

# MASCOUTAH COMMUNITY SCHOOL DISTRICT #19

Grade: 9

Subject: Algebra I

Month	Content	Skills	Assessments	Standards
August	Real Numbers	-Use rational and irrational numbers with the basic operations	Classroom participation Homework (worksheets or from the text) Quizzes/Tests Guided/Independent Practice	6-NS-7 7-NS-2a,b,c
<b>Vocabulary:</b>	Absolute Value, Additive Inverses, Coordinate, Difference, Infinity, Integer, Irrational Number, Natural Number, Negative Number, Opposites, Perfect Square, Positive Number, Principal Square Root, Product, Quotient, Radical Sign, Rational Number, Real Number, Square Root, Sum, Whole Number			
September	Language of Algebra  Linear Equations	-Use order of operations -Describe variables, expressions and properties used with operations -Writing and solving equations using the basic operations -Solve word problems using linear equations -Solve ratio, proportion, and percent problems - Find the probability and odds of simple events.	Classroom participation Homework (worksheets or from the text) Quizzes/Tests Guided/Independent Practice	6-EE-2 6-EE-3 6-EE-5 6-EE-9 N-RN-1 A-SSE-1a 8-EE-7 A-CED-1 A-CED-4 A-REI-1 A-REI-3
<b>Vocabulary:</b>	Addition Property of Equality, Additive Identity, Algebraic Expressions, Associative Property, Base, Coefficient, Commutative Property, Consecutive Integers, Defining a Variable, Distributive Property, Division Property of Equality, Equally Likely, Equivalent Equations, Equivalent Expressions, Evaluate, Exponent, Factors, Formula, Fraction Bar, Grouping Symbols, Identity, Like Terms, Mixture Problems, Multiplication Property of Equality, Multiplicative Identity, Multiplicative Inverse, Multiplicative Property of Zero, Multi-Step Equations, Odds, Order of Operations, Percent of Change, Percent of Decrease, Percent of Increase, Power, Probability, Proportion, Rate, Ratio, Reciprocals, Sample Space, Simple Event, Simplest Form, Solve an Equation, Substitution, Subtraction Property of Equality, Term, Uniform Motion, Variables, Weighted Average			
October	Graphing Relations and	-Understand the Coordinate Plane -Graph functions	Classroom participation Homework (worksheets or	A-REI-10 F-IF-1

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	Functions	-Solve relations with equations	from the text) Quizzes/Tests Guided/Independent Practice	F-IF-2 F-IF-7a F-BF-1a F-BF-3
<b>Vocabulary:</b>	Arithmetic Sequence, Common Difference, Coordinate Plane, Dependent Variable, Dilation, Domain, Function, Function Notation, Graph, Image, Independent Variable, Inductive Reasoning, Inverse, Linear Equation, Mapping, Ordered Pair, Origin, Quadrant, Preimage, Range, Reflection, Relation, Rotation, Sequence, Solution, Transformation, Translation, Vertical Line Test, x-axis, x-coordinate, x-intercept, y-axis, y-coordinate, y-intercept			
November	Analyze Linear Equations	-Define Slope -Solve equations involving slope -Scatter Plots and Lines of Fit	Classroom participation Homework (worksheets or from the text) Quizzes/Tests Guided/Independent Practice	8-F-3 8-F-4 A-CED-2 F-IF-4 F-IF-6 S-ID-6a,c
<b>Vocabulary:</b>	Constant of Variation, Direct Variation, Line of fit, Negative Correlation, Parallel Lines, Perpendicular Lines, Point-Slope Form, Positive Correlation, Rate of Change, Scatter Plot, Slope, Slope-intercept Form, Standard Form of a Linear Equation, Undefined Slope			
December	Solve Linear Inequalities	-Solve inequalities using basic operations -Solve word problems involving inequalities -Graph inequalities	Classroom participation Homework (worksheets or from the text) Quizzes/Tests Guided/Independent Practice	A-CED-1 A-CED-3 A-REI-12
<b>Vocabulary:</b>	Addition Property of Inequalities, Boundary Compound Inequality, Division Property of Inequalities, Half-Plane, Intersection, Multiplication Property of Inequalities, Set-Builder Notation, Union,			
January	Solve systems of linear equations and inequalities	-Graph systems of equations -Solve systems of equations -Graph systems inequalities -Solve word problems using systems of	Classroom participation Homework (worksheets or from the text) Quizzes/Tests	8-EE-3 8-EE-8 A-APR-1 A-REI-6

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	Polynomials	equations - Use basic operations to simplify monomial expressions and equations -Solve problems involving scientific notation	Guided/Independent Practice	A-REI-7
<b>Vocabulary:</b>	Binomial, Consistent, Constant, Degree of a Monomial, Degree of a Polynomial, Dependent, Difference of Squares, Elimination, FOIL Method, Inconsistent, Independent, Monomial, Polynomial, Power of a Power, Power of a Product, Power of a Quotient, Product of Powers, Product of a Sum and a Difference Quotient of Powers, Scientific Notation, Square of a Difference, Square of a Sum, Substitution, System of Equations, System of Inequalities, Trinomial,			
February	Factoring	-Simplify expressions using factoring -Solve equations using factoring -Solve word problems using factoring	Classroom participation Homework (worksheets or from the text) Quizzes/Tests Guided/Independent Practice	A-SSE-2 A-SSE-3a
<b>Vocabulary:</b>	Composite Number, Factored Form, Factoring, Factoring by Grouping, Greatest Common Factor, Perfect Square Trinomial, Prime Factorization, Prime Number, Prime Polynomial, Square Root Property, Zero Product Property			
March	Quadratic and Exponential Functions	-Graph quadratic functions -Solve quadratic equations -Solve and graph exponential functions -Solve word problems using quadratic and exponential functions -Solve geometric sequences	Classroom participation Homework (worksheets or from the text) Quizzes/Tests Guided/Independent Practice	A-SSE-3a,b A-APR-3 A-REI-4 F-IF-7a F-IF-8a F-BF-2
<b>Vocabulary:</b>	Appreciation, Axis of Symmetry, Common Ratio, Completing the Square, Compound Interest, Depreciation, Discriminant, Exponential Decay, Exponential Function, Exponential Growth, Geometry Mean, Geometric Sequence, Maximum, Minimum, Parabola, Quadratic Equation, Quadratic Formula, Quadratic Function, Roots, Symmetry, Vertex, Zeroes			
April	Radical	-Simplify radical expressions	Classroom participation	8-NS-2

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	Expressions and Triangles	-Use and understand Pythagorean Theorem and Distance Formula -Use trigonometric ratios to solve triangles	Homework (worksheets or from the text) Quizzes/Tests Guided/Independent Practice	8-EE-2 A-REI-2 G-SRT-8
<b>Vocabulary:</b>	Angle of Depression , Angle of Elevation , Conjugate, Cosine, Denominator, Distance Formula, Extraneous Solution, Hypotenuse, Leg, Pythagorean Theorem, Pythagorean Triple, Radicand , Radical Expression, Rationalizing the Radical Equation, Sine, Solve a Triangle, Tangent, Trigonometric Ratio,			
May	Rational Expressions and Equations	-Solve inverse variation equations -Simplify rational expressions -Multiply and divide polynomials -Simplify rational expressions with like and unlike denominators -Simplify mixed expressions and complex fractions -Solve rational equations	Classroom participation Homework (worksheets or from the text) Quizzes/Tests Guided/Independent Practice	A-APR-6 A-REI-2
<b>Vocabulary:</b>	Complex Fraction , Dimensional Analysis, Inverse Variation, Product Rule, Rational Expression, Excluded Values, Least Common Denominator (LCD), Least Common Multiple (LCM), Mixed Expression, Rate Problems, Rational Equations, Work Problems,			