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| **Unit 0: Foundations for Algebra (4 days)** |
| **Est # Days** | **Focus Benchmark(s)** | **Lesson/Topic** | **Pearson sections and other resources** |
| .5 | MA.8.F.1.1 | Identifying Parts of an Algebraic Expression | 1-1, 1-7 |
| .5 | MA.7.AR.1.1MA.8.AR.1.1 | Combining Like Terms & Distributive Property | 1-7 |
| 1 | MA.912.AR.1.1 | Identifying and Representing Functions | 4-6 |
| 1 | MA.912.F.1.2 | Function Notation and Evaluation | 1-1, 1-2, 4-5 |
| 1 | MA.912.F.1.1 | Classifying Parent Functions (Intro) | 11-7 (Concept Summary), 2-6 (Algebra II) |
| Vocabulary: variable, expression, term, set builder notation, function notation, linear, quadratic, exponential, table, relation, mapping, evaluate |
| Secondary Resource for this unit: : [https://www.storyofmathematics.com/parent-functions/,](https://www.storyofmathematics.com/parent-functions/%2C) <https://quizizz.com/admin/presentation/6005ce00500381001bec317d?source=quiz_page> |

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| **Unit 1: Solving Equations & Linear Inequalities (14 days)** |
| **Est # Days** | **Focus Benchmark(s)** | **Lesson/Topic** | **Pearson sections and other resources** |
| 1 | 912.A.R. 1.1912.A.R. 2.1  | Solving One-Step Equations | 2-1 |
| 5 | 912.A.R. 1.2912.A.R. 2.1 | Solving Multi-Step Equations | 2-2, 2-3, 2-4 |
| 2 | 912.A.R. 1.2 | Rearranging Formulas | 2-5 |
| 1 | 912.A.R. 2.6 | Understanding Set-Builder Notation | 3-1 |
| 2 | 912.A.R. 2.6 | Solving and Graphing Linear Inequalities in One-Variable | 3-2, 3-3,3-4 |
| 2 | 912.A.R. 2.6 | Solving and Graphing Compound Inequalities | 3-6 |
| 1 | 912.A.R. 2.6 | Writing and Solving Inequalities | 3-1, 3-2, 3-3, 3-4, 3-6 |
| Vocabulary: solve, equation, square root property, inverse operation, inequality, less than, greater than, less than or equal to, greater than or equal to  |
| **Unit 2: Graphing Linear Functions & Inequalities (13 days)** |
| **Est # Days** | **Focus Benchmark(s)** | **Lesson/Topic** | **Pearson sections and other resources** |
| 2 | 912.F.1.3 | Calculating and interpreting Average Rate of Change | 5-1 |
| 3 | 912.A.R. 2.2 | Writing Equations of Lines | 5-3, 5-4, 5-5 |
| 0.5 | 912.A.R. 2.3 | Relationships of Parallel and Perpendicular Lines | 5-6 |
| 1.5 | 912.A.R. 2.3 | Writing Equations of Parallel and Perpendicular Lines | 5-6 |
| 4 | 912.A.R.1.1912.A.R. 2.4 | Key Features of Linear Graphs | 5-2, 5-3, 5-4, 5-5 |
| 2 | 912.A.R. 2.8912.A.R. 2.7 | Writing and Graphing Two-Variable Linear Inequalities | 6-6 Concept Byte |
| Vocabulary: average rate of change, slope, parallel, perpendicular, increasing, decreasing, end behavior, x-intercept, y-intercept, domain, range |
| **Unit 3: Systems of Equations & Inequalities (13 days)** |
| **Est # Days** | **Focus Benchmark(s)** | **Lesson/Topic** | **Pearson sections and other resources** |
| 1 | 912.F.1.3 | Solving Systems of Equations: Graphing | 6-1 |
| 3 | 912.A.R. 9.1 | Solving Systems of Equations: Substitution | 6-2 |
| 3 | 912.A.R. 9.1 | Solving Systems of Equations: Elimination | 6-3 |
| 4 | 912.A.R. 9.6 | Solving Systems of Equations in a Real-World Context | 6-1, 6-2, 6-3 |
| 1 | 912.A.R. 9.4 | Solving Systems of Linear Inequalities | 6-6 |
| Vocabulary: systems of equations, substitution, elimination |
| **Unit 4: Exponent Rules & Radicals (16 days)** |
| **Est # Days** | **Focus Benchmark(s)** | **Lesson/Topic** | **Pearson sections and other resources** |
| 1 | 912.NSO.1.1912.NSO.1.2 | Exploring Rational Exponents | 7-5 Concept Byte |
| 3 | 912.NSO.1.4 | Writing Equivalent Expressions Using Rational Exponents | 7-5 |
| 6 | 912.NSO.1.1 | Applying Laws of Exponents | 7-1, 7-2, 7-3, 7-4 |
| 3 | 912.NSO.1.2 | Simplifying Radical Expressions | 10-2 |
| 3 | 912.NSO.1.4 | Operations with Radical Expressions | 10-3 |
| Vocabulary: index, radical, radicand, rational, equivalent, power rule, product rule, quotient rule, exponent, inverse, base, exponent |
| **Unit 5: Exponential Functions (16 days)** |
| **Est # Days** | **Focus Benchmark(s)** | **Lesson/Topic** | **Pearson sections and other resources** |
| 2 | 912.A.R.5.2912.A.R.5.4 | Classifying Exponential Functions  | 7-6 |
| 3 | 912.A.R.5.3 | Exponential Growth and Decay: Word Problems | 7-7 |
| 3 | 912.A.R.5.6 | Graphing Exponential Functions | 7-6 |
| 3 | 912.A.R.5.6 | Domain and Range of Exponential Function (graphs and equations) | NOT in Pearson |
| Vocabulary: exponential function, exponential growth function, exponential decay function, common ratio, growth/decay rate, growth factor, decay factor, end behavior |
| **Unit 6: Financial Literacy (4 days)** |
| **General Days** | **Focus Benchmark(s)** | **Lesson/Topic** |  |
| 2  | 912.FL.3.2 | Simple Interest | 2-9 |
| 2  | 912.FL.3.2912.FL.3.4 | Compound Interest | 7-7 |
| 3  | 912.FL.3.4 | Continuous Compound Interest **(HONORS ONLY)** | NOT in Pearson |
| Vocabulary: simple interest, compound interest, exponential growth, linear growth |
| **Unit 7: Polynomials (18 days)** |
| **Days** | **Focus Benchmark(s)** | **Lesson/Topic** | **Pearson sections and other resources** |
| 1 | 912.A.R.1.3 | Classifying Polynomials | 8-1 |
| 1  | 912.A.R.1.3 | Adding and Subtracting Polynomials  | 8-1 |
| 2 | 912.A.R.1.3 | Multiplying Polynomials | 8-2 |
| 2 | 912.A.R.1.3 | Multiplying Binomials  | 8-3 |
| 2 | 912.A.R.1.3 | Multiplying Special Cases | 8-4 |
| 1 | 912.A.R.1.7 | Factoring using the Distributive Property | 8-2 |
| 2 | 912.A.R.1.7 | Factoring by Grouping | 8-8 |
| 2  | 912.A.R.1.7 | Factoring Trinomials with Lead Coefficients of 1 | 8-5 |
| 2  | 912.A.R.1.7 | Factoring Trinomials with Lead Coefficients Greater Than 1 | 8-6 |
| 2  | 912.A.R.1.7 | Factoring Special Cases | 8-7 |
| 1 | 912.A.R.1.4 | Dividing Polynomials by Monomials | 11-3 |
| Vocabulary: area model, binomial, coefficient, monomial, polynomial, degree, standard form of a polynomial, trinomial |
| Secondary Resource for this unit: Math Nation: 2.4-2.9, Unit 7 |
| **Unit 8: Quadratic Equations (8 days)** |
| **Day** | **Focus Benchmark(s)** | **Lesson/Topic** | **Pearson sections and other resources** |
| 1  | 912.A.R.3.1 | Solve a Quadratic Equation Using Square Root Property | 9-3 |
| 1  | 912.A.R.3.1 | Solve a Quadratic Equation Using the Zero Product Property | 9-4 |
| 1 | 912.A.R.3.1 | Completing the Square when a =1 | 9-5 |
| 1 | 912.A.R.3.1 | Completing the Square when a >1 | 9-5 |
| 2 | 912.A.R.3.1 | Solving a Quadratic Equation by Completing the Square | 9-5 |
| 1 | 912.A.R.3.1 | Evaluating the Discriminant | 9-6 |
| 2  | 912.A.R.3.1 | Solve a Quadratic Equation using the Quadratic Formula | 9-6 |
| Vocabulary: Completing the Square, Difference of Two Squares, Discriminant, Factoring, Factoring by Grouping, Perfect Square Trinomial, Prime Polynomial, Quadratic Equation, Quadratic Formula, Zero Factor Property |
| Secondary Resource for this unit: Math Nation:8.5-8.7; 9.5 - 9.11 |
| **Unit 9: Quadratic Functions (13 days)** |
| **General Days** | **Focus Benchmark(s)** | **Lesson/Topic** | **Pearson sections and other resources** |
| 2  | 912.AR.3.4 | Quadratic Graphs (parent function, vertex, axis of symmetry, max/min) | 9-1 |
| 2 | 912.AR.3.7 | Graphing Quadratics Using Standard Form (-b/2a, f(-b/2a)) | 9-2 |
| 2 | 912.AR.3.7 | Graphing Quadratics Using Vertex Form (h,k) | SR |
| 2  | 912.AR.3.8 | Vertical Action (Falling Object) Word Problems | 9-1, KA |
| 2  | 912.AR.3.6 | Characteristics of Quadratic Functions (increasing, decreasing, domain, range, x-intercepts (zeroes), end behavior) | SR |
| 2  | 912.AR.3.4 | Completing a Function Table: Quadratic Functions | SR |
| 1  | 912.AR.3.8 | Matching Quadratic Functions and Graphs | 9-2 |
| Vocabulary: axis of symmetry, standard form, quadratic parent function, parabola, vertex, minimum, maximum, increasing, decreasing, domain, range, zeros, discriminant, vertical action model |
| Secondary Resource for this Unit: Math Nation Unit 8 |

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| **Unit 10: Absolute Value Functions (6 days)** |
| **General Days** | **Focus Benchmark(s)** | **Lesson/Topic** | **Pearson sections and other resources** |
| 2 | 912.AR.4.3 | Graphing Absolute Value Parent Function (y= abs(x)) | 5-8 |
| 1 | 912.AR.4.1 | Key Features of Absolute Value Functions (increasing, decreasing, vertex, end behavior, symmetry) | SR. Concept Byte 5-8 |
| 3 | 912.AR.4.3 | Absolute Value Equations | 1-6 (Algebra II book) |
| Vocabulary: vertex, increasing, decreasing, axis of symmetry, slope, branch, domain, range, set builder notation, x-intercept, y-intercept |
| **Unit 11: Transformations and Special Cases (8 days)** |
| **Days** | **Focus Benchmark(s)** | **Lesson/Topic** | **Pearson sections and other resources** |
| 1 | 912.F.2.1 | Parent Functions I: (Linear, Quadratic, Absolute Value) | 2-6 (Algebra II), SR |
| 1 | 912.F.2.1 | Vertical Transformations of Functions, f(x) + k | 2-6 (Algebra II), SR |
| 1 | 912.F.2.1 | Horizontal Transformations of Functions, f(x+k) | 2-6 (Algebra II), SR |
| 2 | 912.F.2.1 | Transformations by Factor, kf(x). f(kx)1  | 2-6 (Algebra II), SR |
| 1 | 912.F.2.1912.F.1.1 | Parent Functions II: (cubic, square root, cube root, exponential) | 7-6, H6, 5-1,6-8 (Algebra II) |
| 1 | 912.F.2.1 | Vertical Transformations of Functions II, f(x) + k | H6; 5.1-6.8 (Algebra II) |
| 1 | 912.F.2.1 | Horizontal Transformations of Functions II, f(x+k) | 7-6; 5-1,6-8 (Algebra II) |
| 1 | 912.F.2.1 | Reflections of Functions II | 7-6; 5-1,6-8 (Algebra II) |
| Vocabulary: reflection, stretch, shrink, compression, shift, horizontal, vertical, transformation |
| **Unit 12: Classifying and Analyzing Functions (5 days)** |
| **Days** | **Focus Benchmark(s)** | **Lesson/Topic** | **Pearson sections and other resources** |
| 1 | 912.F.1.6 | Identifying Linear, Exponential and Quadratic Functions from Graphs | 9-7 |
| 2 | 912.F.1.6 | Identifying Linear, Exponential and Quadratic Functions from Tables | 9-7 |
| 1 | 912.F.1.6 | Comparing Linear, Exponential, and Quadratic Growth | 9-7 |
| 1 | 912.F.1.8 | Determining Which Function Type Best Models a Real-World Context | 9-7 |
| Vocabulary: linear, quadratic, exponential, constant |
| Secondary Resource for this Unit: Math Nation 13.8-13.10 |

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| **Unit 13: Foundations for Algebra (7 days)** |
| **Est # Days** | **Focus Benchmark(s)** | **Lesson/Topic** | **Pearson sections and other resources** |
| 1 | 912.DP.1.1 | Create and Interpret Bar Graphs, Line Graphs and Histograms  | 12-2, SH p.810-811 |
| 1 | 912.DP.1.1 | Interpret Circle Graphs  | SH p.812 |
| 1 | 912.DP.1.1 | Interpret Stem-and-Leaf Plots  | SH p. 813 |
| 1 | 912.DP.1.2 | Box Plots  | 12-4 |
| 1 | 912.DP.1.2 | Interpret a Scatter Plot  | 5-7 |
| 1 | 912.DP.1.3 | Correlation and Causation | 5-7, SR |
| 1 | 912.DP.1.4 | Estimating for a Population | 12-3, SR |
| Vocabulary: Bar graphs, line graphs, histograms, stem-and-leaf plot, box plot, scatter plot, correlation, causation, numerical data, categorical data, margin of error, sample survey, population mean, univariate data, bivariate data, numerical |
| Secondary Resource for this Unit: Math Nation: Unit 12 |

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| **Unit 14: Calculating Statistics (8 days)** |
| **Est # Days** | **Focus Benchmark(s)** | **Lesson/Topic** | **Pearson sections and other resources** |
| 1 | 912.DP.2.4 | Constructing Two-Way Frequency Tables | 12-2 |
| 1 | 912.DP.3.1 | Find Probabilities Using Two-Way Frequency Tables | 12-2 |
| 1 | 912.DP.2.5 | Write Equations for Lines of Best Fit | 5-7 |
| 1 | 912.DP.3.2 | Find the Equation of Regression Line  | Not In Pearson; Need Secondary Resource |
| 1 | 912.DP.2.4 | Interpret Regression Lines  | Not In Pearson; Need Secondary Resource |
| 1 | 912.DP.3.3 | Analyze a Regression Line of a Data Set  | Not In Pearson; Need Secondary Resource |
| 1 | 912.DP.2.6 | Interpret a Scatter Plot  | Not In Pearson; Need Secondary Resource |
| 1 | 912.DP.2.4 | Determining Possible Associations in Data | Not In Pearson; Need Secondary Resource |
| Vocabulary: frequency, regression, probability, scatter plot, marginal frequency, joint frequency |