**Pacing Guide**

**Course: Algebra II Grade: 10-11**

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| **Months/Days** | **UNITS** | **STANDARDS** | **CONTENT****Topics being covered? What do students need to know? (*nouns*)** | **ACTIVITIES****w/Integration of Technology & Career Ready Practices** | **ASSESSMENTS****What evidence (formative/summative) is utilized to establish that the content, standards, & skills have been mastered?** |
| September(2 weeks) | Basic Concepts of Algebra | MA.9-12.A-APR.AMA.9-12.A-REIMA.9-12.A-REI.BMA.9-12.A-REI.DMA.9-12.A-SSE.BMA.9-12.N-Q.AMA.9-12.A-CEDMA.9-12.A-CED.A MA.9-12.A-REIMA.9-12.A-REI.AMA.9-12.A-REI.BMA.9-12.A-REI.D | Linear equations in one variableProperties of operationsProperties of equalityWord problems with linear equationsAlgebraic expressionsConjunctions & DisjunctionsLinear inequalities in one variableAbsolute value equationsWord problems with inequalities | Mathxlforschool.comGroup Project Creating Word ProblemsGraphing CalculatorMathxlforschool.comPresentation of Compound Inequalities using and/orGraphing Calculator | Unit Test on Solving and Graphing Equations and Inequalities |
| October -November(10 weeks) | Linear Equations and Functions  | MA.9-12.A-REI.A.1MA.9-12.A-REI.A.2MA.9-12.A-REI.B.3MA.9-12.A-REI.C.5MA.9-12.A-REI.C.6MA.9-12.A-REI.C.8MA.9-12.A-REI.D.10MA.9-12.A-REI.D.11MA.9-12.A-REI.D.12MA.9-12.F-BF.AMA.9-12.F-BF.A.1MA.9-12.F-IF.AMA.9-12.F-IF.A.1MA.9-12.F-IF.A.2MA.9-12.F-IF.B.4MA.9-12.F-IF.B.5MA.9-12.F-IF.B.6MA.9-12.F-IF.C.7MA.9-12.F-IF.C.8MA.9-12.F-IF.C.9MA.9-12.F-LE.AMA.9-12.G-GPE.B.5MA.9-12.S-ID.C.7MA.9-12.S-ID.C.8 | Systems of linear equations through graphing, substitution, elimination and using technologyApplications of systemsSystems of linear inequalitiesSystems of three equationsOperation with functionsFinding domain and rangeComposition of functions | Mathxlforschool.comGraphing Calculator Exploration with Systems | Graphing Linear Equations QuizSystems of Equations QuizUnit Test on Systems of EquationsComposition of Functions QuizUnit Test on Relations & Functions |
| Dec - Jan (7 weeks) | Polynomials | MA.9-12.A-APRMA.9-12.A-APR.AMA.9-12.A-APR.A.1MA.9-12.A-APR.BMA.9-12.A-APR.B.3MA.9-12.A-SSE.A.1MA.9-12.A-SSE.A.2MA.9-12.A-SSE.BMA.9-12.A-SSE.B.3MA.9-12.F-IF.C.7MA.9-12.F-IF.C.8MA.9-12.F-LE.B.5MA.9-12.N-RN.A.1 | Operations with polynomialsLaws of exponentsMultiplying polynomialsPrime factorizationSpecial factorizationFactoring quadraticsSolving quadratic equations by factoring | Mathxlforschool.comGraphing Calculator Exploration with Quadratics and the Effects of Changing Parts of the Equation | Operations on Polynomials QuizSpecial Case Factoring QuizUnit Test on FactoringSolve by Factoring Quiz |
| Feb-March(8 weeks) | Quadratic Equations and Functions | MA.9-12.F-IF.C.7MA.9-12.F-IF.C.8MA.9-12.F-IF.C.9MA.9-12.N-CN.CMA.9-12.N-CN.C.7 | Completing the squareThe quadratic formulaThe discriminantEquations in quadratic formGraphing y-k = a(x-h)^2Writing quadratic functions and equations | Mathxlforschool.comDesmos Graphing ProjectGroup Project Analyzing all methods for solving quadratic equationsGraphing Calculator | Completing the Square QuizQuadratic Formula and Discriminant QuizUnit Test on Quadratic Functions and Their Graphs |
| April-May(5 weeks) | Irrational and Complex Numbers  | MA.9-12.F-IF.CMA.9-12.F-IF.C.7MA.9-12.N-CNMA.9-12.N-CN.AMA.9-12.N-CN.A.1MA.9-12.N-CN.A.2MA.9-12.N-CN.A.3MA.9-12.N-CN.BMA.9-12.N-CN.B.4MA.9-12.N-CN.B.5MA.9-12.N-RN.B | Roots of real numbersProperties of radicalsSums of radicalsBinomials with radicalsEquations with radicalsConjugatesRational and irrational numbersImaginary number iComplex numbers | Mathxlforschool.comPresentation on Complex NumbersGraphing Calculator | Imaginary Number QuizSimplifying Radicals QuizUnit Test on Complex Numbers |
| May(5 weeks) | Rational Expressions | MA.9-12.A-APRMA.9-12.A-APR.AMA.9-12.A-APR.D.7MA.9-12.N-Q.AMA.9-12.N-Q.A.1MA.9-12.N-Q.A.2MA.9-12.N-Q.A.3MA.9-12.N-RN.BMA.9-12.N-RN.B.3 | Quotients of monomialsZero and negative exponentsAdd, subtract, multiply and divide rational expressionsComplex FractionsFractional coefficients and equations | Mathxlforschool.comGroup Project on Simplifying Rational ExpressionsGraphing Calculator | Simplifying Complex Fractions QuizSimplifying Rational Expressions QuizUnit Test on Simplifying Rational Expressions Using Operations |
| June (3 weeks) | Exponential Functions | MA.9-12.F-BF.AMA.9-12.F-IF.B.4MA.9-12.F-IF.CMA.9-12.F-IF.C.7MA.9-12.F-IF.C.7eMA.9-12.F-LE.B.5 | Rational exponentsReal number exponentsExponential growth and decay | Mathxlforschool.comRational Exponents Group Work Graphing Calculator | Rational and Real Number Exponents Quiz  |