

MATHEMATICS: Algebra 1

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Functions, and Algebra</u>				TEST: OGT NUMBER: 4 PACING: 5 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
<p>Use algebraic representations, such as tables, graphs, expressions, functions and inequalities, to model and solve problem situations.</p> <p>Write, simplify and evaluate algebraic expressions.</p> <p>Use formulas in problem-solving situations</p>	<p>Write, interpret, simplify, evaluate, and/or use algebraic expressions and formulas</p> <p>Stress order of operations and its use in formula substitution and simplification.</p> <p>Practice translating the English language into mathematical symbols.</p> <p>Practice translating mathematical symbols into English.</p>	<p>Merrill Algebra I 1-1 Variables and Expressions p.8 1-2 Evaluating Expressions p.12 1-7 Formulas p.36</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB (Teacher Book)</p>	<p>*Read sections 1-1, 1-2, 1-7 *Teaching Tips in sections 1-1, 1-2, and 1-7 of TB *Chalkboard Examples pp.9-10, p.14, p.37 TB *Translate verbal expressions into mathematical expressions *Write an expression containing identical factors as an expression using exponents *Use the order of operations to evaluate expressions *Translate verbal sentences into equations or formulas *Motivating the Lesson p.8, p.13, p.36 TB *Using Logical Reasoning p.8, p.13 TB *Math Power Reasoning p.12, p.17 TB *Application in Sports p.7 SB/TB *Geometry Connections examples 5 and 6 in section 1-1, example 2 in section 1-2, and examples 1 and 4 in section 1-7 *1-1, 1-2, 1-7 Reteaching and Practice Worksheets</p>	<p>Checking For Understanding: 1-1 p.11, p.15, p.37</p> <p>Exercises 1-1 p.11 (19-34), p.15 (21-53), 1-7 p.38 (13-48)</p> <p>Geometry Connections: p.12 (33-34), p.16 (27-32, 53) p.38 (7-12, 20-38)</p> <p>Applications Electronics p.12 (42) Government p.12 (43) Merchandising p.17 (46) Health p.17 (47) Carpentry p.17 (48) Travel p.39 (40)</p> <p>Applications Fitness p.39 (41) Physics p.39 (42) Astronomy p.39 (43)</p> <p>Critical Thinking p.12 (41), p.16 (45), p.39 (39)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.

Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Mathematical Processes</u>				TEST: OGT NUMBER: 16 PACING: 1 PERIOD
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Formulate a problem or mathematical model in response to a specific need or situation, determine information required to solve the problem, choose method for obtaining this information, and set limits for acceptable solution.	<p>Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions</p> <p>Students need to find patterns and/or create models to find and use solutions to draw conclusions.</p>	<p>Merrill Algebra I 1-8 Problem Solving: Explore Verbal Problems</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>Read section 1-8</p> <p>Teaching Tips in section 1-8</p> <p>Chalkboard Examples p.42 TB</p> <p>Explore problem situations by asking and answering questions</p> <p>Motivating the Lesson p.42 TB</p> <p>Math Power p.45 TB</p> <p>Cooperative Learning Activity p.43 TB and SB</p> <p>1-8 Reteaching and Practice Worksheets</p>	<p>Checking For Understanding: 1-8 p.41 (1-4)</p> <p>Exercises 1-8 p.42 (5-10c)</p> <p>Writing Activity p.43 TB</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

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<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Number, Number Sense and Operations</u>				TEST: OGT NUMBER: 1 PACING: 3 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Compare, order, and determine equivalent forms of real numbers.	<p>Compare, order, and determine equivalence of real numbers</p> <p>Given a set of numbers in a variety of forms (i.e. fractions, decimals, scientific notation, radicals, zero, percents) be able to place them correctly on a number line.</p>	<p>Merrill Algebra I 2-1 Integers and the Number Line</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p> <p>(objective also in section 2-4)</p>	<p>Read section 2-1</p> <p>Teaching Tips in section 2-1 of TB</p> <p>Chalkboard Examples p.51 TB</p> <p>State the coordinate of a point on a number line</p> <p>Graph integers on a number line</p> <p>Add integers using a number line</p> <p>Motivating the Lesson p.50 TB</p> <p>Using Models p.50 TB</p> <p>Math Power Reasoning p.54 TB</p> <p>Meteorology Application p.54 TB</p> <p>Application in Recreation .49 SB/TB</p> <p>Set Theory Connections example1 (section 2-1)</p> <p>2-1 Reteaching and Practice Worksheet</p>	<p>Checking For Understanding: 2-1 p.52 1-24</p> <p>Exercises 2-1 p.53 25-49</p> <p>Set Theory Connections: p.53 (50-53)</p> <p>Applications Oceanography p.53 (56) Football p.53 (57) School p.53 (58)</p> <p>Critical Thinking p.53 (54-55)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

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<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Number, Number Sense and Operations</u>				TEST: OGT NUMBER: 1 PACING: 4 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Connect physical, verbal, and symbolic representations of integers, rational numbers and irrational numbers.	<p>Compare, order, and determine equivalence of real numbers</p> <p>Given a number, be able to convert that number to a variety of different forms (i.e. $0.5 = 1/2 = 50\% = 5 \times 10^{-1}$).</p> <p>Use a variety of models to convey the concept of a fraction (for example, circles, lines, M&M's).</p> <p>Given a set of numbers in a variety of forms (i.e. fractions, decimals, scientific notation, radicals, zero, percents) be able to place them correctly on a number line.</p>	<p>Merrill Algebra I 2-2 Adding and Subtracting Integers 2-3 Inequalities and the Number Line</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>*Read sections 2-2 and 2-3</p> <p>*Teaching Tips in sections 2-2 and 2-3 of TB</p> <p>*Chalkboard Examples pp.56-57 and pp.61-62 TB</p> <p>*Find the absolute value of a number</p> <p>*Add integers without using a number line</p> <p>*Subtract integers and compare numbers</p> <p>*Write inequalities for graphs on number lines</p> <p>*Graph inequalities on number lines</p> <p>*Motivating the Lesson p.55 and p.60 TB</p> <p>*Using Manipulatives p.55 and p.60 TB</p> <p>*Using Questioning p.55</p> <p>*Math Power p.59 and p64 TB</p> <p>*Puzzle p.59 TB/SB</p> <p>*Speaking Activity p63 TB</p> <p>*2-2 and 2-3 Reteaching/Practice Worksheets</p>	<p>Checking For Understanding: 2-2 p.57 2-3 p.63</p> <p>Exercises 2-2 p.58 (17-52) 2-3 p63 (18-45)</p> <p>Applications Business p.58 (55) Mining p.58 (56) School p.64 (48) Population p.64 (49) Armed Forces p.64 (50) History p.64 (51)</p> <p>Critical Thinking p.58 (53-54) p.64 (46-47)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

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<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Number, Number Sense and Operations</u>				TEST: OGT NUMBER: 1 PACING: 1 PERIOD
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Compare, order, and determine equivalent forms of real numbers.	<p>Represent and use real numbers in a variety of equivalent forms</p> <p>Given a number, be able to convert that number to a variety of different forms (i.e. $0.5 = 1/2 = 50\% = 5 \times 10^{-1}$).</p> <p>Use a variety of models to convey the concept of a fraction (for example, circles, lines, M&M's).</p> <p>Given a set of numbers in a variety of forms (i.e. fractions, decimals, scientific notation, radicals, zero, percents) be able to place them correctly on a number line.</p>	<p>Merrill Algebra I 2-4 Comparing and Ordering Rational Numbers</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p> <p>(objective also covered in section 2-1)</p>	<p>Read section 2-4</p> <p>Teaching Tips in section 2-4 of TB</p> <p>Chalkboard Examples p.67 TB</p> <p>Compare rational numbers</p> <p>Write rational numbers in decreasing and increasing order</p> <p>Find a number between two rational numbers</p> <p>Motivating the Lesson p.66 TB</p> <p>Using Calculators p.66 TB</p> <p>Math Power Connections p.68 TB</p> <p>Application on Consumerism in example3 of section 2-4 p.66 SB/TB</p> <p>2-4 Reteaching and Practice Worksheet</p>	<p>Checking For Understanding : 2-4 p.67 1-10</p> <p>Exercises 2-4 p.67 11-25</p> <p>Applications Consumerism p.68 (28-33)</p> <p>Critical Thinking p.68 (26-27)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

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<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Number, Number Sense and Operations</u>				TEST: OGT NUMBER: 2 PACING: 5 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Estimate, compute, and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.	<p>Estimate and compute with real numbers</p> <p>After reading problems, follow a 4-step process:</p> <ol style="list-style-type: none"> State what the problem is asking Organize the given information (picture, chart, list, Let statement). Choose and implement a strategy to solve the problem. Check that the answer is reasonable and complete (labeled). 	<p>Merrill Algebra I 2-5 Adding and Subtracting Rational Numbers p.69 2-6 Multiplying Rational Numbers p.74 2-7 Dividing Rational Numbers p.80</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluations Master Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>*Read sections 2-5, 2-6, 2-7 *Teaching Tips in sections 2-5, 2-6, and 2-7 of TB *Chalkboard Examples p.70, pp.75-76, pp.81-82 TB *Add two or more rational numbers *Subtract rational numbers *Simplify expressions that contain rational numbers *Multiply rational numbers *Divide rational numbers *Motivating the Lesson p.69, p.74, p.80 TB *Using Applications p.69, p.80 TB *Using Problem Solving p.69 TB *Using Logical Reasoning p.74, p. TB *Math Power Reasoning p.73, p.84 TB *Math Power Problem Solving p.78 *History Connection p78 TB/SB *Using Communication p.80 TB *Application on Stock Market in example1 of section 2-5 p.69 SB/TB *Sequences Connections in example 6 of section 2-6 p. 76 *2-5 2-6 2-7 Reteaching and Practice Worksheets</p>	<p>Checking For Understanding: 2-5 p.71 (1-12) 2-6 p.76 (1-8) 2-7 p.82 (1-19)</p> <p>Exercises 2-5 p.71 (13-56) 2-6 p.77 (9-40) 2-7 p.83 (20-54, 52-55)</p> <p>Mid-Chapter Review p.73 TB/SB</p> <p>Connections Stock Market p.72 (53) Sequences p.77 (24-27) Statistics p.78 (46) p.83 (39-42)</p> <p>Applications Golf p.72 (54) Football p.72 (55) Personal Finance p.72 56) Sales p.78 (47) Basketball p.84 (52) Aviation p.84 (53) Space p.84 (54) World Records p.84 (55)</p> <p>Critical Thinking p.72 (49-52), p.77 (41-45) p.84 (49-51)</p> <p>Summary and Review p.88 (1-49) Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

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Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Solve and graph linear equations and inequalities.	Use linear equations and inequalities Using the transition skills form page one of this Course Of Study and the 4-Step Problem Solving Process form page seven of this Course Of Study, extend and combine them as they apply to linear equations and inequalities.	Merrill Algebra I 3-1 Solve Equations by using Addition 3-2 Solve Equations by using Subtraction 3-3 Solve Equations by using Multiplication and Division Reteaching Masters Booklet Practice Masters Booklet Evaluations Master Booklet Other resources mentioned in Merrill Algebra 1 TB	*Read sections 3-1, 3-2, 3-3 *Teaching Tips in sections 3-1, 3-2, and 3-3 of TB *Chalkboard Examples pp.95-96, pp.99-100, pp.104-105 TB *Solve Equations by using the four operations *Motivating the Lesson p.94, p.99, p.103 TB *Using Models p.94 TB *Using Manipulatives p.94, p.99, p.103 TB *Using Discussion p.103 TB *Using Problem Solving p.107 TB *Using Calculators p.99 TB *Math Power Reasoning p.98 TB *Math Power Problem Solving p.107 TB *Application on Aviation in example2 of section 3-1 p.95 SB/TB *Application on Weightlifting in example1 of section 3-2 p.99 SB/TB *Geometry Connections in example 5 of section 3-3 p.105 *3-1, 3-2, 3-3 Reteaching and Practice Worksheets	Checking For Understanding: 3-1 p.97 (1-15) 3-2 p.101 (1-16) 3-3 p.105 (1-16) Exercises 3-1 p.97 (16-46) 3-2 p.101(17-43) 3-3 p.106 (17-48) Mid-Chapter Review p.107 TB/SB Connections Geometry p.106 (49-51) Applications Spelunking p.98 (43) Gardening p.98 (44) Sales p.45 (45) p.107 (59) Weather p.98 (46) Baseball p.102 (40) Skiing p.102 (41) Finance p.102 (42) Farming p.102 (43) Sports p.107 (58) Critical Thinking p.98 (42) p.102 (39) p.107 (57) Numerous Tests and Quizzes are available in the Evaluation Masters Booklet

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<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Functions, and Algebra</u>				TEST: OGT NUMBER: 5 PACING: 5 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Solve and graph linear equations and inequalities.	Use linear equations and inequalities Using the transition skills from page one of this Course Of Study and the 4-Step Problem Solving Process form page seven of this Course Of Study, extend and combine them as they apply to linear equations and inequalities.	Merrill Algebra I 3-5 Solving Equations Using More than One operation 3-6 Solving Equations with Variables on both sides 3-7 More Equations Reteaching Masters Booklet Practice Masters Booklet Evaluations Master Booklet Other resources mentioned in Merrill Algebra 1 TB This objective is also covered in chapter 9.	*Read sections 3-5, 3-6, and 3-7 *Teaching Tips in sections 3-5, 3-6, and 3-7 of TB *Chalkboard Examples pp.111-112, pp.117, pp.122-123 TB *Solve equations involving more than one operations *Solve equations with the variable on both sides *Solve equations containing grouping symbols *Solve equations containing fractions or decimals *Solve equations containing more than one variable *Motivating the Lesson p.111, p.116, p.122 TB *Using Cooperative Groups p.111 TB *Using Applications p.116 TB *Using Manipulatives p.111, p.116, p.122 TB *Using Problem Solving p.125 TB *History Connection: Diophantus p.125 SB/TB *Math Power Connections p.115, p.120 TB *Puzzle p.115, p.120 TB SB/TB *Using Technology - Graphing Calculator p.121 SB/TB *Application on Finance in example 1 of section 3-5 p.111 SB/TB *Geometry Connections in example 2 of section 3-6 p.117 3-5, 3-6, and 3-7 Reteaching and Practice Worksheets	Checking For Understanding: 3-5 p.113 (1-14) 3-6 p.118 (1-11) 3-7 p.123 (1-11) Exercises 3-5 p.114 (15-32) 3-6 p.118 (12-37) 3-7 p.124 (12-37) Chapter Review p.126 TB/SB Connections Geometry p.118 (12-14) Number Theory p.113 (8-14) p.114 (33-37) Applications Sales p.114 (39) p.119 (39) p.124 (40) Baseball p.114 (40) Statistics p.114 (41) Running p.115 (42) p.119 (40) Soccer p.120 (41) Travel p.120 (42) Computer p.115 (43) p.125 (41) Construction p.124 (39) Critical Thinking p.114 (38) p.119 (38) p.124 (38) Numerous Tests and Quizzes are available in the Evaluation Masters Booklet

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<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer:</u> Patterns, Functions, and Algebra				TEST: OGT NUMBER: 5 PACING: 5 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment

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 Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer:</u> Measurement				TEST: OGT NUMBER: 6 PACING:
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Understand and solve rate-change problems.	Represent a mathematical relationship using a table, graph, symbols, and words, and describe how a change in the value of one variable affects the value of a related variable	4-4?4-7?		

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<p><u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer:</u> Mathematical Processes</p>				<p>TEST: OGT NUMBER: 16 PACING: 1 PERIOD:</p>
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
<p>Formulate a problem or mathematical model in response to a specific need or situation, determine information required to solve the problem, choose method for obtaining this information, and set limits of acceptable solution.</p>	<p>Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions</p> <p>Students need to find patterns and/or create models to find and use solutions to draw conclusions.</p>	<p>Merrill Algebra I 4-5 Problem-Solving Strategy: Make a Table or Chart</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>Read section 4-5</p> <p>Teaching Tips in section 4-5 of TB</p> <p>Chalkboard Examples p.152 TB</p> <p>Solve problems by making a table or a chart</p> <p>Motivating the Lesson p.151 TB</p> <p>Using Cooperative Groups p.151 TB</p> <p>Math Power Connections p.153 TB</p> <p>Cooperative Learning Activity p.153 SB/TB</p> <p>Speaking Activity p.153 TB</p> <p>4-5 Practice Worksheet</p>	<p>Checking For Understanding: 4-5 p.152 (1-4, 6-7)</p> <p>Exercises 4-5 p.153 (7-10)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

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Content Standard: Grade Benchmarks: Content Organizer: Mathematical Processes				TEST: OGT NUMBER: 16 PACING: 1 PERIOD:
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Formulate a problem or mathematical model in response to a specific need or situation, determine information required to solve the problem, choose method for obtaining this information, and set limits of acceptable solution.	<p>Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions</p> <p>Students need to find patterns and/or create models to find and use solutions to draw conclusions.</p>	<p>Merrill Algebra I 5-4 Problem-Solving Strategy: Make a Diagram</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>Read section 5-4</p> <p>Teaching Tips in section 5-4 of TB</p> <p>Chalkboard Examples p.192 TB</p> <p>Solve problems by making a diagram</p> <p>Motivating the Lesson p.192 TB</p> <p>Math Power Connections p.193 TB</p> <p>Cooperative Learning Activity p.193 SB/TB</p> <p>Modeling Activity p.192 TB</p> <p>5-4 Practice Worksheet</p>	<p>Checking For Understanding: 5-4 p.192 (1-5)</p> <p>Exercises 5-4 p.193 (6-8)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

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Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
<p>Formulate a problem or mathematical model in response to a specific need or situation, determine information required to solve the problem, choose method for obtaining this information, and set limits of acceptable solution.</p> <p>Generalize and explain patterns and sequences in order to find the next term and the nth term</p>	<p>Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions</p> <p>Students need to find patterns and/or create models to find and use solutions to draw conclusions.</p>	<p>Merrill Algebra I 6-1 Problem-Solving Strategy: Look for a Pattern</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>Read section 6-1</p> <p>Teaching Tips in section 6-1 of TB</p> <p>Chalkboard Examples p.211 TB</p> <p>Solve problems by looking for a pattern</p> <p>Motivating the Lesson p.210 TB</p> <p>Using Manipulatives p.210 TB</p> <p>Using Logical Reasoning p.210 TB</p> <p>Math Power Connections p.212 TB</p> <p>Cooperative Learning Activity p.212 SB/TB</p> <p>Speaking Activity p.211 TB</p> <p>6-1 Practice Worksheet</p>	<p>Checking For Understanding: 6-1 p.211 (1-8)</p> <p>Exercises 6-1 p.212 (9-12)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

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<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Functions, and Algebra</u>				TEST: OGT NUMBER: 4 PACING: 7 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Write, simplify and evaluate algebraic expressions.	<p>Write, interpret, simplify, evaluate, and/or use algebraic expressions and formulas</p> <p>Using the transition skills from page one of this Course Of Study and the 4-Step Problem Solving Process form page seven of this Course Of Study, extend and combine them as they apply to linear equations and inequalities.</p>	<p>Merrill Algebra I 6-2 Multiplying Monomials 6-3 Dividing Monomials 6-5 Polynomials</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluations Master Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>*Read sections 6-2, 6-3, 6-5 *Teaching Tips in sections 6-2, 6-3, 6-5 of TB *Chalkboard Examples pp.214-215, pp.217-219, pp.226-227 TB *Multiply monomials *Simplify expressions involving powers of monomials *Simplify expressions involving quotients of monomials *Simplify expressions involving negative exponents *Find the degree of a polynomial *Arrange the terms of a polynomial so that the powers of a certain variable are in ascending or descending order *Motivating the Lesson p.213, p.217, p.226 *Using Applications p.221 TB *Using Problem Solving p.221 TB *Using Connections p.213 TB *Reading Algebra p.220 TB/SB *Using Discussion p.217 TB *Using Calculators p.226 TB *Math Power Problem Solving p.216, p.220, p.229 *Using Manipulatives p.226 *Geometry Connections in examples 1 and 3 of section 6-2 pp.213-214 and example 3 of section 6-5 p.230 *6-2, 6-3, 6-5 Reteaching and Practice Worksheets</p>	<p>Checking For Understanding: 6-2 p.215 (1-10) 6-3 p.219 (1-19) 6-5 p.228 (1-21)</p> <p>Exercises 6-2 p.216 (17-47) 6-3 p.219 (20-44) 6-5 p.228 (22-43)</p> <p>Mid-Chapter Review p.229 TB/SB</p> <p>Connections Geometry p.215 (11-16)</p> <p>Applications Finance p.216 (50-51) p.220 (51-52) p.229 (45-46) Consumerism p.220 (53) Government p.220 (55) Biology p.229 (47)</p> <p>Critical Thinking p.216 (48-49) p.219 (45-50) p.228 (44) Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.

Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Functions, and Algebra</u>				TEST: OGT NUMBER: 4 PACING: 6 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Write, simplify and evaluate algebraic expressions.	Write, interpret, simplify, evaluate, and/or use algebraic expressions and formulas Stress order of operations and its use in formula substitution and simplification.	Merrill Algebra I 6-6 Adding and Subtracting Polynomials 6-7 Multiplying a Polynomial by a Monomial 6-8 Multiplying Polynomials Reteaching Masters Booklet Practice Masters Booklet Evaluations Master Booklet Other resources mentioned in Merrill Algebra 1 TB	*Read sections 6-6, 6-7, 6-8 *Teaching Tips in sections 6-6, 6-7, 6-8 of TB *Chalkboard Examples p.231, pp.234-235, p.239 TB *Add and subtract polynomials *Multiply a polynomial by a monomial *Simplify expressions involving polynomials *Use the FOIL method to multiply two binomials *Multiply any two polynomials by using the distributive property *Motivating the Lesson p. 230, p.234, p.238 *Using Problem Solving p. 230 TB *History Connection p.233 TB/SB *Using Discussion p.p.234 TB *Math Power Connections p.233, p.237 TB *Math Power Problem Solving p.242 TB *Using Manipulatives p.230, p.234 TB *Geometry Connections in example 3 of section 6-6 p.231 and in example 4 of section 6-7 p.235 *Gardening Application in example 6 of section 6-8 p.240 *6-6, 6-7, 6-8 Reteaching and Practice Worksheets	Checking For Understanding: 6-6 p.232 (1-12) 6-7 p.235 (1-13) 6-8 p.240 (1-12) Exercises 6-6 p.232 (13-30) 6-7 p.236 (14-52) 6-8 p.241 (13-40, 45, 46) p.245 (10-26 even) Connections Geometry p.232 (31-33) p.236 (33-35) p.237 (53) Applications Basketball p.233 (39) Sports p.233 (41) Bicycling p.233 (42) Sports p.237 (54) Construction p.237 (55) p.242 (46) Sales p.242 (48) Finance p.237 (59) Gardening p.241 (45) Critical Thinking p.233 (34-37) p.237 (53) p.241 (41-44) Numerous Tests and Quizzes are available in the Evaluation Masters Booklet

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

Content Standard: Grade Benchmarks: Content Organizer: Patterns, Functions, and Algebra				TEST: OGT NUMBER: 4 PACING: 14 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Use algebraic representations, such as tables, graphs, expressions, functions and inequalities, to model and solve problem situations. Use formulas in problem-solving situations	Write, interpret, simplify, evaluate, and/or use algebraic expressions and formulas.	Merrill Algebra I 7-1 Factors and Greatest Common Factors 7-2 Factoring Using the Distributive Property 7-3 Factoring by Grouping 7-5 Factoring Trinomials Reteaching Masters Booklet Practice Masters Booklet Evaluations Master Booklet Other resources mentioned in Merrill Algebra 1 TB Some factoring techniques are also covered in sections 7-6 and 7-8.	*Read sections 7-1, 7-2, 7-3, 7-5 *Teaching Tips in sections 7-1, 7-2, 7-3, 7-5 of TB *Chalkboard Examples pp.257-258, p.262, pp.265-266, pp. 272-273 TB *Find the prime factorization of an integer *Find the greatest Common factor (GCF) for a set of monomials *Use the GCF and the distributive property to factor polynomials *Use grouping techniques to factor polynomials with four or more terms *Factor quadratic trinomials *Motivating the Lesson p.256, p.261, p.265, p.271 *History Connection p.260 SB/TB *Using Problem Solving p.265 TB *Using Connections p.265 TB *Using Discussion p.261, p.271 TB *Math Power Connections p. 268 TB *Math Power Problem Solving p.260 TB *Using Manipulatives p.256, p.261, p.271 TB Geometry Connections in examples 4 of section 7-2 p.262 and example 2 of section 7-5 p.272 7-1, 7-2, 7-3, 7-5 Reteaching and Practice Worksheets (7-5 Reteaching and Practice Worksheets are highly recommended in order to make sure that every student completely understands factoring trinomials. Factoring Trinomials is used often in Algebra 1, Algebra 2, PreCalculus, and Calculus)	Checking For Understanding: 7-1 p.258 (1-16) 7-2 p.262 (1-17) 7-3 p.266 (1-15) 7-5 p.274 (1-18) Exercises 7-1 p.258 (17-67) 7-2 p.263 (18-44) 7-3 p.267 (16-42) 7-5 p.274 (19-54) Connections Geometry p.259 (68-69) p.263 (36-39, 44-45) p.267 (34-38, 43) p.275 (44, 55) Applications Gardening p.259 (71) p.264 (46) Sports p.259 (73) Computer p.260 (74-75) Metallurgy p.260 (78) Stocks p.264 (47) Sales p.264 (49) p.268 (47) Conference p.268 (44) Construction p.268 (45) Shipping p.275 (56) Agriculture p.275 (57) Finance p.275 (58) Critical Thinking p.259 (69-70) p.264 (45) p.268 (43) p.275 (55) Numerous Tests and Quizzes are available in the Evaluation Masters Booklet

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
 Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer:</u> Patterns, Functions, and Algebra				TEST: OGT NUMBER: 4 PACING: 14 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
 Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Mathematical Processes</u>				TEST: OGT NUMBER: 16 PACING: 1 PERIOD
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Formulate a problem or mathematical model in response to a specific need or situation, determine information required to solve the problem, choose method for obtaining this information, and set limits of acceptable solution.	<p>Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions</p> <p>Students need to find patterns and /or create models to find and use solutions to draw conclusions.</p>	<p>Merrill Algebra I 7-4 Problem-Solving Strategy: Guess and Check</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>Read section 7-4</p> <p>Teaching Tips in section 7-4 of TB</p> <p>Chalkboard Examples p.269 TB</p> <p>Solve problems by using guess and check</p> <p>Motivating the Lesson p.269 TB</p> <p>Math Power Reasoning p.270 TB</p> <p>Cooperative Learning Activity p.270 SB/TB</p> <p>Speaking Activity p.270 TB</p> <p>7-4 Practice Worksheet</p>	<p>Checking For Understanding: 7-4 p.269 (1-7)</p> <p>Exercises 7-4 p.270 (8-11)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

Content Standard: Grade Benchmarks: Content Organizer: Patterns, Functions, and Algebra				TEST: OGT NUMBER: 4 PACING: 6 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
<p>Use algebraic representations, such as tables, graphs, expressions, functions and inequalities, to model and solve problem situations.</p> <p>Use formulas in problem-solving situations.</p>	<p>Write, interpret, simplify, evaluate, and/or use algebraic expressions and formulas.</p>	<p>Merrill Algebra I 7-6 Factoring Differences of Squares 7-8 Summary of Factoring</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>*Read sections 7-6 and 7-8 *Teaching Tips in sections 7-6 and 7-8 of TB *Chalkboard Examples pp.277-278 and p.267 TB *Identify and factor polynomials that are differences of squares *Factoring polynomials by applying the various methods of factoring *Motivating the Lesson p.276 and p.286 TB *Using Logical Reasoning p.276 TB *Math Power Problem Solving p.280 TB *Using Models p.286 TB *Using Connections p.286 TB *Math Power Connections p.289 TB *Writing Activity p.288 TB *Geometry Connections in example 6 of section 7-6 p.278 and in example 4 of section 7-8 p.287 *7-6 and 7-8 Reteaching/Practice Worksheets</p>	<p>Checking For Understanding: 7-6 p.278 (1-13) 7-8 p.288 (1-16)</p> <p>Exercises 7-6 p.279 (14-52) 7-8 p.288 (17-50)</p> <p>Mid-Chapter Review p.280 TB/SB</p> <p>Connections Number Theory p.279 (41) Geometry p.279 (42-45,52) p.289 (51, 60)</p> <p>Applications Photography p.279 (57) Finance p.280 (58) Travel p.280 (60) Gardening p.289 (53) Conferences p.289 (54) Sales p.289 (56)</p> <p>Critical Thinking p.279 (53-56) p.289 (52)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Functions, and Algebra</u>				TEST: OGT NUMBER: 7 PACING: 6 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Solve quadratic equations with real roots by graphing, formula and factoring.	<p>Create and analyze graphs of linear and simple non-linear functions</p> <p>Recognize and analyze simple non-linear functions, such as, quadratic.</p>	<p>Merrill Algebra I 7-9 Solving Equations by Factoring 7-10 Solving Equations by Factoring</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>Read sections 7-9 and 7-10</p> <p>Teaching Tips in sections 7-9 and 7-10 of TB</p> <p>Chalkboard Examples pp.290-292 and pp.296-297 TB</p> <p>Use the Zero product property to solve equations</p> <p>Solve equations by using various factoring methods and applying zero product property</p> <p>Motivating the Lesson p.290 and p.295 TB</p> <p>Using Logical Reasoning p.290 TB</p> <p>Using Applications p.295 TB</p> <p>Math Power Connections p.294, p.299 TB</p> <p>Number Theory Connections in example 3 of section 7-10 p.297</p> <p>7-9 and 7-10 Reteaching/Practice Worksheets</p>	<p>Checking For Understanding: 7-9 p.293 (1-15) 7-10 p.297 (1-13)</p> <p>Exercises 7-6 p.293 (16-39) 7-8 p.298 (16-41)</p> <p>Chapter Review p.300 TB/SB</p> <p>Connections Number Theory p.298 (33-37) Geometry p.298 (32)</p> <p>Applications Gardening p.294 (41) p.299 (45) Photography p.299 (46) Construction p.294 (42) Physics p.294 (43-44) p.299 (48-49, 56) Agriculture p.299 (47) Sales p.294 (45) Basketball p.299 (50)</p> <p>Critical Thinking p.294 (40) p.298 (42-44) Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.

Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Functions, and Algebra & Geometry and Spatial Sense (OGT 10)</u>				TEST: OGT NUMBER: 7 PACING: 1 PERIOD
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Graph and interpret ordered pairs.	<p>Create and analyze graphs of linear and simple non-linear functions</p> <p>Students need to know and apply the vocabulary of graphing; slope, y-intercept, x-intercept, zeros, horizontal, vertical, origin, quadrants, coordinates, and ordered pairs.</p> <p>Using the transition skills from page one of this Course Of Study and the 4-Step Problem Solving Process form page seven of this Course Of Study, extend and combine them as they apply to linear equations and inequalities.</p>	<p>Merrill Algebra I 9-1 Ordered Pairs</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>Read section 9-1</p> <p>Teaching Tips in section 9-1</p> <p>Chalkboard Examples pp.355-356 TB</p> <p>Graph ordered pairs on a coordinate plane</p> <p>Motivating the Lesson p.354 TB</p> <p>Use Logical Reasoning p.354 TB</p> <p>Application in automobile safety p.353 TB/SB</p> <p>Using Applications p.354 TB</p> <p>Math Power Connections p.358 TB</p> <p>Speaking Activity p.357 TB</p> <p>Cartography Application in example 3 of section 9-1 on p.356</p> <p>9-1 Reteaching and Practice Worksheets</p>	<p>Checking For Understanding: 9-1 p.356 (1-16)</p> <p>Exercises 9-1 p.357 (17-57)</p> <p>Applications Cartography p.358 (61-65) Entertainment p.358 (67)</p> <p>Critical Thinking p.358 (58-60)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Relations, and Functions</u>				TEST: OGT NUMBER: 6 PACING: 2 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Translate information from one representation (words, table, graph or equation) to another representation of a relation or function.	Represent a mathematical relationship using a table, graph, symbols, and words, and describe how a change in the value of one variable affects the value of a related variable Display the relationship between variables in a variety of ways - tables, charts, graphs, etc.	Merrill Algebra I 9-2 Relations Reteaching Masters Booklet Practice Masters Booklet Evaluation Masters Booklet Other resources mentioned in Merrill Algebra 1 TB (This objective is also covered in section 9-7)	Read section 9-2 Teaching Tips in section 9-2 Chalkboard Examples pp.360-361 TB Identify the domain, range, and inverse of a relation Represent relations as sets of ordered pairs and mappings Motivating the Lesson p.359 TB Using Discussion p.359 TB Using Manipulatives p.359 TB Speaking Activity p.361 TB Math Power Reasoning p.363 TB Probability Connection in example 4 of section 9-2 on p.361 9-2 Reteaching and Practice Worksheets	Checking For Understanding: 9-2 p.361 (1-12) Exercises 9-2 p.362 (13-41) Applications Statistics p.363 (43) Food p.363 (44) Chemistry p.363 (46) Electronics p.263 (49) Connections Probability p.363 (33-34) Critical Thinking p.363 (42) Numerous Tests and Quizzes are available in the Evaluation Masters Booklet

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
 Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Relations, and Functions</u>				TEST: OGT NUMBER: 6 PACING: 3 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Translate information from one representation (words, table, graph or equation) to another representation of a relation or function.	<p>Set up and solve linear equations</p> <p>Using the transition skills from page one of this Course Of Study and the 4-Step Problem Solving Process form page seven of this Course Of Study, extend and combine them as they apply to linear equations and inequalities.</p>	<p>Merrill Algebra I 9-3 Equations as Relations</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>Read section 9-3</p> <p>Teaching Tips in section 9-3</p> <p>Chalkboard Examples pp.365-366 TB</p> <p>Solve linear equations for a specific variable</p> <p>Solve linear equations for a given domain</p> <p>Motivating the Lesson p.364 TB</p> <p>Using Discussion p.364 TB</p> <p>Writing Activity p.367 TB</p> <p>Math Power Reasoning p.367 TB</p> <p>Career Application in example 4 of section 9-3 on p.366</p> <p>9-3 Reteaching and Practice Worksheets</p>	<p>Checking For Understanding :</p> <p>9-3 p.367 (1-12)</p> <p>Exercises 9-3 p.367 (13-41)</p> <p>Applications Gardening p.368 (45) Physics p.368 (46) Work p.368 (51)</p> <p>Critical Thinking p.363 (42-44)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Functions and Algebra</u>				TEST: OGT NUMBER: 7 PACING: 5 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Identify and classify functions as linear or nonlinear, and contrast their properties using tables, graphs or equations.	<p>Create and analyze graphs of linear and simple non-linear functions</p> <p>Represent a mathematical relationship using a table, graph, symbols, and words, and describe how a change in the value of one variable affects the value of a related variable.</p> <p>Incorporate computers and graphing calculators to explore the relationship between variable in a problem situation.</p> <p>Display the relationship between variables in a variety of ways - tables, charts, graphs, etc.</p>	<p>Merrill Algebra I 9-4 Graphing Linear Relations</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p> <p>(This objective is also covered in sections 9-3, 7-9, 7-10, 13-2, and 13-5)</p>	<p>Read section 9-4</p> <p>Teaching Tips in section 9-4</p> <p>Chalkboard Examples pp.370-371 TB</p> <p>Graph linear equations on a coordinate plane</p> <p>Motivating the Lesson p.369 TB</p> <p>Using Logical Reasoning p.369 TB</p> <p>Writing Activity p.372 TB</p> <p>Math Power Reasoning p.373 TB</p> <p>Meteorology Application in example 4 of section 9-4 on p.371</p> <p>9-4 Reteaching and Practice Worksheets</p>	<p>Checking For Understanding: 9-4 p.371 (1-16)</p> <p>Exercises 9-4 p.372 (17-46)</p> <p>Applications Science p.372 (48) Business p.372 (49) Temperature p.373 (50) Gardening p.373 (55)</p> <p>Mid-Chapter Review p.373 TB/SB</p> <p>Critical Thinking p.372 (47)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Functions and Algebra</u>				TEST: OGT NUMBER: 7 PACING: 4 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Analyze and compare functions and their graphs using attributes, such as rates of change, intercepts and zeros.	Create and analyze graphs of linear functions.	Merrill Algebra I 9-5 Functions Reteaching Masters Booklet Practice Masters Booklet Evaluation Masters Booklet Other resources mentioned in Merrill Algebra 1 TB	Read section 9-5 Teaching Tips in section 9-5 Chalkboard Examples pp.375-376 TB Determine whether a given relation is a function Calculate functional values for a given function Motivating the Lesson p.374 TB Using Models p.374 TB Error Analysis p.377 TB Math Power Problem Solving p.378 TB Physics Application in example 7 of section 9-5 on p.376 9-5 Reteaching and Practice Worksheets	Checking For Understanding: 9-5 p.377 (1-15) Exercises 9-5 p.377 (16-48) Applications Car Rental p.378 (53) Business p.378 (54) Computer p.378 (55) Construction p.378 (57) Critical Thinking p.378 (53-54) Numerous Tests and Quizzes are available in the Evaluation Masters Booklet

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Functions and Algebra</u>				TEST: OGT NUMBER: 5 PACING: 3 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Solve and graph linear equations and inequalities.	<p>Use linear equations and inequalities</p> <p>Using the transition skills from page one of this Course Of Study and the 4-Step Problem Solving Process form page seven of this Course Of Study, extend and combine them as they apply to linear equations and inequalities.</p>	<p>Merrill Algebra I 9-6 Graphing Inequalities in Two Variables</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>Read section 9-6</p> <p>Teaching Tips in section 9-6</p> <p>Chalkboard Examples pp.380-381 TB</p> <p>Graph inequalities in the coordinate plane</p> <p>Motivating the Lesson p.379 TB</p> <p>Using Applications p.379 TB</p> <p>Speaking Activity p.382 TB</p> <p>Math Power Connections p.383 TB</p> <p>History Connection - Rene Descartes p.383 TB/SB</p> <p>Sales Applications in examples 2 and 3 of section 9-6 on pp.380-381</p> <p>9-6 Reteaching and Practice Worksheets</p>	<p>Checking For Understanding: 9-6 p.381 (1-15)</p> <p>Exercises 9-6 p.382 (16-47)</p> <p>Applications Sales p.383 (49) Manufacturing p.383 (50) Physics p.383 (56)</p> <p>Critical Thinking p.382 (48)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Relations, and Functions</u>				TEST: OGT NUMBER: 6 PACING: 2 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Use algebraic representations, such as tables, graphs, expressions, functions and inequalities, to model and solve problem situations.	<p>Set up and solve linear equations</p> <p>Display the relationship between variables in a variety of ways - tables, charts, graphs, etc.</p> <p>Using the transition skills from page one of this Course Of Study and the 4-Step Problem Solving Process from page eight of this Course Of Study, extend and combine them as they apply to linear equations and inequalities.</p>	<p>Merrill Algebra I 9-7 Finding Equations from Relations</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p> <p>(This objective is also covered in section 9-2)</p>	<p>Read section 9-7</p> <p>Teaching Tips in section 9-7</p> <p>Chalkboard Examples p.386 TB</p> <p>Write an equation to represent a relation, given a chart of values</p> <p>Write an equation to represent a relation, given a information in which you can create a chart of values</p> <p>Motivating the Lesson p.385 TB</p> <p>Using Discussion p.385 TB</p> <p>Writing Activity p.387 TB</p> <p>Math Power Problem Solving p.388 TB</p> <p>Business Application in example 3 of section 9-7 on p.386</p> <p>9-7 Reteaching and Practice Worksheets</p>	<p>Checking For Understanding: 9-7 p.387 (1-11)</p> <p>Exercises 9-7 p.387 (12-32)</p> <p>Applications Geology p.388 (34) Sales p.388 (35) Finance p.388 (36)</p> <p>Critical Thinking p.388 (33)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Relations, and Functions</u>				TEST: OGT NUMBER: 6 PACING: 6 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Use formulas in problem-solving situations.	<p>Set up and solve linear equations</p> <p>Students need to know and apply the vocabulary of graphing; slope, y-intercept, x-intercept, zeros, horizontal, vertical, origin, quadrants, coordinates, and ordered pairs.</p> <p>Students need to be able to identify the y-intercept and slope of a line given a variety of forms such as a graph or an equation.</p> <p>Recognize and use the correct formula from a formula sheet.</p>	<p>Merrill Algebra I 10-1 Slope of a Line 10-7 Midpoint of a Line Segment 12-8 Distance Formula</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluations Master Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>*Read sections 10-1, 10-7, 12-8</p> <p>*Teaching Tips in sections 10-1, 10-7, 12-8 of TB</p> <p>*Chalkboard Examples pp.401-402, p.429, p.507 TB</p> <p>*Find the slope of a line, given the coordinate of two points on the line.</p> <p>*Find the coordinates of the midpoint of a line segment in the coordinate plane given the coordinates of the endpoints.</p> <p>*Find the distance between two points in the coordinate plane.</p> <p>*Motivating the Lesson p.400, p.428, p.506 TB</p> <p>*Using Applications p.400 TB</p> <p>*Using Discussion p.506 TB</p> <p>*Using Cooperative Groups p.428 TB</p> <p>*Using Logical Reasoning p.428 TB</p> <p>*Math Power Connections p.431, p.509 TB</p> <p>*Math Power Problem Solving p.404 TB</p> <p>*Speaking Activity p.403, p.430, p.508</p> <p>*Application on Driving in example 1 of section 10-1 p.400 SB/TB</p> <p>*Geometry Connections in example 1 of section 10-7 p.428 and Example 1 of section 12-8 p.507.</p> <p>*10-1, 10-7, 12-8 Reteaching and Practice Worksheets</p>	<p>Checking For Understanding: 10-1 p.402 (1-13) 10-7 p.429 (1-16) 12-8 p.508 (1-8)</p> <p>Exercises 10-1 p.403 (14-39) 10-7 p.430 (17-46) 12-8 p.508 (9-28)</p> <p>Connections Geometry p.430 (41-42) p.508 (23-25)</p> <p>Applications Construction p.404 (42) Driving p.404 (43) p.431 (62) Carpentry p.404 (44) Aviation p.404 (45) p.509 (36) Computer p.431 (49-50) Mapping p.431 (51-58) Telecommunications p.509 (30-31)</p> <p>Critical Thinking p.404 (40-41) p.430 (47-48) p.509 (29)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.

Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Functions and Algebra</u>				TEST: OGT NUMBER: 5 PACING: 3 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Solve and graph linear equations and inequalities. Use formulas in problem-solving situations.	Use linear equations and inequalities Students need to know and apply the vocabulary of graphing; slope, y-intercept, x-intercept, zeros, horizontal, vertical, origin, quadrants, coordinates, and ordered pairs. Students need to be able to identify the y-intercept and slope of a line given a variety of forms such as a graph or an equation.	Merrill Algebra I 10-3 Slope-Intercept Form of Linear Equations 10-4 Graphing Linear Equations Reteaching Masters Booklet Practice Masters Booklet Evaluation Masters Booklet Other resources mentioned in Merrill Algebra 1 TB (This objective also covered in section 9-4.)	*Read sections 10-3 and 10-4 *Teaching Tips in sections 10-3 and 10-4 of TB *Chalkboard Examples pp.411-412 and p.416 TB *Write an equation in slope-intercept form given the slope and y-intercept *Determine the slope, x-, and y-intercept of a graph *Graph Linear equations using the x- and y-intercepts or the slope and y-intercept *Motivating the Lesson p.410 and p.415 TB *Using Applications p.410 TB *Using Manipulatives p.410 TB *Speaking Activity p.413 TB *Math Power Problem Solving p.414, p.418 TB *Using Reasoning p.415 *Using Discussion p.414 *Writing Activity p.417 *Travel Application in example 2 of section 10-3 p.411 *Communication Application in example 2 of section 10-4 p.416 *10-3 and 10-4 Reteaching/Practice Worksheets	Checking For Understanding: 10-3 p.412 (1-19) 10-4 p.416 (1-14) Exercises 10-3 p.413 (20-50) 10-4 p.417 (15-32) Applications Finance p.414 (55) Education p.414 (56) Tennis p.414 (57) Aviation p.417 (37) Manufacturing p.417 (38) National Landmarks p.418 (39) Critical Thinking p.414 (51-54) p.417 (33-36) Numerous Tests and Quizzes are available in the Evaluation Masters Booklet

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
 Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer:</u> Patterns, Functions and Algebra				TEST: OGT NUMBER: 5 PACING: 3 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Solve and graph linear equations and inequalities.	<p>Use linear equations and inequalities</p> <p>Students need to know and apply the vocabulary of graphing; slope, y-intercept, x-intercept, zeros, horizontal, vertical, origin, quadrants, coordinates, and ordered pairs.</p> <p>Students need to be able to identify the y-intercept and slope of a line given a variety of forms such as a graph or an equation.</p>	Merrill Algebra 1 Chapter 10 p427 (This objective is also covered in Chapter 13 p.530 -- details located later in course of study)	Technology - Graphing Linear Equations Page 427 shows how graphing software can be used to perform mathematical computations and to enhance and extend mathematical concepts.	p.427 (1a-3g)

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Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer:</u> Patterns, Functions and Algebra			TEST: OGT NUMBER: 5 PACING: 10 PERIODS	
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Solve systems of linear equations involving two variables graphically and symbolically.	<p>Use linear equations and inequalities</p> <p>Create and analyze graphs of linear functions.</p> <p>Know vocabulary associated with intersecting lines.</p> <p>Incorporate computers and graphing calculators to explore the relationship between variables in problem situations.</p> <p>Display the relationship between variables in a variety of ways - equations and graphs.</p>	<p>Merrill Algebra I 11-2 Graphing Systems of Equations 11-3 Substitution 11-4 Elimination Using Addition and Subtraction 11-5 Elimination Using Multiplication</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluations Master Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>Read sections 11-2, 11-3, 11-4, 11-5</p> <p>Teaching Tips in sections 11-2, 11-3, 11-4, 11-5 of TB</p> <p>Chalkboard Examples pp.443-444, p.448-449, pp.453-454, pp. 458-459TB</p> <p>Solve systems of equations by graphing</p> <p>Determine whether a system of equations has one solution, no solution, or infinitely many solutions</p> <p>Solve systems of equations by the substitution method</p> <p>Solve systems of equations by the elimination method using addition or subtraction.</p> <p>Solve systems of equations by the elimination method using multiplication and addition</p> <p>Motivating the Lesson p.442, p.447, p.452, p.457</p> <p>Using Questioning p.442, p.452 TB</p> <p>Using Logical Reasoning p.442, p.447, p.457TB</p>	<p>Checking For Understanding: 11-2 p.444 (1-16) 11-3 p.450 (1-16) 11-4 p.454 (1-12) 11-5 459 (1-11)</p> <p>Exercises 11-2 p.445 (17-42) 11-3 p.450 (17-40) 11-4 p.455 (13-36) 11-5 p.460 (12-31)</p> <p>Mid-Chapter Review p.456 SB/TB</p> <p>Connections Geometry p.446 (41-42) Number Theory p.451 (35-37) p.455 (31-32) p.460 (27-28)</p> <p>Applications Gardening p.446 (44) p.461 (39) Sales p.446 (45) p.451 (45, 48) p.461 (34, 36) Ballooning p.446 (46) Boating p.446 (49) Geometry p.446 (50) Sports p.451 (42) Finance p.451 (43) Chemistry p.451 (44) Statistics p.455 (36)</p>

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<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Functions and Algebra</u>				TEST: OGT NUMBER: 5 PACING: 10 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
			Writing Activity p.445 Math Power Connections p.446, p.451, p.456, p.461 TB Speaking Activity p.450, p.455, p.460 TB Using Problem Solving p.447, p.457 TB Technology - Solving Systems of Equations (Graphing Calculator Lab) p.462 Geometry Connections in examples 5 of section 11-2 p.444 Metallurgy Application in example 3 of section 11-3 p.448 Number Theory Connection in example 4 of section 11-3 p.449 and example 2 of section 11-4 p.453 Uniform Motion Application in example 3 of section 11-4 p.454 and example 3 of section 11-5 p.459 Banking Application in example 2 of section 11-5 p.458 11-2, 11-3, 11-4, 11-5 Reteaching and Practice Worksheets	Conferences p.456 (38) Testing p.456 (39) Uniform Motion p.456 (40) p.461 (33, 35) Aviation p.456 (44) Computer p.461 (37) Critical Thinking p.446 (43) p.451 (41) p.455 (37) p.460 (32) Numerous Tests and Quizzes are available in the Evaluation Masters Booklet

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 Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

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<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer:</u> Patterns, Functions and Algebra				TEST: OGT NUMBER: 5 PACING: 10 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

Content Standard: Grade Benchmarks: Content Organizer: Number, Number Sense and Operations & Measurement				TEST: OGT NUMBER: 1 & 11 PACING: 4 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
<p>Find the square root of perfect squares, and approximate the square root of non-perfect squares.</p> <p>Apply indirect measurement techniques, tools and formulas, as appropriate, to find perimeter, circumference and area of circles, triangles, quadrilaterals and composite shapes.</p>	<p>Represent and use real numbers in a variety of equivalent forms & 11: Use measurement techniques including scale drawings, formulas, and geometric relationships to find length, perimeter, area, surface area, and volume</p> <p>Know and apply the vocabulary associated with triangles.</p> <p>Recognize and use the correct formula from a formula sheet.</p> <p>Know appropriate units of measures to use in a given situation.</p>	<p>Merrill Algebra I 12-2 Square Roots 12-3 The Pythagorean Theorem</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>*Read sections 12-2 and 12-3 *Teaching Tips in sections 12-2 and 12-3 of TB *Chalkboard Examples pp.478-479 and p.483-484 TB *Simplify rational square roots *Find approximate values for square roots *Use the Pythagorean Theorem *Motivating the Lesson p.477 and p.482 TB *Using Logical Reasoning p.477 TB *Using a Calculator p.477 TB *Speaking Activity p.480 TB *Math Power Problem Solving p.481, p.418 TB *History Connection - Jaime Escalante p.481 SB/TB *Using Connections p.482 *Using Manipulatives p.482 *Writing Activity p.485 *Math Power Connections p.486 *Application - Escape Velocity p.486 SB/TB *Plumbing Application in example 4 of section 12-2 p.479 *Construction Application in example 4 of section 12-3 p.484 *12-2 and 12-3 Reteaching/Practice Worksheets</p>	<p>Checking For Understanding: 12-2 p.479 (1-17) 12-3 p.484 (1-16)</p> <p>Exercises 12-2 p.479 (18-52) 12-3 p.485 (17-38)</p> <p>Connections Geometry p.480 (46-48,52) p.485 (35-38)</p> <p>Applications Law Enforcement p.480 (54) Physics p.481 (55) Electricity p.481 (56) Aviation p.481 (59) Baseball p.485 (40) Construction p.486 (41, 43) Sailing p.486 (42) Statistics p.486 (44) Chemistry p.486 (47)</p> <p>Critical Thinking p.480 (53) p.485 (39)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

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Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

Content Standard: Grade Benchmarks: Content Organizer: Patterns, Functions and Algebra				TEST: OGT NUMBER: 7 PACING: 4 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
<p>Solve quadratic equations with real roots by graphing, formula and factoring.</p> <p>Analyze and compare functions and their graphs using attributes, such as rates of change, intercepts and zeros.</p>	<p>Create and analyze simple non-linear functions, such as, quadratics.</p> <p>Students need to know and apply the vocabulary of graphing; slope, y-intercept, x-intercept, zeros, horizontal, vertical, origin, quadrants, coordinates, and ordered pairs.</p>	<p>Merrill Algebra I 13-1 Graphing Quadratic Functions 13-2 Solving Quadratic Equations by Graphing</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>*Read sections 13-1 and 13-2 *Teaching Tips in sections 13-1 and 13-2 of TB *Chalkboard Examples pp.519-520 and p.524 TB *Find the equation of the axis of symmetry and the coordinates of the vertex of the graph of a quadratic function *Graph quadratic functions *Find the roots of a quadratic equation by graphing *Motivating the Lesson p.518 and p.523 TB *Using Discussion p.518 TB *Using Manipulatives p.518, p.523 TB *Speaking Activity p.521 TB *Using Models p.523 TB *Math Power Connections p.526 TB *Writing Activity p.525 TB *Finance Application in example 2 of section 13-1 p.520 *Number Theory Connections in example 2 of section 13-2 p.524 *13-1 and 13-2 Reteaching/Practice Worksheets</p>	<p>Checking For Understanding: 13-1 p.522 (1-14) 13-2 p.525 (1-10)</p> <p>Exercises 13-1 p.522 (15-41) 13-2 p.525 (11-35)</p> <p>Connections Number Theory p.525 (20-21)</p> <p>Applications Physics p.522 (43) p.526 (37) Finance p.522 (44) Agriculture p.522 (45) Consumerism p.522 (46) Diving p.526 (37)) Statistics p.526 (39) Construction p.526 (43)</p> <p>Critical Thinking p.522 (42) p.526 (36)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

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<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer:</u> Patterns, Functions and Algebra				TEST: OGT NUMBER: 7 PACING: 1 PERIOD
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Solve quadratic equations with real roots by graphing, formula and factoring.	<p>Create and analyze graphs of linear and simple non-linear functions</p> <p>Incorporate computers and graphing calculators to explore the relationships between variables in a problem situation.</p>	Merrill Algebra 1 Chapter 13 p.530 (This objective was previously covered in Chapter 10 p427)	Technology - Solving Quadratic Equations Page 530 shows how the graphing calculator can be used to perform mathematical computations and to enhance and extend mathematical concepts.	p.530 (1-4)

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Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Functions and Algebra</u>				TEST: OGT NUMBER: 7 PACING: 4 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Solve quadratic equations with real roots by graphing, formula and factoring.	<p>Create and analyze graphs of linear and simple non-linear functions</p> <p>Recognize and analyze simple non-linear functions, such as, quadratics.</p> <p>Students need to know and apply the vocabulary of graphing; slope, y-intercept, x-intercept, zeros, horizontal, vertical, origin, quadrants, coordinates, and ordered pairs.</p>	<p>Merrill Algebra I 13-5 Solving Quadratic Equations Using the Quadratic Formula</p> <p>13-7 Application: Solving Quadratic Equations</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>*Read sections 13-5 and 13-7</p> <p>*Teaching Tips in sections 13-5 and 13-7 of TB</p> <p>*Chalkboard Examples pp.537-538 and p.546-547 TB</p> <p>*Solve quadratic equations by using the quadratic formula</p> <p>*Solve problems that can be represented by quadratic equations</p> <p>*Motivating the Lesson p.536 and p.546 TB</p> <p>*Using Logical Reasoning p.536 TB</p> <p>*Using Calculators p.536 TB</p> <p>*Speaking Activity p.540, p.548 TB</p> <p>*Using Problem Solving p.546 TB</p> <p>*Math Power Problem Solving p.540 TB</p> <p>*Math Power Connections p.549 TB</p> <p>*History Connection - Muhammed ibn Mus al Khwarizmi p.549 SB/TB</p> <p>*Physics Application in example 2 of section 13-5 p.538</p> <p>*Geometry Connections in example 1 of section 13-7 p.546</p> <p>*13-5 and 13-7 Reteaching/Practice Worksheets</p>	<p>Checking For Understanding: 13-5 p.538 (1-19) 13-7 p.547 (1-15)</p> <p>Exercises 13-5 p.539 (20-47) 13-7 p.548 (16-24)</p> <p>Connections Number Theory p.548 (25-26) Geometry p.549 (34, 37)</p> <p>Applications Physics p.539 (50) p.540 (56) p.548 (29) Finance p.540 (51) Construction p.548 (27) Gardening p.548 (28) Framing p.548 (30) Mowing p.549 (31) Sales p.549 (32) Work p.549 (35)</p> <p>Critical Thinking p.539 (48-49) p.549 (33)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

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Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Data Analysis and Probability</u>				TEST: OGT NUMBER: 12 PACING: 1 PERIOD
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Create, interpret and use graphical displays and statistical measures to describe data; e.g., box-and-whisker plots, histograms, scatter plots, measures of center and variability.	Create, interpret and/or analyze tables, charts, and graphs involving data Practice reading graphs, interpreting data, and making conclusions.	Merrill Algebra I 14-1 Statistics and Line Plots Reteaching Masters Booklet Practice Masters Booklet Evaluation Masters Booklet Other resources mentioned in Merrill Algebra 1 TB (This objective is also covered in sections 9-4, 9-8, 10-4, 10-8, and throughout chapter 14.)	Read section 14-1 Teaching Tips in section 14-1 Chalkboard Examples p.561 TB Interpret numerical data from a table Display and interpret statistical data on a line plot Motivating the Lesson p.560 TB Using Discussion p.560 TB Application in probability p.559 TB/SB Math Power Problem Solving p.564 TB Speaking Activity p.562 TB Transportation Application in example 2 of section 14-1 on p.561 14-1 Reteaching and Practice Worksheets	Checking For Understanding: 14-1 p.562 (1-8) Exercises 14-1 p.562 (9-13) Applications Meteorology p.564 (15) History p.564 (16) Consumerism p.564 (17) Travel p.564 (18) Manufacturing p.564 (20) Critical Thinking p.564 (14) Numerous Tests and Quizzes are available in the Evaluation Masters Booklet

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Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Data Analysis and Probability</u>				TEST: OGT NUMBER: 12 PACING: 1 PERIOD
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Create, interpret and use graphical displays and statistical measures to describe data; e.g., box-and-whisker plots, histograms, scatter plots, measures of center and variability.	Create, interpret and/or analyze tables, charts, and graphs involving data Create and organize data in a visual display.	Merrill Algebra I 14-2 Stem and Leaf Plots Reteaching Masters Booklet Practice Masters Booklet Evaluation Masters Booklet Other resources mentioned Merrill Algebra 1 TB (This objective is also covered in sections 9-4, 9-8, 10-4, 10-8, and throughout chapter 14.)	Read section 14-2 Teaching Tips in section 14-2 Chalkboard Examples pp.565-566 TB Display and interpret data on a stem-and-leaf plot Motivating the Lesson p.565 TB Using Cooperative Groups p.565 TB Math Power Reasoning p.569 TB Speaking Activity p.567 TB Income Application in example 2 of section 14-2 on p.566 14-2 Reteaching and Practice Worksheets	Checking For Understanding: 14-2 p.567 (1-13) Exercises 14-2 p.567 (14-20) Applications Football p.567 (14) School p.568 (15) Work p.568 (16) Auto Racing p.568 (17) Stock Market p.568 (18) Housing p.569 (19) Education p.569 (20) Statistics p.569 (22) Travel p.569 (24) Critical Thinking p.569 (21) Numerous Tests and Quizzes are available in the Evaluation Masters Booklet

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Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer:</u> Data Analysis & Probability				TEST: OGT NUMBER: 13 PACING: 3 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
<p>Compare the characteristics of mean, median and mode for a given set of data, and explain which measure of center best represents the data.</p> <p>Find, use and interpret measures of center and spread, such as mean and quartiles, and use those measures to compare and draw conclusions and sets of data</p> <p>Evaluate the validity of claims and predictions that are based on data by examining the appropriateness of the data collection and analysis</p> <p>Construct convincing arguments based on analysis of data and interpretation of graphs.</p>	<p>Be able to define, Choose and apply measures of central tendency (mean, median, and mode) and variability (range and visual display of distribution)</p> <p>calculate, and understand how changes in data impact mean, median, mode, and range.</p>	<p>Merrill Algebra I 14-3 Measures of Central Tendency</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p> <p>(This objective is also covered in sections 9-4, 9-8, 10-4, 10-8, and throughout chapter 14.)</p>	<p>Read section 14-3</p> <p>Teaching Tips in section 14-3</p> <p>Chalkboard Examples pp.571-572 TB</p> <p>Calculate and interpret the mean, median, and mode of a set of data</p> <p>Motivating the Lesson p.570 TB</p> <p>Using Applications p.570 TB</p> <p>Math Power Problem Solving p.574 TB</p> <p>Speaking Activity p.573 TB</p> <p>Baseball Application in example 3 of section 14-3 on p.571</p> <p>14-3 Reteaching and Practice Worksheets</p>	<p>Checking For Understanding: 14-3 p.572 (1-10)</p> <p>Exercises 14-3 p.573 (11-18)</p> <p>Applications Football p.573 (19) Advertising p.573 (20) Basketball p.573 (21) School p.573 (22) Sports p.573 (23) Geography p.574 (24) Work p.574 (25) Diving p.574 (26) Business p.574 (27) Number Theory p.574 (29) Physics p.574 (32)</p> <p>Critical Thinking p.574 (28)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.

Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer:</u> Data Analysis & Probability				TEST: OGT NUMBER: 13 PACING: 3 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Functions and Algebra</u>				TEST: OGT NUMBER: 6 PACING: 2 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Use algebraic representations, such as tables, graphs, expressions, functions and inequalities, to model and solve problem situations.	<p>Represent a mathematical relationship using a table, graph, symbols, and words, and describe how a change in the value of one variable affects the value of a related variable</p> <p>Be able to define, calculate, and understand how changes in data impact mean, median, mode, and range.</p>	<p>Merrill Algebra I 14-4 Measures of Variation</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p> <p>(This objective is also covered in throughout chapter 14.)</p>	<p>Read section 14-4</p> <p>Teaching Tips in section 14-4</p> <p>Chalkboard Examples pp.576-577 TB</p> <p>Calculate and interpret the range, quartiles, and the interquartile range of a set of data</p> <p>Motivating the Lesson p.575 TB</p> <p>Using Reasoning p.575 TB</p> <p>Math Power Reasoning p.578 TB</p> <p>Writing Activity p.578 TB</p> <p>Finance Application in example 3 of section 14-4 on p.576</p> <p>14-4 Reteaching and Practice Worksheets</p>	<p>Checking For Understanding: 14-4 p.577 (1-14)</p> <p>Exercises 14-4 p.577 (15-20)</p> <p>Applications School p.578 (22) Foods p.578 (23) Entertainment p.578 (24) Geometry p.578 (27) Consumerism p.578 (29)</p> <p>Critical Thinking p.578 (21)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.

Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<p><u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer:</u> Data Analysis and Probability</p>				<p>TEST: OGT NUMBER: 12 PACING: 1 PERIOD</p>
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
<p>Create, interpret and use graphical displays and statistical measures to describe data; e.g., box-and-whisker plots, histograms, scatter plots, measures of center and variability.</p> <p>Evaluate different graphical representations of the same data to determine which is the most appropriate representation for an identified purpose.</p>	<p>Create, interpret and/or analyze tables, charts, and graphs involving data</p> <p>Create and organize data in a visual display.</p>	<p>Merrill Algebra I 14-5 Box-and-Whiskers Plots</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p> <p>(This objective is also covered in sections 9-4, 9-8, 10-4, 10-8, and throughout chapter 14.)</p>	<p>Read section 14-5</p> <p>Teaching Tips in section 14-5</p> <p>Chalkboard Examples p.580 TB</p> <p>Display and interpret data on a box-an-whiskers plot</p> <p>Motivating the Lesson p.579 TB</p> <p>Using Problem Solving p.579 TB</p> <p>Math Power Connections p.582 TB</p> <p>Speaking Activity p.581 TB</p> <p>Fundraising Application in example 1 of section 14-5 on p.580</p> <p>14-5 Reteaching and Practice Worksheets</p>	<p>Checking For Understanding: 14-5 p.581 (1-12)</p> <p>Exercises 14-5 p.581 (13-15)</p> <p>Applications Travel p.581 (16) Weather p.582 (17) Basketball p.582 (18) Baseball p.582 (19) Consumerism p.582 (20) Health p.582 (21)</p> <p>Critical Thinking p.582 (22)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.

Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Data Analysis & Probability</u>				TEST: OGT NUMBER: 12 PACING: 1 PERIOD
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
<p>Create, interpret and use graphical displays and statistical measures to describe data; e.g., box-and-whisker plots, histograms, scatter plots, measures of center and variability.</p> <p>Evaluate different graphical representations of the same data to determine which is the most appropriate representation for an identified purpose.</p>	<p>Create, interpret and/or analyze tables, charts, and graphs involving data</p> <p>Recognize and describe trends on a scatter plot.</p>	<p>Merrill Algebra I 14-6 Scatter Plots</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>Read section 14-6</p> <p>Teaching Tips in section 14-6</p> <p>Chalkboard Examples p.584 TB</p> <p>Graph and interpret pairs of numbers on a scatter plot</p> <p>Motivating the Lesson p.583 TB</p> <p>Using Applications p.583 TB</p> <p>Math Power Reasoning p.587 TB</p> <p>Writing Activity p.586 TB</p> <p>Technology-Regression Lines p.588 SB/TB</p> <p>14-6 Reteaching and Practice Worksheets</p>	<p>Checking For Understanding: 14-6 p.585 (1-10)</p> <p>Exercises 14-6 p.585 (11-14)</p> <p>Applications Finance p.585 (15) Weather p.586 (16) Hockey p.586 (17) Golf p.586 (18) School p.586 (19) Aviation p.587 (22) Geometry p.587 (24)</p> <p>Mid-Chapter Review p.587 TB/SB</p> <p>Critical Thinking p.587 (20)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.

Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Data Analysis & Probability</u>				TEST: OGT NUMBER: 14 PACING: 3 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
<p>Use counting techniques such as permutations and combinations to determine the total number of options and possible outcomes.</p> <p>Design an experiment to test a theoretical probability, and record and explain results.</p> <p>Compute probabilities of compound events, using such methods as organized lists, tree diagrams and area models.</p> <p>Make predictions based on theoretical probabilities and experimental results.</p>	<p>Represent and interpret the possible outcomes for a mathematical situation and calculate probabilities</p> <p>Be able to define and calculate mathematical probabilities including simple probability, probability with or without replacements and multiplication counting principle.</p>	<p>Merrill Algebra I 14-7 Probability and Odds 14-8 Empirical Probability</p> <p>Reteaching Masters Booklet</p> <p>Practice Masters Booklet</p> <p>Evaluation Masters Booklet</p> <p>Other resources mentioned in Merrill Algebra 1 TB</p>	<p>*Read sections 14-7 and 14-8 *Teaching Tips in sections 14-7 and 14-8 of TB *Chalkboard Examples p.590 and p.595 TB *Find the probability of a simple event *Find the odds of a simple event *Conduct and interpret probability experiments *Motivating the Lesson p.589 and p.594 TB *Using Discussion p.589 TB *Using Manipulatives p.594 TB *Math Power Connections p.593 TB *Math Power Problem Solving p.597 TB *History Connection - Graunt and Bernoulli p.593 SB/TB *Speaking Activity p.591 and p.596 TB *Civic Application in example 1 of section 14-8 p.595 *14-7 and 14-8 *Reteaching/Practice Worksheets</p>	<p>Checking For Understanding: 14-7 p.591 (1-16) 14-8 p.595 (1-4)</p> <p>Exercises 14-7 p.591 (17-35) 14-8 p.592 (5-7)</p> <p>Chapter Review p.604 (1-20) TB/SB</p> <p>Connections Number Theory p.592 (36)</p> <p>Applications Entertainment p.592 (38) p.593 (40) Consumerism p.592 (39) Finance p.593 (41) Recreation p.593 (43)</p> <p>Critical Thinking p.592 (37) p.596 (8)</p> <p>Numerous Tests and Quizzes are available in the Evaluation Masters Booklet</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.

Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Patterns, Functions and Algebra</u>				TEST: OGT NUMBER: 7 PACING: 4 PERIODS
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
Analyze and compare functions and their graphs using attributes, such as rates of change, intercepts and zeros.	<p>Create and analyze graphs of linear and simple non-linear functions</p> <p>Recognize and analyze simple non-linear functions.</p> <p>Cord Ch6 (abs. Value, quadratics, exponential, etc.) Cord Algebra 1 book (Ch13 as supp.)</p>	<p>Cord Algebra 1 - Mathematics in Context (Part A)</p> <p>6-1 Relations and Functions 6-2 The Absolute Value Function 6-3 The Quadratic Function 6-4 The Square Root Function 6-5 The Exponential Function 6-6 The Reciprocal Function</p>	<p>*Read through each section of chapter 6 *Teaching tips in each section *Represent relations and functions as tables of data, ordered pairs, graphs, and equations *Identify and graph nonlinear functions involving absolute value, squares, square roots, exponents, and reciprocals *Solve problems involving nonlinear equations either by graphing or by using algebraic methods</p> <p>Activities: Sequences and Equations p.6-6 Vertical Slides p.6-11 Horizontal Slides p.6-12 Stretching and Shrinking p.6-13 A Reflection p.6-15 Vertical Translations p.6-19 Horizontal Translations p.6-19 Stretching and Shrinking a Parabola p.6-20 Reflecting a Parabola p.6-20 Cell Division p.6-33 Radioactive Decay p.6-36 Graphing Part of a Function p.6-39 The Rest of the Story p.6-40 The Pythagorean Theorem p.6-27 Workplace Communication p.6-15, p.6-23 Cultural Communication p.6-29 Math Lab 1 Price and Size of Pizza p.6-45 Math Lab 2 Exponential Growth p.6-46 Math Lab 3 Height and Time of Bouncing Ball p.6-47</p>	<p>Checking For Understanding p.6-8 (1-5) p.6-16 (1-5) p.6-23 (1-6) p.6-30 (1-5) p.6-37 (1-5) p.6-42 (1-5)</p> <p>Exercises p.6-9 (6-20) p.16 (6-14) p.6-24 (7-20) p.6-30 (6-22) p.6-37 (6-19) p.6-43 (6-24)</p> <p>Chapter 6 Assessment p.6-64 (1-23)</p>

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.

Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Mathematical Processes</u>				TEST: OGT NUMBER: 15 PACING:
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
<p>Recognize and use connections between equivalent representations and related procedures for a mathematical concept; e.g., zero of a function and the x-intercept of the graph of the function, apply proportional thinking when measuring, describing functions, and comparing probabilities.</p> <p>Use a variety of mathematical representations flexibly and appropriately to organize, record and communicate mathematical ideas.</p> <p>Use precise mathematical language and notations to represent problem situations and mathematical idea.</p> <p>Write clearly and coherently about mathematical thinking and ideas.</p> <p>Locate and interpret mathematical information accurately, and communicate ideas, processes and solutions in a complete and easily understood manner.</p>	<p>Communicate mathematical ideas, reasoning, and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations</p>	<p>This objective is covered throughout the course. Critical thinking connections can be found throughout the Merrill Algebra Book. Speaking and Writing Activities are integrated into every lesson. -- (Please see the Instructional Activities/Strategies and the Assessment sections throughout this course of study)</p>		

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.
Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.

<u>Content Standard:</u> <u>Grade Benchmarks:</u> <u>Content Organizer: Estimation and Mental Computation</u>				TEST: OGT NUMBER: 16 PACING:
Grade Level Indicator	Competency Focus	Resources	Instructional Activities/Strategies	Assessment
<p>Formulate a problem or mathematical model in response to a specific need or situation, determine information required to solve the problem, choose method for obtaining this information, and set limits for acceptable solution.</p> <p>Apply mathematical knowledge and skills routinely in other content area and practical situations.</p> <p>Apply reasoning processes and skills to construct logical verifications or counterexamples to test conjectures and to justify and defend algorithms and solutions.</p>	<p>Apply problem-solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions</p>	<p>This objective is covered throughout the course. Critical thinking connections can be found throughout the Merrill Algebra Book. Speaking and Writing Activities are integrated into every lesson. -- (Please see the Instructional Activities/Strategies and the Assessment sections throughout this course of study)</p> <p>Also - Multiple-choice tests are found at the end of every chapter in the student book and teacher book. Multiple-choice tests are also available in the Evaluation Masters Booklet.</p>		

Mathematical Processes: Competencies 15 and 16: Communicate mathematical ideas, reasoning and solutions through the use of appropriate mathematical terminology, notations, symbols, definitions, models, and other representations.

Apply problem—solving strategies and evaluate processes, strategies, calculations, and solutions to verify reasonableness; and use mathematical reasoning to validate and/or generalize approaches, arguments, strategies, and solutions.