

SENECA VALLEY SCHOOL DISTRICT

CURRICULUM

Course Title:	Pre-Algebra
Course Number:	
Grade Level(s):	6th Grade Gifted – Single-subject acceleration
Periods Per Week:	5
Length of Period:	70 Minutes
Length of Course:	Full Year
Credits:	
Faculty Author(s):	Scherrie Creasy, Megan Oldenski, Jay Roman, Carissa Schott, Ken Kotula
Gifted Faculty Revisor(s):	Michael Levere, Lynne Ranayhossaini
Gifted Revisions Date:	June 7, 2013

COURSE DESCRIPTION:

Pre-Algebra is an integrated math course where students review and extend their basic math skills. The course is centered on algebra skills needed to solve equations using integers, decimals, and fractions. Students also learn the concepts of probability, statistics, and geometry. The relationship among percents, decimals, and fractions is also explored. Throughout the year, students practice answering open-ended questions and model and solve real-world applications.

GIFTED PRE-ALGEBRA PREREQUISITE(S):

PSSA advanced
NWEA Fall/prior spring – at least 95th%tile
Classroom grades
Qualified or not qualified

The following document contains Grade 7 Mathematics Assessment Anchors and Eligible Content aligned to Pennsylvania Common Core Standards.

This outline provides a general overview of the course content, not a chronological timetable. The weeks denoted for each area provide an idea for the overall time spent working with a given topic throughout the school year.

COURSE OUTLINE	Common Core Standard/ Descriptor/ Eligible Content New material is underlined and bolded.			
<p>Common Core 2.1 Numbers and Operations (E)The Number System</p> <p>I. Integers</p> <p>A. <u>Adding Integers</u></p> <ol style="list-style-type: none"> 1. Use models to add integers 2. Use rules to add integers <p>B. <u>Subtracting Integers</u></p> <ol style="list-style-type: none"> 1. Use models to subtract integers 2. Use a rule to subtract integers <p>C. <u>Multiplying/ Dividing Integers</u></p> <ol style="list-style-type: none"> 1. Multiply integers 2. Divide integers 	<p>CC.2.1.7.E.1 Apply and extend previous understandings of operations with fractions to operations with rational numbers.</p> <p>M07.A-N.1.1.1 Apply properties of operations to add and subtract rational numbers, including real-world contexts.</p> <p>M07.A-N.1.1.2 Represent addition and subtraction on a horizontal or vertical number line.</p> <p>M07.A-N.1.1.1. M07.A-N.1.1.2</p> <p>M07.A-N.1.1.3 Apply properties of operations to multiply and divide rational numbers, including real-world contexts; demonstrate that the decimal form of a rational number terminates or eventually repeats</p>			
<p>Common Core 2.2 Algebraic Concepts (B) Expressions and Equations</p> <p>II. Solving One-Step Equations and Inequalities</p> <p>A. <u>Properties of Numbers</u></p> <ol style="list-style-type: none"> 1. Identify properties of addition and multiplication. 2. Use properties to solve problems <p>B. <u>Distributive Property</u></p> <ol style="list-style-type: none"> 1. Use the Distributive 	<p>CC.2.2.7.B.1 Apply properties of operations to generate equivalent expressions.</p> <p>M07.B-E.1.1 Use properties of operations to generate equivalent expressions.</p> <p>CC.2.2.7.B.1</p>			

<p>Property with numerical expressions</p> <p>1. Use the Distributive Property with algebraic expressions</p>	<p>M07.B-E.1.1 Use properties of operations to generate equivalent expressions.</p> <p>M07.B-E.1.1.1 Apply properties of operations to add, subtract, factor, and expand linear expressions with rational coefficients.</p> <p><i>Example 1: The expression $1/2 \cdot (x + 6)$ is equivalent to $1/2 \cdot x + 3$.</i></p> <p><i>Example 2: The expression $5.3 - y + 4.2$ is equivalent to $9.5 - y$ (or $-y + 9.5$).</i></p> <p><i>Example 3: The expression $4w - 10$ is equivalent to $2(2w - 5)$.</i></p>			
<p>C. <u>Simplifying Variable Expressions</u></p> <p>1. Identify parts of a variable expression</p> <p>2. Simplify expressions</p>	<p>CC.2.2.7.B.1</p> <p>M07.B-E.1.1 M07.B-E.1.1.1</p>			
<p>D. <u>Solving Equations by Adding or Subtracting</u></p> <p>1. Solve one-step equations using addition</p> <p>2. Solve one-step equations using subtraction</p>	<p>CC.2.2.7.B.1</p> <p>M07.B-E.1.1 M07.B-E.1.1.1</p> <p>CC.2.2.7.B.3 Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations.</p> <p>M07.B-E.2.1 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers.</p>			
<p>E. <u>Solving Equations by Multiplying or Dividing</u></p> <p>1. Solve one-step equations using division</p> <p>2. Solve one-step equations using multiplication</p>	<p>CC.2.2.7.B.1</p> <p>M07.B-E.1.1 M07.B-E.1.1.1</p> <p>CC.2.2.7.B.3</p> <p>M07.B-E.2.1</p>			
<p>F. <u>Inequalities and their Graphs</u></p> <p>1. Graph inequalities</p> <p>2. Write inequalities</p>	<p>CC.2.2.7.B.3 M07.B-E.2.1 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers.</p>			

<p>G. <u>Solving One-step Inequalities by Adding or Subtracting</u></p> <ol style="list-style-type: none"> Solve one-step inequalities using addition Solve one-step inequalities using subtraction <p>H. <u>Solving One-Step Inequalities by Multiplying or Dividing</u></p> <ol style="list-style-type: none"> Solve one-step inequalities using division Solve one-step inequalities using multiplication 	<p>CC.2.2.7.B.3</p> <p>M07.B-E.2.2 M07.B-E.2.2.2 Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers, and graph the solution set of the inequality. <i>Example: A salesperson is paid \$50 per week plus \$3 per sale. This week she wants her pay to be at least \$100. Write an inequality for the number of sales the salesperson needs to make, and describe the solutions.</i></p> <p>CC.2.2.7.B.3</p> <p>M07.B-E.2.2 M07.B-E.2.2.2</p>			
<p>Common Core 2.1 Numbers and Operations (E)The Number System</p> <p>2.2 Algebraic Concepts (B) Expressions and Equations</p> <p>III. Operations with Fractions</p> <p>A. <u>Fractions and Decimals</u></p> <ol style="list-style-type: none"> Write fractions as decimals Write terminating decimals as fractions <p>B. <u>Adding and Subtracting Fractions</u></p> <ol style="list-style-type: none"> Add and subtract fractions 	<p>CC.2.1.7.E.1 Apply and extend previous understandings of operations with fractions to operations with rational numbers.</p> <p>M07.A-N.1.1 Solve real-world and mathematical problems involving the four operations with rational numbers. M07.A-N.1.1.3 Apply properties of operations to multiply and divide rational numbers, including real-world contexts; demonstrate that the decimal form of a rational number terminates or eventually repeats.</p> <p>CC.2.1.7.E.1 M07.A-N.1.1 M07.A-N.1.1.1 Apply properties of operations to add and subtract rational numbers, including real-world contexts.</p>			

<p>2. Add and subtract mixed numbers</p> <p>C. <u>Multiplying and Dividing Fractions</u></p> <ol style="list-style-type: none"> Multiply fractions Divide fractions <p>D. <u>Solving Equations by Adding or Subtracting Fractions</u></p> <ol style="list-style-type: none"> Solve equations by subtracting fractions Solve equations by adding fractions 	<p>CC.2.1.7.E.1 M07.A-N.1.1 M07.A-N.1.1.3</p> <p>CC.2.2.7.B.1 Apply properties of operations to generate equivalent expressions. M07.B-E.1.1 Use properties of operations to generate equivalent expressions.</p> <p>CC.2.2.7.B.3 Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations.</p> <p>M07.B-E.2.2 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems.</p> <p>M07.B-E.2.2.1 Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers. <i>Example: The perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?</i></p> <p>M07.B-E.2.2.2 Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers, and graph the solution set of the inequality. <i>Example: A salesperson is paid \$50 per week plus \$3 per sale. This week she wants her pay to be at least \$100. Write an inequality for the number of sales the salesperson needs</i></p> <p>M07.B-E.2.1 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers. M07.B-E.2.1.1 Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate. <i>Example: If a woman making \$25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or \$2.50, for a new salary of \$27.50 (or $1.1 \times \\$25 = \\27.50).</i></p>			
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<p>E. <u>Solving Equations by Multiplying Fractions</u></p> <ol style="list-style-type: none"> Solve equations by multiplying fractions Solve equations by multiplying mixed numbers 	<p>CC.2.2.7.B.1 M07.B-E.1.1 M07.B-E.1.1.1 Apply properties of operations to add, subtract, <u>factor</u>, and expand linear expressions with rational coefficients. <i>Example 1: The expression $1/2 \cdot (x + 6)$ is equivalent to $1/2 \cdot x + 3$.</i> <i>Example 2: The expression $5.3 - y + 4.2$ is equivalent to $9.5 - y$ (or $-y + 9.5$).</i> <i>Example 3: The expression $4w - 10$ is equivalent to $2(2w - 5)$.</i></p> <p>CC.2.2.7.B.3 M07.B-E.2.2 M07.B-E.2.2.1 M07.B-E.2.2.2 M07.B-E.2.1 M07.B-E.2.1.1</p>			
<p>Common Core 2.1 Numbers and Operations (E)The Number System</p> <p>2.2Algebraic Concepts (B) Expressions and Equations</p> <p>IV. Decimals and Equations</p> <p>A. <u>Using Formulas</u></p> <ol style="list-style-type: none"> Substitute into formulas Use the formula for the perimeter of a rectangle <p>B. <u>Solving Equations by Adding or Subtracting Decimals</u></p> <ol style="list-style-type: none"> Solve one-step decimal equations involving addition Solve one-step decimal equations involving subtraction 	<p>CC.2.2.7.B.3 Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations.</p> <p>M07.B-E.2.1 M07.B-E.2.1.1</p> <p>CC.2.2.7.B.3 M07.B-E.2.1 M07.B-E.2.1.1</p> <p>M07.B-E.2.3 Determine the reasonableness of the answer(s) in problem solving situations.</p>			

<p>C. <u>Solving Equations by Multiplying and Dividing Decimals</u></p> <ol style="list-style-type: none"> 1. Solving one-step decimal equations involving multiplication 2. Solve one-step decimal equations involving division 	<p>M07.B-E.2.3.1 Determine the reasonableness of an answer(s), or interpret the solution(s) in the context of the problem. <i>Example: If you want to place a towel bar that is $9 \frac{3}{4}$ inches long in the center of a door that is $27 \frac{1}{2}$ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.</i></p> <p>CC.2.2.7.B.1 Apply properties of operations to generate equivalent expressions.</p> <p>M07.B-E.1.1 Use properties of operations to generate equivalent expressions. M07.B-E.1.1.1 Apply properties of operations to add, subtract, factor, and expand linear expressions with rational coefficients. <i>Example 1: The expression $\frac{1}{2} \cdot (x + 6)$ is equivalent to $\frac{1}{2} \cdot x + 3$.</i> <i>Example 2: The expression $5.3 - y + 4.2$ is equivalent to $9.5 - y$ (or $-y + 9.5$).</i> <i>Example 3: The expression $4w - 10$ is equivalent to $2(2w - 5)$.</i></p> <p>CC.2.2.7.B.3 M07.B-E.2.1 M07.B-E.2.1.1 M07.B-E.2.3 M07.B-E.2.3.1</p> <p>CC.2.2.7.B.1 M07.B-E.1.1 M07.B-E.1.1.1</p>			
<p>Common Core 2.1 Numbers and Operations (E)The Number System</p> <p>2.2Algebraic Concepts (B) Expressions and Equations</p> <p>V. Solving Equations and Inequalities</p> <p>A. <u>Solving Two-Step</u></p>	<p>CC.2.2.7.B.1</p> <p>M07.B-E.1.1</p>			

<p><u>Equations</u></p> <ol style="list-style-type: none"> Solve two-step equations Use two-step equations to solve problems 	<p>M07.B-E.1.1.1</p> <p>M07.B-E.2.1 M07.B-E.2.1.1</p> <p>M07.B-E.2.2 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems.</p> <p>M07.B-E.2.2.1 Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers. <i>Example: The perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?</i></p> <p>M07.B-E.2.3 Determine the reasonableness of the answer(s) in problem solving situations.</p> <p>M07.B-E.2.3.1 Determine the reasonableness of an answer(s), or interpret the solution(s) in the context of the problem. <i>Example: If you want to place a towel bar that is $9 \frac{3}{4}$ inches long in the center of a door that is $27 \frac{1}{2}$ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.</i></p>			
<p>B. <u>Solving Multi-Step Equations</u></p> <ol style="list-style-type: none"> Combine like terms to simplify an equation Use the Distributive Property to simplify an equation 	<p>CC.2.2.7.B.1 M07.B-E.1.1 M07.B-E.1.1.1 M07.B-E.2.1 M07.B-E.2.1.1 M07.B-E.2.2 M07.B-E.2.2.1 M07.B-E.2.3 M07.B-E.2.3.1</p>			
<p>C. <u>Multi-Step Equations with Fractions and Decimals</u></p> <ol style="list-style-type: none"> Solve multi-step equations with fractions Solve multi-step equations with decimals 	<p>CC.2.2.7.B.1 M07.B-E.1.1 M07.B-E.1.1.1 M07.B-E.2.1 M07.B-E.2.1.1 M07.B-E.2.2 M07.B-E.2.2.1 M07.B-E.2.3 M07.B-E.2.3.1</p>			

<p>D. <u>Write an Equation</u></p> <p>1. Write an equation to solve a problem</p> <p>E. <u>Solving Equations with Variables on Both Sides</u></p> <p>1. Solve equations with variables on both sides</p> <p>2. Use equations with variables on both sides</p> <p>F. <u>Solving Two-Step Inequalities</u></p> <p>1. Solve two-step inequalities</p> <p>2. Use two-step inequalities to solve problems</p> <p>G. <u>Transforming Formulas</u></p> <p>1. Solve a formula for a given variable</p> <p>2. Use formulas to solve problems</p> <p>H. <u>Simple and Compound Interest</u></p> <p>1. Solve simple-interest problems</p>	<p>CC.2.2.7.B.1</p> <p>M07.B-E.1.1 M07.B-E.1.1.1 M07.B-E.2.1 M07.B-E.2.1.1</p> <p>CC.2.2.7.B.1</p> <p>M07.B-E.1.1 M07.B-E.1.1.1 M07.B-E.2.1 M07.B-E.2.1.1 M07.B-E.2.2 M07.B-E.2.2.1 M07.B-E.2.3 M07.B-E.2.3.1</p> <p>CC.2.2.7.B.3 M07.B-E.2.3 M07.B-E.2.3.1 M07.B-E.2.2 M07.B-E.2.2.2</p> <p>CC.2.2.7.B.1</p> <p>M07.B-E.1.1 M07.B-E.1.1.1 M07.B-E.2.1 M07.B-E.2.1.1 M07.B-E.2.2 M07.B-E.2.2.1 M07.B-E.2.3 M07.B-E.2.3.1</p> <p>CC.2.1.7.D.1 Analyze proportional relationships and use them to model and solve real-world and mathematical problems. M07.A-R.1.1 Analyze, recognize, and represent</p>			
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<p>2. Solve compound-interest problems</p>	<p>proportional relationships and use them to solve real-world and mathematical problems.</p> <p>M07.A-R.1.1.6 Use proportional relationships to solve multi-step ratio and percent problems. <i>Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease.</i></p>			
<p>Common Core 2.1 Numbers and Operations (D) Ratios and Proportional Relationships</p> <p>VI. Ratios, Proportions, and Percents</p> <p>A. <u>Ratios and Unit Rates</u></p> <ol style="list-style-type: none"> 1. Write and simplify ratios 2. Find rates and unit rates <p>B. <u>Proportions</u></p> <ol style="list-style-type: none"> 1. Solve proportions 2. Use proportions to solve problems 	<p>CC.2.1.7.D.1 Analyze proportional relationships and use them to model and solve real-world and mathematical problems. M07.A-R.1.1.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. <i>Example: If a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction $1/2 \div 1/4$ miles per hour, equivalently 2 miles per hour.</i></p> <p>CC.2.1.7.D.1 M07.A-R.1.1 Analyze, recognize, and represent proportional relationships and use them to solve real-world and mathematical problems.</p> <p>M07.A-R.1.1.2 is a straight line through the origin).</p> <p>M07.A-R.1.1.3 Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.</p> <p>M07.A-R.1.1.4 Represent proportional relationships by equations. <i>Example: If total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be</i></p>			

<p>C. <u>Similar Figures and Scale</u> <u>Drawings</u></p> <ol style="list-style-type: none"> Solve problems that involve similar figures Solve problems that involve scale drawings <p><u>New-needs added</u></p> <p>E. <u>Fractions, Decimals and Percents</u></p> <ol style="list-style-type: none"> Find a part of a whole and a percent Write decimals and fractions as percents <p>F. <u>Proportions and Percents</u></p> <ol style="list-style-type: none"> Find a part of a whole 	<p><i>expressed as $t = pn$.</i></p> <p>M07.A-R.1.1.5 Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.</p> <p>CC.2.1.7.D.1 7.A-R.1.1 M07.A-R.1.1.2</p> <p>CC.2.3.7.A.2 Visualize and represent geometric figures and describe the relationships between them.</p> <p>M07.C-G.1.1 Describe and apply properties of geometric figures. M07.C-G.1.1.1 Solve problems involving scale drawings of geometric figures, including finding length and area. M07.C-G.1.1.2 Identify or describe the properties of all types of all types of triangles based on angle and side measure.</p> <p><u>4M07.C-G.1.1.3 Use and apply the triangle inequality theorem.</u></p> <p>CC.2.2.7.B.3 Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations. M07.B-E.2.1 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers. M07.B-E.2.1.1 Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate. <i>Example: If a woman making \$25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or \$2.50, for a new salary of \$27.50 (or $1.1 \times \\$25 = \\27.50).</i></p> <p>CC.2.1.7.D.1 Analyze proportional relationships and use them to model and solve real-world and mathematical</p>			
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<p>and a percent</p> <p>2. Find a whole amount</p> <p>G. <u>Percents and Equations</u></p> <p>1. Write and solve percent equations</p> <p>2. Use equations in solving percent problems</p> <p>H. <u>Percent of Change</u></p> <p>1. Define percent of increase and decrease.</p> <p>I. <u>Markup and Discount</u></p> <p>1. Find markups</p> <p>2. Find discounts</p>	<p>problems.</p> <p>M07.A-R.1.1 Analyze, recognize, and represent proportional relationships and use them to solve real-world and mathematical problems.</p> <p>M07.A-R.1.1.6 Use proportional relationships to solve multi-step ratio and percent problems. <i>Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease.</i></p> <p>CC.2.1.7.D.1 Analyze proportional relationships and use them to model and solve real-world and mathematical problems.</p> <p>M07.A-R.1.1 Analyze, recognize, and represent proportional relationships and use them to solve real-world and mathematical problems.</p> <p>M07.A-R.1.1.4 Represent proportional relationships by equations. <i>Example: If total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as $t = pn$.</i></p> <p>CC.2.1.7.D.1</p> <p>M07.A-R.1.1.6 Use proportional relationships to solve multi-step ratio and percent problems. <i>Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease.</i></p> <p>CC.2.1.7.D.1</p> <p>M07.A-R.1.1 Analyze, recognize, and represent proportional relationships and use them to solve real-world and mathematical problems.</p> <p>M07.A-R.1.1.6 Use proportional relationships to solve multi-step ratio and percent problems. <i>Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease</i></p>			
<p>Common Core 2.3 Geometry (A) Geometry</p>				

<p>VII.Area and Volume</p> <p>A. <u>Area: Parallelograms</u></p> <ol style="list-style-type: none"> 1. Find areas of rectangles 2. Find areas of parallelograms <p>B. <u>Area: Triangles and Trapezoids</u></p> <ol style="list-style-type: none"> 1. Find areas of triangles 2. Find areas of trapezoids <p>C. <u>Area: Circles</u></p> <ol style="list-style-type: none"> 1. Find areas of circles 2. Find areas of irregular circles that include parts of circles 	<p>CC.2.3.7.A.1 Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume. M07.C-G.2.2 Determine circumference, area, surface area, and volume. M07.C-G.2.2.2 Solve real-world and mathematical problems involving area, volume, and surface area of two and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. Formulas will be provided.</p> <p>CC.2.3.7.A.1 Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume. M07.C-G.2.2 Determine circumference, area, surface area, and volume. M07.C-G.2.2.2 Solve real-world and mathematical problems involving area, volume, and surface area of two and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. Formulas will be provided.</p> <p>CC.2.3.7.A.2 Visualize and represent geometric figures and describe the relationships between them. M07.C-G.1.1 Describe and apply properties of geometric figures. M07.C-G.1.1.2 Identify or describe the properties of all types of triangles based on angle and side measure. M07.C-G.1.1.3 Use and apply the triangle inequality theorem.</p> <p>CC.2.3.7.A.1 Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume. M07.C-G.2.2 Determine circumference, area, surface area, and volume.</p>			
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<p>D. <u>Surface Area: Prisms and Cylinders</u></p> <p>1. Find surface areas of prisms</p>	<p>M07.C-G.2.2.1 Find the area and circumference of a circle. Solve problems involving area and circumference of a circle(s). Formulas will be provided.</p> <p>CC.2.3.7.A.2 Visualize and represent geometric figures and describe the relationships between them. M07.C-G.1.1 Describe and apply properties of geometric figures. M07.C-G.1.1.4 Describe the two-dimensional figures that result from slicing three-dimensional figures. <i>Example: Describe plane sections of right rectangular prisms and right rectangular pyramids.</i></p> <p>CC.2.3.7.A.1 Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume.</p> <p>M07.C-G.2.2 Determine circumference, area, surface area, and volume. M07.C-G.2.2.2 Solve real-world and mathematical problems involving area, volume, and surface area of two and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right</p>			
<p>E. <u>Volume: Prisms and Cylinders</u></p> <p>1. Find volume of prisms <u>and cylinders</u></p>	<p>CC.2.3.7.A.1 Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume.</p> <p>M07.C-G.2.2 Determine circumference, area, surface area, and volume. M07.C-G.2.2.2 Solve real-world and mathematical problems involving area, volume, and surface area of two and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. Formulas will be provided.</p>			

<p>Common Core 2.3 Geometry (A) Geometry</p> <p>VIII. Spatial Thinking</p> <p>B. <u>Angle Relationships and Parallel Lines</u></p> <ol style="list-style-type: none"> 1. Identify adjacent and vertical angles 2. Relate angles formed by parallel lines and a transversal <p>E. <u>Circles</u></p> <ol style="list-style-type: none"> 1. Find circumferences 	<p>CC.2.3.7.A.1 Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume.</p> <p>M07.C-G.2.1 Identify, use and describe properties of angles and their measures. M07.C-G.2.1.1 Identify and use properties of supplementary, complementary, and adjacent angles in a multistep problem to write and solve simple equations for an unknown angle in a figure. M07.C-G.2.1.2 Identify and use properties of angles formed when two parallel lines are cut by a transversal (e.g., angles may include alternate interior, alternate exterior, vertical, corresponding).</p> <p>CC.2.3.7.A.1 Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume.</p> <p>M07.C-G.2.2 Determine circumference, area, surface area, and volume. M07.C-G.2.2.1 Find the area and circumference of a circle. Solve problems involving area and circumference of a circle(s). Formulas will be provided. M07.C-G.2.2.2 Solve real-world and mathematical problems involving area, volume, and surface area of two and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. Formulas will be provided.</p>			
<p>Common Core 2.4 Measurement, Data, and Probability (B) Statistics and Probability</p>	<p>CC.2.4.7.B.2 Draw informal comparative inferences about two</p>			

<p>B. <u>Counting Outcomes and Theoretical Probability</u></p> <ol style="list-style-type: none"> 1. Use a tree diagram and the Counting Principle to count possible choices 2. Find the theoretical probability by counting outcomes <p>C. <u>Experimental Probability</u></p> <ol style="list-style-type: none"> 1. Find experimental probability 2. Use simulations <p>D. <u>Independent and Dependent Events</u></p> <ol style="list-style-type: none"> 1. Calculate probabilities of independent events 2. Calculate probabilities of dependent events 	<p>CC.2.4.7.B.3 Investigate chance processes and develop, use, and evaluate probability models. M07.D-S.3.2 Use probability to predict outcomes. M07.D-S.3.2.2 Find the probability of a simple event, including the probability of a simple event not occurring. <i>Example: What is the probability of not rolling a 1 on a number cube?</i> M07.D-S.3.2.3 Find probabilities of independent compound events using organized lists, tables, tree diagrams, and simulation.</p> <p>CC.2.4.7.B.3 Investigate chance processes and develop, use, and evaluate probability models. M07.D-S.3.2 Use probability to predict outcomes. M07.D-S.3.2.2 Find the probability of a simple event, including the probability of a simple event not occurring. <i>Example: What is the probability of not rolling a 1 on a number cube?</i> M07.D-S.3.2.3 Find probabilities of independent compound events using organized lists, tables, tree diagrams, and simulation.</p> <p>CC.2.4.7.B.3 Investigate chance processes and develop, use, and evaluate probability models. M07.D-S.3.2 Use probability to predict outcomes. M07.D-S.3.2.3 Find probabilities of independent compound events using organized lists, tables, tree diagrams, and simulation.</p> <p>CC.2.4.7.B.1 Draw inferences about populations based on random sampling concepts. M07.D-S.1.1 Use random samples. M07.D-S.1.1.1 Determine whether a sample is a random sample given a real-world situation. M07.D-S.1.1.2 Use data from a random sample to draw inferences about a population with an unknown</p>			
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<p>E. <u>Random Samples and Surveys</u></p> <ol style="list-style-type: none"><u>1.</u> Choose a sample for a survey of a population<u>2.</u> To make estimates about populations	<p>characteristic of interest. <i>Example 1: Estimate the mean word length in a book by randomly sampling words from the book.</i> <i>Example 2: Predict the winner of a school election based on randomly sampled survey data.</i></p>			
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