

Mathematics 8 Pacing Guide

1st Semester Topics					
1 st Nine Weeks			2 nd Nine Weeks		
Unit 1: The Real Number System and Pythagorean Theorem		Unit 2: Transformations	Unit 3: Equations		Unit 4: Functions
<ul style="list-style-type: none"> • Square and Cube Roots • Estimating Square and Cube Roots • The Real Number System • Decimal Representation of Repeating Decimals • Pythagorean Theorem • Converse of the Pythagorean Theorem • Application of Pythagorean Theorem • Distance on the Coordinate Plane 		<ul style="list-style-type: none"> • Identify and Graph Translations • Identify and Graph Reflections • Identify and Graph Rotations • Identify and Graph Dilations • Symmetry 	<ul style="list-style-type: none"> • Solve Multi-Step Equations • Solve Equations by Square Roots • Solve Equations with Variables on Both Sides • Solve Equations with Variables on Both Sides (Special Types- Infinite and No Solutions) • Translating and Solving Equations • Applying Equations to Real World Word Problems 		<ul style="list-style-type: none"> • Identify domain and range of a relation • Classify a relation as a function when given an ordered pair list, table, or graph • Calculate range when given domain in function notation • Graph a relation/ function on a coordinate plane when given a table • Determine if a graph, table of values, or an equation is linear or nonlinear
2nd Semesters Topics					
3 rd Nine Weeks			4 th Nine Weeks		
Unit 5: Linear Relationships	Unit 6: Exponential & Scientific Notation	Unit 7: Data Analysis	Unit 8: Angle Relationships	Unit 9: Volume	Unit 10: Systems of Linear Equations
<ul style="list-style-type: none"> • Slope • Graphing Linear Equations in slope-intercept, • Proportional vs Non-Proportional Relationships • Linear Relationship Applications 	<ul style="list-style-type: none"> • Laws of Exponents • Estimating Powers of Ten • Operations with Scientific Notation 	<ul style="list-style-type: none"> • Scatterplots • Lines of Best Fit • Two Way Tables • Frequency Tables 	<ul style="list-style-type: none"> • Use angle pair relationships to calculate missing values and/or angles • Classify special angle pairs formed by parallel lines cut by a transversal 	<ul style="list-style-type: none"> • Calculate Volume of Cylinders, Cones and Spheres • Find the missing measure of a 3D Figure given the volume 	<ul style="list-style-type: none"> • Solving by Graphing and Substitution • Application Problems