



WEST SHORE SCHOOL DISTRICT
Pacing Guide: Algebra Grade 8

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1	Foundations of Algebra
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6	Relations and Functions
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8	Geometry
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11	Linear Equations
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16	Systems
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20	Inequalities
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24	Polynomials and Factoring
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35	Data Analysis
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Module 1- Foundations of Algebra (5 weeks) (2 summative tests)

Part 1- Number system, rational & irrational numbers, properties (12), variables and expressions, order of operations, writing & simplifying expressions. Part 2- Writing & Solving Linear Equations, solving word problems using equations, solving for a specific variable, applications of word problem

Module 2- Relations & Functions (2 weeks)

Relations (tables, maps, graphs), Functions (function notation, vertical line test), Linear Functions (standard form, intercepts, rate of change)

Module 3- Geometry (3 weeks)

Pythagorean Theorem, volume (cylinder, cone, sphere), transformations, congruence, similarity, reflection, rotation, translation, dilation

Module 4- Linear Equations (5 weeks)

Slope & rate of change, slope-intercept form, point-slope form, standard form, graphing linear equations, parallel & perpendicular, application of word problems

Module 5- Systems of Linear Equations (4 weeks)

Graphing (all 3 solutions), substitution, elimination (all 4), application of systems

Module 6- Inequalities (4 weeks)

Solving inequalities (all 4 operations), set builder notation, solving multi-step inequalities, (empty set, null set, all real numbers), compound inequalities (intersection & union), absolute value in equations & inequalities, graphing inequalities (boundary line & half plane)

Module 7- Polynomials & Factoring (6 weeks) (2 tests)

Part 1- Exponent rules to simplify monomials, Scientific Notation (add/subtract/multiply/divide), Multiplication of monomials, division of monomials, degree of polynomials, adding & subtracting polynomials, multiplying a monomial & polynomials, multiplying polynomials, evaluate & rewrite expressions involving rational exponents Part 2- factoring a GCF, distributive property to factor, special products, trinomials w & w/out lead coefficient, zero product property, degree of a polynomial to determine number of roots

Module 8- Rational Expressions (5 weeks)

Simplifying rational expressions (monomials & polynomials), multiplying & dividing rational expressions, adding & subtracting rational expressions, LCM of rational expressions, simplify complex fractions with rational expressions, dividing polynomials, solving rational equations



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Module 9- Data Analysis & Probability (2 weeks)

Two- way tables, scatterplots, measures of dispersion (range, quartiles & interquartile range), analyze data (central tendencies, box & whisker plots, scatterplots), determine probability of events occurring (compound events), random samples