

# Neshoba Central School

## District Pacing Guides

### ALGEBRA I

Unit	Common Core	1st 9-Weeks Major Topics / Concepts
Algebraic Expressions and Operations	A.SSE.1a A.SSE.1b A.SSE.2	<p><b>Algebraic Expressions</b></p> <ul style="list-style-type: none"> <li>--- Translate expressions</li> <li>--- Use order of operations to simplify</li> <li>--- Use properties to simplify</li> <li>--- Evaluate polynomial expressions</li> <li>--- Include polynomial expressions</li> <li>--- Emphasize use of Distributive Property</li> </ul> <p><b>Exponents</b></p> <ul style="list-style-type: none"> <li>--- Add and subtract expressions</li> <li>--- Multiply and divide expressions with exponents</li> </ul>
Equations and Inequalities	A.CED.1 A.REI.1 A.REI.3 N.Q.1 N.Q.2	<p><b>Equations</b></p> <ul style="list-style-type: none"> <li>--- Write and solve multi-step equations in one variable</li> <li>--- Include rational coefficients</li> <li>--- Incorporate real-world contexts</li> <li>--- Verify solutions</li> </ul> <p><b>Inequalities</b></p> <ul style="list-style-type: none"> <li>--- Write and solve multi-step inequalities in one variable</li> <li>--- Include rational coefficients</li> <li>--- Incorporate real-world contexts</li> <li>--- Graph solutions</li> <li>--- Verify solutions</li> </ul>
Polygons and Formulas	N.Q.1 N.Q.2 G.CO.1 G.GMD.1	<p><b>Polygons</b></p> <ul style="list-style-type: none"> <li>--- Identify parts of polygons (radius, diameter, hypotenuse, leg)</li> <li>--- Use formulas to find perimeter, area, and circumference of polygons and circles</li> </ul> <p><b>Distance and Rate</b></p> <ul style="list-style-type: none"> <li>--- Use formulas to find distance and rate</li> </ul>
Absolute Value	A.CED.1 A.REI.1	<p><b>Absolute Value Equations and Inequalities</b></p> <ul style="list-style-type: none"> <li>--- Solve absolute value equations and inequalities in one variable</li> <li>--- Include compound inequalities</li> <li>--- Incorporate real-world contexts</li> <li>--- Graph number line solutions</li> <li>--- Represent solutions in multiple ways: words, graphs, etc.</li> </ul>
<b>9th Week</b>	<b>Review/1st Cumulative Benchmark (covering all content through the 9th week)</b>	

Unit	Common Core	2nd 9-Weeks Major Topics / Concepts
Polynomials	A.APR.1 A.SSE.2	<p><b>Polynomials and Exponents</b></p> <ul style="list-style-type: none"> <li>--- Add and subtract polynomial expressions</li> <li>--- Multiply and divide monomial expressions with exponents</li> </ul> <p><b>Polynomials and Factoring</b></p> <ul style="list-style-type: none"> <li>--- Use GCF to factor polynomial expressions</li> <li>--- Factor quadratics with rational roots</li> <li>--- Factor perfect square trinomials</li> <li>--- Factor difference of square polynomials</li> <li>--- Determine if a polynomial is prime</li> </ul> <p><b>Polynomials and Polygons</b></p> <ul style="list-style-type: none"> <li>--- Use polygons to add and subtract polynomials</li> <li>--- Represent polynomial operations with area models</li> </ul>
Quadratics	A.SSE.3a A.SSE.3b F.IF.7 F.IF.8	<p><b>Quadratics</b></p> <ul style="list-style-type: none"> <li>--- Graph quadratic functions</li> <li>--- Determine solutions to quadratic functions by: graphing, factoring, and completing the square</li> <li>--- Use the quadratic formula to solve quadratics</li> <li>--- Analyze quadratic functions</li> </ul>
Matrices		<p><b>Matrices</b></p> <ul style="list-style-type: none"> <li>--- Use scalar multiplication</li> <li>--- Add and subtract matrices</li> <li>--- Use matrices to solve mathematical situations and contextual problems</li> </ul>
<b>18th Week</b>	<b>Review/2nd Cumulative Benchmark (covering all content through the 18th week)</b>	

Unit	Common Core	3rd 9-Weeks Major Topics / Concepts
Functions	F.IF.1 F.IF.2 F.IF.5 F.BF.1 F.LE.2	<p><b>Functions</b></p> <ul style="list-style-type: none"> <li>--- Analyze relationships between x and y values</li> <li>--- Determine if a relation is a function</li> <li>--- Identify domain and range</li> <li>--- Write functions</li> <li>--- Analyze and apply function rules</li> </ul> <p><b>Absolute Value Functions</b></p> <ul style="list-style-type: none"> <li>--- Graph absolute value functions</li> <li>--- Analyze absolute value functions</li> </ul>
Linear Functions and Slope	A.CEO.4 F.IF.6 G.GPE.5 S.ID.7	<p><b>Slope</b></p> <ul style="list-style-type: none"> <li>--- Solve literal equations for a specific variable (e.g., <math>y = mx + b</math>)</li> <li>--- Calculate slope using multiple forms</li> <li>--- Analyze slope of vertical and horizontal lines</li> <li>--- Interpret slope as rate of change</li> <li>--- Write equations of lines using slopes, intercepts, and slope-intercept form</li> <li>--- Use slope to determine if lines are parallel or perpendicular</li> </ul>
Coordinate Plane and Graphing Linear Functions	A.CED.2 A.REI.10 A.REI.12 F.IF.4 G.GPE.6 G.GPE.7 N.Q.1 N.Q.2	<p><b>Coordinate Plane</b></p> <ul style="list-style-type: none"> <li>--- Find midpoint</li> <li>--- Determine distance</li> <li>--- Apply Pythagorean Theorem</li> <li>--- Use real-world contexts</li> </ul> <p><b>Linear Functions</b></p> <ul style="list-style-type: none"> <li>--- Use slopes and intercepts to graph functions</li> <li>--- Analyze linear functions</li> <li>--- Write, graph, and analyze two-variable inequalities</li> </ul>
Systems of Equations and Inequalities	A.CED.3 A.REI.5 A.REI.6 A.REI.11 A.REI.12	<p><b>Methods for Solving Systems of Equations</b></p> <ul style="list-style-type: none"> <li>--- Solve by graphing</li> <li>--- Solve using substitution</li> <li>--- Solve using elimination</li> </ul> <p><b>Methods for Solving Systems of Inequalities</b></p> <ul style="list-style-type: none"> <li>--- Solve by graphing</li> </ul> <p><b>Real-World Applications of Systems Calculator Tips</b></p>
Data Analysis and Probability	S.ID.6 S.ID.8 S.ID.9	<p><b>Scatterplots</b></p> <ul style="list-style-type: none"> <li>--- Draw conclusions and make predictions from scatterplots</li> <li>--- Identify positive, negative, no correlation</li> <li>--- Use linear regression to find line-of-best-fit</li> <li>--- Share calculator tips</li> </ul>
<b>27th Week</b>	<b>Review/3rd Cumulative Benchmark (covering all content through the 27th week)</b>	

<b>4th 9-Weeks</b>	
<b>Weeks 28-33</b>	<b>Review for SATP2 Test</b>
<b>Week 34</b>	<b>SATP2 Test</b>
<b>Week 36</b>	<b>9 Weeks Exam</b>