**PACING GUIDE**

**COURSE:** Honors Algebra II **GRADE(S): 10,11**

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| **MONTH** | **UNIT** | **STANDARDS/SKILLS** | **ASSESSMENTS**What evidence (formative/summative) is utilized to establish that the content, standards, & skills have been mastered? | **CONTENT**Topics being covered? What do students need to know? (*nouns*) | **ACTIVITIES**w/Integration of Technology & Career Ready Practices |
| September | Basic Concepts of Algebra And Inequalities and proof | MA.9-12.A-CEDMA.9-12.A-CED.AMA.9-12.A-REIMA.9-12.A-REI.AMA.9-12.A-REI.BMA.9-12.A-REI.B.4MA.9-12.A-REI.DMA.K-12.2MA.K-12.6 | Assessment on Algebra 1 Skills | Review of algebra 1 skills | Khan academySummer projectMathxlforschool.com |
| September/October | Linear equation and functions | MA.9-12.A-CEDMA.9-12.A-CED.AMA.9-12.A-REIMA.9-12.A-REI.AMA.9-12.A-REI.BMA.9-12.A-REI.B.4MA.9-12.A-REI.DMA.K-12.2MA.K-12.6 | Assessment on system of linear equations and inequalitiesAssessment on system of non-linear equationsAssessment of systems of three equationsAssessment on Functions  | Systems of linear equationsSystems of linear inequalitiesSystems of three equationsSystems of non-linear equationsOperation with functionsComposite functionsInverse functions | Graphing activityTi-84 activityMathxlforschool.com |
| October | products and factors of 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.CMA.9-12.A-APR.DMA.9-12.A-CEDMA.9-12.A-REIMA.9-12.A-REI.C | Assessment on polynomials and laws of exponentsAssessment on factoringAssessment on Solving quadratic equations | Operations with polynomialsLaws of exponentsMultiplying polynomialsPrime factorizationSpecial factorizationFactoring quadraticsSolving quadratic equations | Factoring activityMathxlforschool.com |
| November | Rational expressions | MA.9-12.A-APR.CMA.9-12.A-APR.DMA.9-12.A-APR.D.6

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| MA.9-12.A-APR.D.7 |

MA.9-12.A-CED | Assessment on quotients of monomials and zero and negative exponentsAssessment on operations with rational expressions and complex fractionsAssessment on fractional coefficients and equations | Quotients of monomialsZero and negative exponentsAdd, subtract, multiply and divide rational expressionsComplex FractionsFractional coefficients and equations | Mathxlforschool.comComplex fraction activityNegative exponent activity |
| December | Irrational and complex numbers | MA.9-12.A-APR.CMA.9-12.A-APR.DMA.9-12.A-APR.D.6

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| MA.9-12.A-APR.D.7 |

MA.9-12.A-CED | Assessment on roots and radicalsAssessment on sums of radicals, binomials with radicals and equations with radicalsAssessment on complex numbers | Roots of real numbersProperties of radicalsSums of radicalsBinomials with radicalsEquations with radicalsConjugatesRational and irrational numbersImaginary number iComplex numbers | Finding roots of real numbersConjugatesProperties of iMathxlforschool.com |
| January | Quadratic equation and functions | MA.9-12.A-REI.B.4MA.9-12.A-SSE.B.3MA.K-12.1MA.K-12.3MA.K-12.5MA.K-12.7 | Assessment on completing the square and the quadratic formulaAssessment on the quadratic function and its graph | Completing the squareThe quadratic formulaThe discriminantEquations in quadratic formGraphing y-k = a(x-h)^2Writing quadratic functions and equations | Parent graph activityDiscriminant activityMathxlforschool.com |
| February | Variation and polynomial equations | MA.K-12.5 MA.K-12.6 MA.K-12.7 MA.K-12.8MA.9-12.A-REI.DMA.9-12.A-SSE | Assessment on variation and proportion.Assessment on polynomial equations | Direct variation and proportionInverse and joint variationDividing polynomials Synthetic divisionThe remainder and factor theorems | Mathxlforschool.com |
| March | Exponental and Logarithmic Functions | MA.K-12.1 MA.K-12.2 MA.K-12.3 MA.K-12.4

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| MA.9-12.A-REI.D |

MA.9-12.A-SSE.B.3MA.9-12.F-IFMA.9-12.F-LEMA.9-12.F-LE.B | Assessment rational and real number exponentsAssessment on logarithmic functions Assessment on applications of logarithms and exponential growth and decay | Rational exponentsReal number exponentsDefinition of logarithmsLaws of logarithmsApplications of logarithmsExponential growth and decayThe natural Log functions | Exponential growth and decay activityMathxlforschool.comGraphing exponential functions activity |
| April | Matrices | MA.K-12.1 MA.K-12.4MA.K-12.5 MA.K-12.7MA.K-12.8MA.9-12.A-REI.CMA.9-12.N-VM.C | Assessment on matrix operationsAssessment on inverses of matricesAssessment on cramers rule | Operations on matricesDeterminantsInverses of matricesProperties of determinantsCramer’s Rule | Mathxlforschool.com |
| April  | Sequesnces and Series | MA.K-12.1 MA.K-12.5 MA.K-12.7MA.K-12.8MA.9-12.S-ICMA.9-12.S-ID.C | Assessment on sequences | Types of sequencesArithmetic sequencesGeometric Sequences | Sequences activity |
| May | Sequense and series | MA.K-12.1 MA.K-12.5 MA.K-12.7MA.K-12.8MA.9-12.S-ICMA.9-12.S-ID.C | Assessment on seriesAssessment on Binomial expansion | Series and sigma notationSums of Arithmetic and geometric SeriosInfinite Geometric SeriesPowers of binomialsThe general Binomial expansion | Pascal Triangle activity |
| May/June | Statistics | MA.K-12.1 MA.K-12.5 MA.K-12.7MA.K-12.8MA.9-12.S-ICMA.9-12.S-ID.CMA.9-12.S-CP MA.9-12.S-ICMA.9-12.S-ID.AMA.9-12.S-ID.BMA.9-12.S-ID.CMA.9-12.S-MD | Assessment on StatisticsAssessment on counting | Presenting Statistical DataAnalyzing Statistical DataThe Normal DistributionCorrelationFundmental Counting PrinciplePermutationsCombinations | Airline problemTree diagrams |