7th Grade Math Curriculum Guide
Lunenburg County Public Schools
June 2014

Marking Period: First Nine Weeks
Days: 40 (Eight Weeks)
Reporting Category/Strand: Number and Number Sense

SOL 7.1 These items will be tested <u>without</u> the use of a calculator: 7.1b-d 7.3b	**The student will** a) investigate and describe the concept of negative exponents for powers of ten; b) determine scientific notation for numbers greater than zero; c) compare and order fractions, decimals, percents, and numbers written in scientific notation; d) determine square roots; and e) identify and describe absolute value for rational numbers.
Essential Knowledge/Skills/Understandings	**Essential Understandings** • Scientific notation should be used whenever the situation calls for use of very large or very small numbers. • Any rational number can be represented in fraction, decimal and percent form. • A base of 10 raised to a negative exponent represents a number between 0 and 1. • Squaring a number and taking a square root are inverse operations. • The absolute value of a number represents distance from zero on a number line regardless of direction. Distance is positive. **Essential Knowledge and Skills** The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to • Recognize powers of 10 with negative exponents by examining patterns. • Write a power of 10 with a negative exponent in fraction and decimal form. • Write a number greater than 0 in scientific notation. • Recognize a number greater than 0 in scientific notation. • Compare and determine equivalent relationships between numbers larger than 0 written in scientific notation. • Represent a number in fraction, decimal, and percent forms. • Compare, order, and determine equivalent relationships among fractions, decimals, and percents. Decimals are limited to the thousandths place, and percents are limited to the tenths place. Ordering is limited to no more than 4 numbers. • Order no more than 3 numbers greater than 0 written in scientific notation. • Determine the square root of a perfect square less than or equal to 400. Demonstrate absolute value using a number line. • Determine the absolute value of a rational number. • Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle to solve practical problems.

Essential Questions	1. When should scientific notation be used? 2. How are fractions, decimals and percents related? 3. What does a negative exponent mean when the base is 10? 4. How is taking a square root different from squaring a number? 5. Why is the absolute value of a number positive?

Primary Resources	● Textbook: Glencoe Mathematics Applications and Concepts Course 2
	    (Each SOL will have a chapter and section number such as 1-9 for worksheets
	     that include 3 pages: Study Guide and Interventions, Practice Skills, and
	     Practice Word Problems)
	     Pages: 43-45, 566, 106-111, 227-231, 556, 569, 570, 576, 470-473
	     Worksheets: 1-9, 5-8, 3-2, 1T1-1, 3-1
	● Teacher-made notes from the Curriculum Framework
	● Scope and Sequence
	http://www.glencoe.com/sec/math/msmath/mac04/course3/index.php/va
	http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va--
	Powers of Ten
	Scientific Notation
	Ordering
	Square Roots
	Absolute Value

Essential Vocabulary	● Exponent-the number in the upper right side of the base number that tells the number of times to multiply the base number by itself. ● Negative exponents-indicate very small values. ● Scientific Notation-A method of expressing numbers in terms of a decimal number between 1 and 10 multiplied by a power of 10. ● Square Roots-a number or quantity that when multiplied by itself gives a given number or quantity. ● Absolute Value-The value of a number without regard to its sign. For example, the absolute value of +3 (written |+3|) and the absolute value of -3 (written |-3|) are both 3. ● Squaring a number-a number multiplied by itself.

Marking Period: First Nine Weeks

Days: 5 (One Week)
Reporting Category/Strand: Number and Number Sense

SOL 7.2	The student will describe and represent arithmetic and geometric sequences, using variable expressions.
Essential Knowledge/Skills/Understandings	**Essential Understandings** • Variable expressions can express the relationship between two consecutive terms in a sequence. **Essential Knowledge and Skills** The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to • Analyze arithmetic and geometric sequences to discover a variety of patterns. • Identify the common difference in an arithmetic sequence. • Identify the common ratio in a geometric sequence. • Given an arithmetic or geometric sequence, write a variable expression to describe the relationship between two consecutive terms in the sequence.
Essential Questions	1. When are variable expressions used?

Primary Resources	● Textbook: Glencoe Mathematics Applications and Concepts Course 2
	    Pages: 34-36, 566
	    Worksheets: 1-7,
	● Teacher-made notes from the Curriculum Framework
	● Scope and Sequence
	http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va
	Arithmetic and Geometric

Essential Vocabulary	● Arithmetic Sequence- If a sequence of values follows a pattern of **adding a fixed amount** from one term to the next, it is referred to as an **arithmetic sequence**. The number added to each term is constant (always the same). ● Common Difference-The fixed amount is called the **common difference, *d*,** referring to the fact that the difference between two successive terms yields the constant value that was added. To find the common difference, subtract the first term from the second term. ● Geometric Sequence-In a **Geometric Sequence** each term is found by **multiplying** the previous term by a **constant**. ● Common Ratio-The fixed amount that is multiplied to each term to get the next term

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Marking Period: Second Nine Weeks

Days: 30 (Six Weeks)

Reporting Category/Strand: Computation and Estimation

SOL 7.3 **These items will be tested <u>without</u> the use of a calculator:** ● **7.1b-d** ● **7.3b**	**The student will** **a) model addition, subtraction, multiplication, and division of integers; and** **b) add, subtract, multiply, and divide integers.**
Essential Knowledge/Skills/Understandings	**Essential Understandings** • The sums, differences, products and quotients of integers are either positive, zero, or negative. This can be demonstrated through the use of patterns and models. **Essential Knowledge and Skills** The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to • Model addition, subtraction, multiplication and division of integers using pictorial representations of concrete manipulatives. • Add, subtract, multiply, and divide integers. • Simplify numerical expressions involving addition, subtraction, multiplication and division of integers using order of operations. • Solve practical problems involving addition, subtraction, multiplication, and division with integers.
Essential Questions	1. How can this be demonstrated?

Primary Resources	● Textbook: Glencoe Mathematics Applications and Concepts Course 2
	        Pages: 118-124, 126-131, 134-141, 570, 571
	        Worksheets: 3-4, 3-5, 3-6, 3-7,
	● Teacher-made notes from the Curriculum Framework
	● Scope and Sequence
	
	http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va
	Addition and Subtraction
	Multiplication and Division

Essential Vocabulary	Integers-are whole numbers and their opposites.

Marking Period: Second Nine Weeks
Days: 15 (Three Weeks)
Reporting Category/Strand: Computation and Estimation

SOL 7.4	The student will solve single-step and multistep practical problems, using proportional reasoning.
Essential Knowledge/Skills/Understandings	**Essential Understandings** • Two quantities are proportional when one quantity is a constant multiple of the other. **Essential Knowledge and Skills** The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to • Write proportions that represent equivalent relationships between two sets. • Solve a proportion to find a missing term. • Apply proportions to convert units of measurement between the U.S. Customary System and the metric system. Calculators may be used. • Apply proportions to solve practical problems, including scale drawings. Scale factors shall have denominators no greater than 12 and decimals no less than tenths. Calculators may be used. • Using 10% as a benchmark, mentally compute 5%, 10%, 15%, or 20% in a practical situation such as tips, tax and discounts. • Solve problems involving tips, tax, and discounts. Limit problems to only one percent computation per problem.
Essential Questions	1. What makes two quantities proportional?

Primary Resources	● Textbook: Glencoe Mathematics Applications and Concepts Course 2
	    Pages: 38-41, 161, 267-269, 288-291, 293, 297, 304-308, 440-443, 354-357, 584
	    Worksheets: 7-1, 7-3, 7-4, 8-5
	● Teacher-made notes from the Curriculum Framework
	● Scope and Sequence
	http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va
	Proportions
	Sales Tax and Tip

Essential Vocabulary	● Ratio-a compaison of two numbers and often times looks like a fraction. ● Proportion-a relationship between four numbers or quantities in which the ratio of the first pair equals the ratio of the second pair. ● Scale Drawings-A drawing that shows a real object with accurate sizes except

<table>
<tr><td></td><td>they have all been reduced or enlarged by a certain amount (called the scale).
The scale is shown as the length in the drawing, then a colon (":"), then the matching length on the real thing.</td></tr>
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Marking Period: Third Nine Weeks
Days: 20 (Four Weeks)
Reporting Category/Strand: Measurement

SOL 7.5	**The student will** a) describe volume and surface area of cylinders; b) solve practical problems involving the volume and surface area of rectangular prisms and cylinders; and c) describe how changing one measured attribute of a rectangular prism affects its volume and surface area.
Essential Knowledge/Skills/Understandings	**Essential Understandings** • Volume is a measure of the amount a container holds while surface area is the sum of the areas of the surfaces on the container. • There is a direct relationship between the volume of a rectangular prism increasing when the length of one of the attributes of the prism is changed by a scale factor. **Essential Knowledge and Skills** The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to • Determine if a practical problem involving a rectangular prism or cylinder represents the application of volume or surface area. • Find the surface area of a rectangular prism. • Solve practical problems that require finding the surface area of a rectangular prism. • Find the surface area of a cylinder. • Solve practical problems that require finding the surface area of a cylinder. • Find the volume of a rectangular prism. • Solve practical problems that require finding the volume of a rectangular prism. • Find the volume of a cylinder. • Solve practical problems that require finding the volume of a cylinder. • Describe how the volume of a rectangular prism is affected when one measured attribute is multiplied by a scale factor.

	Problems will be limited to changing attributes by scale factors only. • Describe how the surface area of a rectangular prism is affected when one measured attribute is multiplied by a scale factor. Problems will be limited to changing attributes by scale factors only.
Essential Questions	1. How are volume and surface area related? 2. How does the volume of a rectangular prism change when one of the attributes is increased?

Primary Resources	● Textbook: Glencoe Mathematics Applications and Concepts Course 2
	     Pages: 538-541, 524-527, 532-535, 520-523
	     Worksheets: 12-3, 12-4, 12-5, 12-2
	● Teacher-made notes from the Curriculum Framework
	● Scope and Sequence
	http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va
	Surface Area and Volume of a Cylinder
	Volume of a Rectangular Prism
	Surface Area of a Rectangular Prism
	Attributes of a Rectangular Prism

Essential Vocabulary	● Volume-The amount of space occupied by a three-dimensional object or region of space expressed in cubic units. ● Surface Area-is the sum of the areas on the container expressed in square units ● Cylinder-A three-dimensional surface or solid object bounded by a curved surface and two parallel circles of equal size at the ends. ● Rectangular Prism-A rectangular prism is said to be a 3 dimensional solid shape. This type of prism has six faces, and all the faces of the prism are rectangle in shape. ● Scale factor-is the number you multiply by to enlarge or reduce a figure or side. ● Attribute-a dimension of a figure.

Marking Period: Third Nine Weeks
Days: 5 (One Week)
Reporting Category/Strand: Measurement

SOL 7.6	The student will determine whether plane figures—quadrilaterals and triangles—are similar and write proportions to express the relationships between corresponding sides of similar figures.
Essential Knowledge/Skills/Understandings	**Essential Understandings** • Congruent polygons have the same size and shape. Similar polygons have the same shape, and corresponding angles between the similar figures are congruent. However, the lengths of the corresponding sides are proportional. All congruent polygons are considered similar with the ratio of the corresponding sides being 1:1. **Essential Knowledge and Skills** The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to • Identify corresponding sides and corresponding and congruent angles of similar figures using the traditional notation of curved lines for the angles. • Write proportions to express the relationships between the lengths of corresponding sides of similar figures. • Determine if quadrilaterals or triangles are similar by examining congruence of corresponding angles and proportionality of corresponding sides. • Given two similar figures, write similarity statements using symbols such as ∆ABC ~ ∆DEF, ∠ A corresponds to ∠D, and AB corresponds to DE.
Essential Questions	How do polygons that are similar compare to polygons that are congruent?

Primary Resources	● Textbook: <u>Glencoe Mathematics Applications and Concepts Course 2</u>
	        Pages: 440-443
	        Worksheets: 10-6,
	● Teacher-made notes from the Curriculum Framework
	● Scope and Sequence
	http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va

	<u>Similar Figures</u>
Essential Vocabulary	● Similar Figures-When two **figures** are **similar**, the ratios of the lengths of their corresponding sides are equal. ● Corresponding-another name for matching as in sides or angles. ● Congruent-exactly the same. Attributes-characteristics Deductive reasoning-the deriving of a conclusion by reasoning Inference-suggest, conclude

Marking Period: Third Nine Weeks
Days: 5 (One Week)
Reporting Category/Strand: Geometry

SOL 7.7	**The student will compare and contrast the following quadrilaterals based on properties: parallelogram, rectangle, square, rhombus, and trapezoid.**

Essential Knowledge/Skills/Understandings	**Essential Understandings**
	• Every quadrilateral in a subset has all of the defining attributes of the subset.
	  For example, if a quadrilateral is a rhombus, it has all the attributes of a rhombus.
	  However, if that rhombus also has the additional property of 4 right angles, then that rhombus is also a square.
	
	Essential Knowledge and Skills
	The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to
	• Compare and contrast attributes of the following quadrilaterals: parallelogram, rectangle, square, rhombus, and trapezoid.
	• Identify the classification(s) to which a quadrilateral belongs, using deductive reasoning and inference.

Essential Questions	1. Why can some quadrilaterals be classified in more than one category?

Primary Resources	● Textbook: <u>Glencoe Mathematics Applications and Concepts Course 2</u>
	    Pages: 434-437,
	    Worksheets: 10-5
	● Teacher-made notes from the Curriculum Framework
	● Scope and Sequence

	http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va Quadrilaterals
Essential Vocabulary	- Deductive reasoning-Deductive reasoning is a logical process in which a conclusion drawn from a set of premises contains no more information than the premises taken collectively. - Inference-any process of reasoning from premises to a conclusion

Marking Period: Third Nine Weeks
Days: 10 (Two Weeks)
Reporting Category/Strand: Geometry

SOL 7.8	**The student, given a polygon in the coordinate plane, will represent transformations (reflections, dilations, rotations, and translations) by graphing in the coordinate plane.**
Essential Knowledge/Skills/Understandings	**Essential Understandings** • Translations, rotations and reflections do not change the size or shape of a figure. A dilation of a figure and the original figure are similar. Reflections, translations and rotations usually change the position of the figure. **Essential Knowledge and Skills** The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to • Identify the coordinates of the image of a right triangle or rectangle that has been translated either vertically, horizontally, or a combination of a vertical and horizontal translation. • Identify the coordinates of the image of a right triangle or rectangle that has been rotated 90° or 180° about the origin. • Identify the coordinates of the image of a right triangle or a rectangle that has been reflected over the x- or y-axis. • Identify the coordinates of a right triangle or rectangle that has been dilated. The center of the dilation will be the origin. • Sketch the image of a right triangle or rectangle translated vertically or horizontally. • Sketch the image of a right triangle or rectangle that has been rotated 90° or 180° about the origin. • Sketch the image of a right triangle or rectangle that has been reflected over the x- or y-axis. Sketch the image of a dilation of a right triangle or rectangle limited to a scale factor of $\frac{1}{4}$, $\frac{1}{2}$, 2, 3, or 4.
Essential Questions	1. How does the transformation of a figure affect the size, shape and position of that figure?
Primary Resources	Textbook: Glencoe Mathematics Applications and Concepts Course 2

	Pages: 451-453, 455-461 Worksheets: 10-8, 10-9 ● Teacher-made notes from the Curriculum Framework ● Scope and Sequence http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va Rotation Dilation Translation and Reflection
Essential Vocabulary	Transformations-movement of a geometric figure on graph paper, can also be reduced/enlarged Reflections-a figure is flipped over a line of symmetry Dilations-reducing or enlarging a geometric figure using a scale factor Rotations-turning a geometric figure 90,180,270,360 degrees around a fixed point Translations-sliding a geometric figure on graph paper Scale factor-the number used to multiply coordinates by to get dilations

Marking Period: Third Nine Weeks

Days: 5 (One Week)

Reporting Category/Strand: Patterns, Functions, and Algebra

SOL 7.16	**The student will apply the following properties of operations with real numbers:** **a) the commutative and associative properties for addition and multiplication;** **b) the distributive property;** **c) the additive and multiplicative identity properties;** **d) the additive and multiplicative inverse properties; and** **e) the multiplicative property of zero.**
Essential Knowledge/Skills/Understandings	**Essential Understandings** • Using the properties of operations with real numbers helps with understanding mathematical relationships. **Essential Knowledge and Skills** The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to

	• Identify properties of operations used in simplifying expressions. • Apply the properties of operations to simplify expressions.
Essential Questions	1. Why is it important to apply properties of operations when simplifying expressions?
Primary Resources	● Textbook: <u>Glencoe Mathematics Applications and Concepts Course 2</u> Pages: 30, 31, 121, 258, 565 Worksheets: 1-6 ● Teacher-made notes from the Curriculum Framework ● Scope and Sequence http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va Properties
Essential Vocabulary	Properties-rules that are true for any number or variable Distributive-multiply the number on the outside of the parenthesis to each addend Additive inverse-the sum of an integer and its opposite equals zero

Marking Period: Fourth Nine Weeks

Days: 5 (One Week)

Reporting Category/Strand: Probability and Statistics

SOL 7.9	**The student will investigate and describe the difference between the experimental probability and theoretical probability of an event.**

Essential Knowledge/Skills/Understandings	**Essential Understandings**
	  • Theoretical probability of an event is the expected probability and can be found with a formula.
	  • The experimental probability of an event is determined by carrying out a simulation or an experiment.
	  • In experimental probability, as the number of trials increases, the experimental probability gets closer to the theoretical probability.
	
	 Essential Knowledge and Skills
	 The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to
	 • Determine the theoretical probability of an event.
	 • Determine the experimental probability of an event.
	 • Describe changes in the experimental probability as the number of trials increases.

	• Investigate and describe the difference between the probability of an event found through experiment or simulation versus the theoretical probability of that same event.
Essential Questions	1. What is the difference between the theoretical and experimental probability of an event?
Primary Resources	● Textbook: Glencoe Mathematics Applications and Concepts Course 2 Pages: 393-397, 586 Worksheets: 9-6 ● Teacher-made notes from the Curriculum Framework ● Scope and Sequence http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va Probability
Essential Vocabulary	Theoretical probability- Simulation-examining data given that was not directly observe

Marking Period: Fourth Nine Weeks
Days: 5 (One Week)
Reporting Category/Strand: Probability and Statistics

SOL 7.10	**The student will determine the probability of compound events, using the Fundamental (Basic)** **Counting Principle.**
Essential Knowledge/Skills/Understandings	**Essential Understandings** • The Fundamental (Basic) Counting Principle is a computational procedure used to determine the number of possible outcomes of several events. • The Fundamental (Basic) Counting Principle is used to determine the number of outcomes of several events. It is the product of the number of outcomes for each event that can be chosen individually. **Essential Knowledge and Skills** The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to • Compute the number of possible outcomes by using the Fundamental (Basic) Counting Principle. • Determine the probability of a compound event containing no more than 2 events.

Essential Questions	1. What is the Fundamental (Basic) Counting Principle? 2. What is the role of the Fundamental (Basic) Counting Principle in determining the probability of compound events?

Primary Resources	• Textbook: <u>Glencoe Mathematics Applications and Concepts Course 2</u>
	    Pages: 378-380, 585
	    Worksheets: 9-3
	• Teacher-made notes from the Curriculum Framework
	• Scope and Sequence
	http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va
	Fundamental (Basic) Counting

Essential Vocabulary	Fundamental Counting Principle-using multiplication of the number of ways each event can occur to find the number of outcomes in a sample space

Marking Period: Fourth Nine Weeks

Days: 5 (One Week)

Reporting Category/Strand: Probability and Statistics

SOL 7.11	The student, given data for a practical situation, will a) construct and analyze histograms; and b) compare and contrast histograms with other types of graphs presenting information from the same data set.
Essential Knowledge/Skills/Understandings	**Essential Understandings** • Numerical data that can be characterized using consecutive intervals are best displayed in a histogram. **Essential Knowledge and Skills** The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to • Collect, analyze, display, and interpret a data set using histograms. For collection and display of raw data, limit the data to 20 items. • Determine patterns and relationships within data sets (e.g., trends). • Make inferences, conjectures, and predictions based on analysis of a set of data. • Compare and contrast histograms with line plots, circle graphs, and stem-and-leaf plots presenting information from the same data set.

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Essential Questions	1. What types of data are most appropriate to display in a histogram?

Primary Resources	● Textbook: <u>Glencoe Mathematics Applications and Concepts Course 2</u>
	  Pages; 85-89, 569
	  Worksheets: 2-7,
	● Teacher-made notes from the Curriculum Framework
	● Scope and Sequence
	http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va
	Histogram

Essential Vocabulary	Histogram-a special kind of bar graph that has spaces between each bar and intervals listed at the bottom of the graph Line plot-a number line that has as many x's above a number to represent each data item Stem-and-leaf plot-a two column chart where the greatest place value forms the stem and the next greatest place value forms the leaves

Marking Period: Fourth Nine Weeks
Days: 10 (Two Weeks)
Reporting Category/Strand: Probability and Statistics

SOL 7.12	The student will represent relationships with tables, graphs, rules, and words.
Essential Knowledge/Skills/Understandings	**Essential Understandings** • Rules that relate elements in two sets can be represented by word sentences, equations, tables of values, graphs or illustrated pictorially. **Essential Knowledge and Skills** The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to • Describe and represent relations and functions, using tables, graphs, rules, and words. Given one representation, students will be able to represent the relation in another form.
Essential Questions	1. What are the different ways to represent the relationship between two sets of numbers?
Primary Resources	● Textbook: <u>Glencoe Mathematics Applications and Concepts Course 2</u> Pages: 176-181, 573

	Worksheets: 4-6 ● Teacher-made notes from the Curriculum Framework ● Scope and Sequence http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va Relationships Round Robin
Essential Vocabulary	

Marking Period: Fourth Nine Weeks
Days: 5 (One Week)
Reporting Category/Strand: Probability and Statistics

SOL 7.13	**The student will** **a) write verbal expressions as algebraic expressions and sentences as equations and vice versa; and** **b) evaluate algebraic expressions for given replacement values of the variables.**
Essential Knowledge/Skills/Understandings	**Essential Understandings** • Word phrases and sentences can be used to represent algebraic expressions and equations. **Essential Knowledge and Skills** The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to • Write verbal expressions as algebraic expressions. Expressions will be limited to no more than 2 operations. • Write verbal sentences as algebraic equations. Equations will contain no more than 1 variable term. • Translate algebraic expressions and equations to verbal expressions and sentences. Expressions will be limited to no more than 2 operations. • Identify examples of expressions and equations. • Apply the order of operations to evaluate expressions for given replacement values of the variables. Limit the number of replacements to no more than 3 per expression.
Essential Questions	1. How can algebraic expressions and equations be written?
Primary Resources	● Textbook: Glencoe Mathematics Applications and Concepts Course 2 Pages: 14, 18-21, 122, 123, 150-152, 564, 565, 570, 572 Worksheets: 1-3, 1-4, 3-4, 4-1,

	● Teacher-made notes from the Curriculum Framework ● Scope and Sequence http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va Translate and Evaluate
Essential Vocabulary	

Marking Period: Fourth Nine Weeks
Days: 10 (Two Weeks)
Reporting Category/Strand: Probability and Statistics

SOL 7.14	**The student will** **a) solve one- and two-step linear equations in one variable; and** **b) solve practical problems requiring the solution of one- and two-step linear equations.**
Essential Knowledge/Skills/Understandings	**Essential Understandings** • An operation that is performed on one side of an equation must be performed on the other side to maintain equality. **Essential Knowledge and Skills** The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to • Represent and demonstrate steps for solving one- and two-step equations in one variable using concrete materials, pictorial representations and algebraic sentences. • Solve one- and two-step linear equations in one variable. • Solve practical problems that require the solution of a one- or two-step linear equation.
Essential Questions	1. When solving an equation, why is it important to perform identical operations on each side of the equal sign?

Primary Resources	● Textbook: Glencoe Mathematics Applications and Concepts Course 2
	    Pages: 156-159, 258-261, 572, 578
	    Worksheets: 4-2, 6-5
	● Teacher-made notes from the Curriculum Framework
	● Scope and Sequence
	http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va

	Linear Equations
Essential Vocabulary	

Marking Period: Fourth Nine Weeks
Days: 5 (One Week)
Reporting Category/Strand: Probability and Statistics

SOL 7.15	The student will a) solve one-step inequalities in one variable; and b) graph solutions to inequalities on the number line.
Essential Knowledge/Skills/Understandings	**Essential Understandings** • The procedures are the same except for the case when an inequality is multiplied or divided on both sides by a negative number. Then the inequality sign is changed from less than to greater than, or greater than to less than. • In an inequality, there can be more than one value for the variable that makes the inequality true. **Essential Knowledge and Skills** The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to • Represent and demonstrate steps in solving inequalities in one variable, using concrete materials, pictorial representations, and algebraic sentences. • Graph solutions to inequalities on the number line. • Identify a numerical value that satisfies the inequality.
Essential Questions	1. How are the procedures for solving equations and inequalities the same? 2. How is the solution to an inequality different from that of a linear equation?

Primary Resources	● Textbook: Glencoe Mathematics Applications and Concepts Course 2
	    Pages:: 172-175, 573
	    Worksheets: 4-5
	● Teacher-made notes from the Curriculum Framework
	● Scope and Sequence
	http://www.glencoe.com/sec/math/msmath/mac04/course2/index.php/va
	Inequalities

Essential Vocabulary	