, #2, #3	

1	Rotations in the Coordinate Plane	7-3	M.A.C.2.3. 1	Rotation, center of rotation, angle of rotation	<b><u>Understanding Math PLUS Understanding Graphing</u></b> <b>Topic 4. Translations</b> Rotations Object to Image We Say We Write Rotation Mapping Rule Examples Examples 1, 2	3616, 3719
1	Line Symmetry and Rotational Symmetry	7-4	M.A.C.2.3. 1	Line Symmetry, line of symmetry, rotational symmetry	<b><u>Understanding Math PLUS Understanding Graphing</u></b> <b>Topic 4. Translations</b> Line of Symmetry - An Introduction Introduction Examples 1, 2, 3, 4 Symmetry Match Puzzle 1, 2	3566, 3666, 3717
1	Review/Quiz					
1	Dilations in the Coordinate Plane	7-5	M.A.C.2.3. 1	Dilation, enlargement, reduction, scale factor, center of dilation	<b><u>Understanding Math PLUS Understanding Graphing</u></b> <b>Topic 4. Translations</b> Dilatations Object to Image We Say We Write Dilatation Mapping	

					Rule Examples Examples 1, 2	
1	Problem Solving Skills- Tessellations	7-6	M.A.C.3.3. 1	Look for a pattern, tessellation, tiling	<b><u>Understanding</u></b> <b><u>Math PLUS</u></b> <b><u>Understanding</u></b> <b><u>Graphing</u></b> <b>Topic 4.</b> <b>Translations</b> Tessellations Introduction Examples Examples 1, 2, 3, 4, 5	3618, 3668
4	Review and Assessment CH. 1- 7					
11	Days					

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 Essential Questions for unit:

7 In what ways have past and present civilizations used geometry?

Chapter 10 Three-Dimensional Geometry			7 <sup>th</sup> Advanced Math			
Days	Topic, Benchmark	Textbook Section	Benchmarks	Vocabulary, Resources	Extensions	DW Test Item Number
1	Visualize and Represent Solids	10-1	M.A.C.1.3.1	Cylinder, axis, right cylinder, oblique cylinder, right cone, oblique cone, sphere, center of sphere, polyhedron, faces, edges, vertices, prism, bases, pyramid, faces, vertex, base, lateral face, lateral edge	<b><u>Understanding Math PLUS</u></b> <b><u>Understanding Measurement and Geometry</u></b> <b>Topic 4.</b> <b>Solids...Volume and Surface Area</b> Classifying Solids A Solid is... Recall Polygons A Polyhedron is... A Prism is... Some Special Pyramids A Cylinder is... A Cone is... Platonic Solids	

2	Nets and Surface Area	10-2	M.A.C.3.3.1	Net, surface area	<p><b><u>Understanding Math PLUS Measurement and Geometry</u></b>  <b>Topic 2. Perimeter and Area of Polygons</b>  Amount of Surface  The Driveway... An Introduction to Area  Area – Estimation  Area of a Rectangle  Concept  Examples 1, 2  Area of a Parallelogram  Concept  Examples 1, 2</p> <p>Design nets</p>	3552, 3563, 3602, 3708
2	SA of Three Dimensional Figures	10-3	MA.C.3.3.1	Regular square pyramid, slant height	<p><b><u>Understanding Math PLUS Understanding Measurement and Geometry</u></b>  <b>Topic 4. Solids...Volume and Surface Area</b>  Surface Area of a Solid  The Concept  Surface Area of a Pyramid  Surface Area of a Cylinder  Surface Area of a Sphere</p>	3426

2	Volume of Prisms and Pyramids	10-7	M.A.C.3.3.1	volume	<b><u>Understanding Math PLUS Understanding Measurement and Geometry</u></b> <b>Topic 4. Solids...Volume and Surface Area</b> Volume of a Solid The Concept Volume of a Prism: Examples 1, 2 Volume of a Pyramid	
2	Volume of Cylinders, Cones, and Spheres	10-8	M.A.C.3.3.1	Vital capacity	<b><u>Understanding Math PLUS Understanding Measurement and Geometry</u></b> <b>Topic 4. Solids...Volume and Surface Area</b> Volume of a Cylinder Volume of a Cone Volume of a Sphere	3713
2	Problem Solving Skills, Length, Area and Volume	10-9	M.A.C.3.3.1	Use an equation or formula	<b><u>Understanding Math PLUS Understanding Measurement and Geometry</u></b> <b>Topic 4. Solids...Volume and Surface Area</b> Practice Questions	3656
2	Review and Assessment CH 10					

	and previous chapters, FLEX, FCAT Practice					
13	Days					

7<sup>th</sup> Advanced Math

Essential Questions for unit:

8 How are right triangles special?

Chapter 11 Right Triangle Trigonometry			7 <sup>th</sup> Advanced Math			
Days	Topic, Benchmark	Textbook Section	Benchmarks	Vocabulary, Resources	Extensions	DW Test Item Number
2	Similar Polygons	11-1	M.A.C.2.3.1	Similar figures		
2	Indirect Measurement	11-2	M.A.C.2.3.1	Indirect measurement		
2	Pythagorean Theorem	11-3	M.A.B.1.3.1	Hypotenuse, legs of a right triangle, Pythagorean Theorem	<p><b>Understanding Math PLUS Understanding Exponents Topic 6. Pythagorean Theorem</b></p> <p>Math or Magic? Introduction Omar's Rope Trick #1, #2 Our Rope Trick Squares on a Grid Examples 1, 2, 3, 4 Squares on the Sides of a Right Triangle Triangles 1, 2, 3 The Pythagorean Theorem The Pattern In General Theorem Example Questions Example 1... Pole Example Example 2... Tower Example</p>	

					Example 3... Walking Example Example 4... Lake Example Example 5... Geometric	
4	Review and Assessment CH 11 and previous chapters					
10	Total					

7<sup>th</sup> Advanced Math  
 Essential Questions for unit:

9. How can numbers be described?

Chapter 12 Logic and Sets						
Days	Topic,	Textbook Section	Benchmarks	Vocabulary, Resources	Extensions	DW Test item #s
2	Properties of Sets	12-1		Set, element or member of a set, notations, infinite set, finite set, equal sets, subset, empty set, equivalent sets		
2	Union and Intersection of Sets	12-2		Universal set, complement of a set, union, intersection, disjoint sets		
2	Review/Assessment CH 12 and previous chapters					
6	Total days					

7<sup>th</sup> Advanced Math

Chapter 8 Relationships in Geometry			7 <sup>th</sup> Advanced Math			
Days	Topic,	Textbook Section	Benchmark	Vocabulary, Resources	Extensions	DW Test Item Number
1	Parallel and Perpendicular Lines	8-1	M.A.C.3.3.2	Negative reciprocals	<b><u>Understanding Math PLUS</u></b> <b><u>Understanding Measurement and Geometry</u></b> <b>Topic 7. Constructions</b> Perpendicular from Point on Line Perpendicular from Point off the Line	
1	Solve Systems of Equations Graphically	8-2	M.A.C.3.3.1 M.A.D.2.3.2	System of equations, solution of a system	<b><u>Understanding Math PLUS</u></b> <b><u>Understanding Equations</u></b> <b>Topic 7. Solving Inequalities</b> Solving Systems of Linear Inequalities by Graphing Examples 1, 2	
3	Review and Assessment CH 8 and previous chapters, FCAT Practice, FLEX					
5	Days					

Essential Questions for unit:

10. How can we use equations to represent information?

Chapter 9 Polynomials			7 <sup>th</sup> Advanced Math			
Days	Topic,	Textbook Section	Benchmark	Vocabulary, Resources	Extensions	DW Test Item Number
1	Add and Subtract Polynomials	9-1	M.A.A.3.3.3	Monomial, coefficient, constant, polynomial, term, binomial, trinomial, standard form, like terms	<p><b><u>Understanding Math PLUS</u></b>  <b><u>Understanding Algebra</u></b>  <b>Topic 5. Adding Expressions</b>                      Our Problem                      Adding Expressions with X and Y Tiles                      Examples 1, 2, 3                      Adding Expressions with X-Squared Tiles                      Examples 1, 2, 3                      Adding Expressions without Tiles                      Examples 1, 2                      Practice Questions with Tiles                      Practice Questions without Tiles</p> <p><b>Topic 6. Subtracting Expressions</b>                      Our Problem                      Subtracting Expressions with X and Y Tiles                      Concept                      Examples 1, 2                      Subtracting Expressions with X-</p>	

					Squared Tiles Examples 1, 2 Subtracting Expressions without Tiles Practice Questions with Tiles	
1	Multiply Monomials	9-2	M.A.A.3.3. 3		<b>Understanding Math PLUS Understanding Algebra Topic 7. Multiplying Expressions</b> Recall Tile Concepts Multiplying Monomials Like Terms With Tiles Without Tiles	
1	Divide by a Monomial	9-3	M.A.A.3.3. 3		<b>Understanding Math PLUS Understanding Algebra Topic 9. Dividing Expressions</b> Dividing a Monomial by a Monomial Examples 1, 2, 3, 4	

1	Multiply a Polynomial by Monomial	9-4	M.A.A.3.3. 3		<b><u>Understanding Math PLUS</u></b> <b><u>Understanding Algebra</u></b> <b>Topic 7.</b> <b>Multiplying Expressions</b> Multiplying Monomials and Polynomials With Tiles... Examples 1, 2, 3, 4 Without Tiles	
2	Review and Assessment CH 9 and previous chapters, FCAT Practice, FLEX					
6	Total Days					