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**Algebra 1 - PACING GUIDE**

**2017 - 2018**

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|  **FIRST QUARTER** |
| **UNIT** | **PACING****(Instruction, Review, and Assessment)** | **TOPICS** |
| **Algebra Basics** | **1 week****(Use as bellwork/review throughout the year)** | * **Real Numbers System**
* **Properties of Real Numbers**
* **Combining Like Terms**
* **Distributive Property**
* **Order of Operations & Absolute Value**
* **Evaluating and Simplifying Expressions**
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| **Statistics** | **1 week****(Use as bellwork/review throughout the year)** | * **Statistics Overview (mean, median, mode, lower extreme, upper extreme, lower quartile, upper quartile, range, interquartile, outliers)**
* **Box-and-whisker plots**
* **Stem-and-leaf plots**
* **Histograms**
 |
| **Multi-Step Equations & Inequalities** | **3 weeks**  | * **Two-Step & Multi-Step Equations**
* **Solving Equations with variables on both sides**
* **Infinite and No solution equations**
* **Solving Algebraic Proportions**
* **Absolute Value Equations**
* **Literal Equations**
* **Two-Step & Multi-Step Inequalities**
* **Compound Inequalities**
* **Absolute Value Inequalities**

**(word problems included in each lesson)** |
| **Relations & Functions**  |  **4 weeks** | * **Relations, Domain, Range**
* **Domain & Range of continuous graphs**
* **Functions**
* **Functions vs. Relations (Is a relation a function?)**
* **Graphing Functions (with Function tables & Zeros of Functions)**
* **Function Notation**
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| **SECOND QUARTER** |
| **UNIT** | **PACING****(Instruction, Review, and Assessment)** | **TOPICS** |
| **Linear Equations** | **3 weeks** | * **Finding Slope/Rate of Change (table, ordered pairs, graphs)**
* **Linear Equation Formulas (Slope Intercept Form, Standard Form)**
* **Graphing Linear Equations (Slope Intercept Form, Standard Form, x-and y- intercepts, vertical and horizontal Lines)**
* **Writing Linear Equations – Point Slope Formula (given point & slope/given two points)**
* **Linear Equation Word Problems**
* **Parallel & Perpendicular Lines (writing & graphing)**
* **Scatter Plots/ Line of Best Fit/ Linear Regression**
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| **Systems of Equations & Inequalities** | **2 weeks** | * **Solving Systems of Equations by Graphing**
* **Solving Systems of Equations by Substitutions**
* **Solving Systems of Equations by Elimination**
* **Linear Inequalities**
* **Systems of Linear Inequalities**

**(word problems included in each lesson)**  |
| **Exponent Rules**  | **4 weeks** | * **Introduction to Monomials (addition & subtraction)**
* **Multiplying Monomials (Product Rule/ Power Rule**
* **Quotient Rule**
* **Negative Exponents**
* **Scientific Notation**
* **Geometric Sequences**
* **Exponential Growth & Decay**
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| **THIRD QUARTER** |
| **UNIT** | **PACING****(Instruction, Review, and Assessment)** | **TOPICS** |
| **Polynomials & Factoring** | **4 weeks** | * **Introduction to Polynomials: Classify, Add, & Subtract**
* **Multiplying Polynomials**
* **Factoring Polynomials: GCF**
* **Factoring Polynomials: Difference of Squares**
* **Factoring Polynomials: Trinomials (x2 + bx + c)**
* **Factoring Polynomials: Trinomials (ax2 + bx + c)**
* **Factoring Polynomials: Grouping (four terms)**
* **Dividing Polynomials by a Monomial/Binomial**
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| **Quadratic Equations** | **4 weeks** | * **Intro to Quadratic Equations: Axis of Symmetry, Vertex, Minimum, Maximum, Parabolas**
* **Graphing Quadratic Equations**
* **Quadratic Roots**
* **Quadratic Equations: Vertex Form**
* **Solving Quadratic Equations by Factoring**
* **Solving Quadratic Equations by the Quadratic Formula**
* **Solving Quadratic Equations by Square Roots**
* **Area Problems**
* **Projectile Motion**
* **Linear vs. Quadratic Modes**
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| **Rational Expression**  | **2 weeks****(rollover into 4th Quarter)** | * **Simplifying Rational Expressions**
* **Multiplying Rational Expressions**
* **Dividing Rational Expressions**
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| **FOURTH QUARTER** |
| **Unit** | **PACING****(Instruction, Review, and Assessment)** | **TOPICS** |
| **Radical Expressions**  | **2 weeks** | * **Simplifying Radicals (squares & cube roots, with variables)**
* **Multiplying Radicals**
* **Dividing Radicals (includes rationalizing the denominator & conjugates)**
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| **Allow time for TNReady Review** |  |  |