

7th grade Advanced Mathematics

		GP1	GP2	GP3	GP4	GP5	GP6
8.2.1 & 7.2.1	8.2.1 Add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) in multi-step problems.						
	7.2.1 Solve addition, subtraction, multiplication, and division problems that use integers, fractions, and decimals, and combinations of the four operations	<b>X</b>					
8.1.1	Read, write, compare, and solve problems using decimals in scientific notation.					<b>X</b>	
8.1.4	Understand and evaluate negative integer exponents.					<b>X</b>	
8.1.5	Use law of exponents for integer exponents.					<b>X</b>	
8.3.4 & 7.3.4	8.3.4 Use the correct order of operations to find the values of algebraic expressions involving powers.						
	7.3.4 Evaluate numerical expressions and simplify algebraic expressions by applying the correct order of operations and the properties of rational numbers (e.g., identity, inverse, commutative, associative, distributive properties). Justify each step in the process.	<b>X</b>					
8.3.1, 8.EE.7, & 7.3.2	8.3.1 Write and solve linear equations and inequalities in one variable, interpret the solution or solutions in their context, and verify the reasonableness of the results.						
	8.EE.7 Solve linear equations in one variable.	<b>X</b>					
	7.3.2 Write and solve two-step linear equations and inequalities in one variable and check the answers.						
7.2.2	Calculate the percentage increase and decrease of a quantity.		<b>X</b>				
7.2.3	Solve problems that involve discounts, markups, and commissions.		<b>X</b>				
8.3.5	Identify and graph linear functions and identify lines with positive and negative slope.			<b>X</b>			
8.3.6	Find the slope of a linear function given the equation and write the equation of a line given the slope and any point on the line.			<b>X</b>			

8.5.4 & 7.5.4	8.5.4 Use formulas for finding the perimeter and area of basic two-dimensional shapes and the surface area and volume of basic three-dimensional shapes, including rectangles, parallelograms, trapezoids, triangles, circles, prisms, cylinders, spheres, cones, and pyramids.				<b>X</b>		
7.5.3	Read and create drawings made to scale, construct scale models, and solve problems related to scale.		<b>X</b>				
7.RP.1	Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units.		<b>X</b>				
7.RP.2	Recognize and represent proportional relationships between quantities.		<b>X</b>	<b>X</b>			
8.4.5	Use the Pythagorean Theorem and its converse to solve problems in two and three dimensions.					<b>X</b>	
<b>The Standards for Mathematical Practice</b>							
The <i>Standards for Mathematical Practice</i> describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important 'processes and proficiencies' with longstanding importance in mathematics education.		<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
1. Make sense of complex problems and persevere in solving them.							
2. Reason abstractly and quantitatively							
3. Construct viable arguments and critique the reasoning of others.							
4. Model with mathematics.							
5. Use appropriate tools strategically.							
6. Attend to precision.							
7. Look for and make use of structure.							
8. Look for and express regularity in repeated reasoning.							