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| **Course: High School Algebra I Content Area Mathematics**  |
| **Timeline** | **Cluster** | **College and Career Readiness Standard** | **Student I Can Statement(s) / Learning Target(s)** | **Academic Vocabulary** | **Assessments** | **Notes / Self - Reflection** |
| First Quarter | Reason Quantitatively | Standards 1-3 | Choose and interpret units to model application problems. | Units ScaleLimitations  | Star BenchmarkTeacher created formative and summative assessmentOngoing informal assessmentPerformance based assessment |  |
| First Quarter | Expressions | Standard 4 | Write, interpret and simplify algebraic expressions | ExpressionTermsFactorsCoefficients | Star BenchmarkTeacher created formative and summative assessmentOngoing informal assessmentPerformance based assessment |  |
| First Quarter | Writing equations to model problems | Standards 5 - 8 | Model a problem with an equationRearrange formulas | ConstraintsEquationsInequalitiesFormulaVariable | Star BenchmarkTeacher created formative and summative assessmentOngoing informal assessmentPerformance based assessment |  |
| First Quarter | Solve equations and inequalities in one variable | Standards 9 -10 | Solve equations and inequalities in one variable and justify reasoning | EquationsInequalitiesSolutionVariableLinear | Star BenchmarkTeacher created formative and summative assessmentOngoing informal assessmentPerformance based assessment |  |
| Second Quarter | Graph linear equations and inequalities | Standards 15 - 17 | Graph linear equations inequalities and using tables, slope-intercept form and intercepts, and using technology. | Coordinate PlaneX,Y axisOriginSolutionQuadrantLinearHalf-planeSlopeIntercepts | Star BenchmarkTeacher created formative and summative assessmentOngoing informal assessmentPerformance based assessment |  |
| Second Quarter | Functions and Function Notation | Standards 18 - 25 | Evaluate functions for given inputsIdentify domain and range of functionsShow key features of a graph (max, min)Write functions from sequences, tables, and graphs | FunctionFunction NotationDomainRangeMaximum, MinimumEnd BehaviorRate of Change | Star BenchmarkTeacher created formative and summative assessmentOngoing informal assessmentPerformance based assessment |  |
| Second Quarter | Systems of Equations | Standards 13 - 14 | Solve systems by graphing, substitution, elimination, and technologyUse systems of equations to solve application problems | System SolutionSubstitutionEliminationInfinite SolutionNo Solution | Star BenchmarkTeacher created formative and summative assessmentOngoing informal assessmentPerformance based assessment |  |
| Third Quarter | Linear and Exponential Relationships | Standards 26 - 32 | Build a function that models a relationship between two quantities and from existing functions.Construct and compare linear, exponential, and quadratic models to solve problems.Interpret expressions for functions in terms of the situation they model. | Explicit and Recursive FunctionArithmetic and Geometric SequencesFunction TransformationsRate of ChangeGrowthDecayExponential Function | Star BenchmarkTeacher created formative and summative assessmentOngoing informal assessmentPerformance based assessment |  |
| Third Quarter | Expressions and Equations | Standards 11-12Standards 41 - 49 |  Extend the properties of Exponents to Rational ExponentsInterpret the Structure of Equations.Write Expressions in Equivalent forms to solve problems.Perform arithmetic operations on polynomials.Create equations that describe numbers or relationships.Solve equations and inequalities in one variable. | Radicals and Rational ExponentsQuadraticPolynomialTermDegreeCoefficientEquivalent FormFactoringZerosComplete the SquareMaximumMinimumImaginary NumberComplex Number System(Will not solve quadratics over complex number system.)Quadratic FormulaSystem | Star BenchmarkTeacher created formative and summative assessmentOngoing informal assessmentPerformance based assessment |  |
| Fourth Quarter | Quadratic Functions and Modeling | Standards 50 - 60 | Use properties of rational and irrational numbers.Interpret functions that arise in applications in terms of a context.Analyze functions using different representations.Build a function that models a relationship between two quantities and from existing functions.Construct and compare linear, quadratic and exponential models and solve problems. | Rational and Irrational numbers.InterceptsIncreasingDecreasingRelative Maximum and MinimumZerosVertexVertex formFactored formStandard formPiece-wise FunctionDomainRangeAbsolute Value Functions | Star BenchmarkTeacher created formative and summative assessmentOngoing informal assessmentPerformance based assessment |  |
| Fourth Quarter | Statistics | Standards 33 - 40 | Represent data with scatter plots, histograms, and box plotsCalculate measures of central tendencyCreate and interpret frequency tablesFit a linear function to a data set using regression with, and without, technology  | HistogramBox plotScatter plotMeanMedianModeInterquartile RangeData setsOutliersFrequencyRegressionCorrelationCausationStandard Deviation | Star BenchmarkTeacher created formative and summative assessmentOngoing informal assessmentPerformance based assessment |  |