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| Grade Level 9th Algebra I | | **Teacher/Room**: L. Payne/Room 181 Week of: October 10 – October 14, 2016 | | | |
| **Unit Vocabulary:** see attached | | | | | |
| **Instructional Strategies Used:** direct instruction, independent study, interactive instruction, partners | | | | | |
| **Day 1** | **Day 2** | | **Day 3** | **Day 4** | **Day 5** |
| **GSE/GPS Standard(s)**:  **MGSE9-12.A.CED.2** Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. | **GSE/GPS Standard(s)**:  **MGSE9-12.A.CED.2** Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. | | **GSE/GPS Standard(s)**:  **MGSE9‐12.A.REI.12** Graph the solution set to a linear inequality in two variables. | **GSE/GPS Standard(s)**:  **MGSE9‐12.A.REI.12** Graph the solution set to a linear inequality in two variables. | **GSE/GPS Standard(s)**:  **MGSE9‐12.A.REI.6** Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables. |
| **EQ Question**: How do I graph equations on coordinate axes with the correct labels and scales? | **EQ Question**: How do I graph equations on coordinate axes with the correct labels and scales? | | **EQ Question**:  How do I graph a linear inequality in two variables? | **EQ Question**:  How do I graph a linear inequality in two variables? | **EQ Question:** How do I solve a system of linear equations by substitution? |
| **Mini Lesson:** 24  **Activating Strategies:** How would you graph this? x + y = 8  **Lesson:** Graphing, by t-table method   1. Computer Lab 2. Pretest 3. Introduction of Graphing with t-table 4. Guided Practice with Graph Boards 5. Assignment-including Friday WS   **Resource/Materials:** Graphs, Markers, Power Point, graphic organizers, worksheets | **Mini Lesson:** usatestprep  **Activating Strategies:** Solve for y:  3x – 15y + 21 + 4x = 42 -16y– 2x – x + 3  **Lesson:** Graphing by slope-intercept method   1. Powerpoint with Cornell Notes 2. Guided Practice with White Boards 3. Assignment 4. Ticket out the door   **Resource/Materials:** Graphs, Markers, Power Point, graphic organizers, worksheets | | **Mini Lesson:** Quiz  **Activating Strategies:** Solving inequalities  **Lesson:** Graphing inequalities   1. Notes with Graphic Organizer 2. Guided Practice 3. Assignment   **Resource/Materials:** Graphs, colored pencils, graphic organizers, Power Point, worksheets | **Mini Lesson**: usatestprep  **Activating Strategies:** Solving inequalities  **Lesson:** Graphing inequalities and Solving Systems by Graphing   1. Notes on Solving Inequalities with Graphic Organizer 2. Guided Practice 3. Notes: Solving Systems by Graphing 4. Guided Practice with White Board 5. Assignment   **Resource/Materials:** Graph Boards, markers, graphic organizers, Power Point, worksheets | **Mini Lesson:** Solving Systems by Graphing  **Activating Strategies:**  Right/Wrong: Solving by substitution  **Lesson**: Solving Systems by Substitution   1. Quiz on Friday WS   2. Powerpoint with guided notes  3. Graphic Organizer  4. Practice Problems (Partners)  5. Assignment  **Resource/Materials:** Powerpoint, Graphic Organizers, Guided Notes, Worksheet |
| **Differentiation:**  *Content/Process/Product:* graphic organizer, graphing boards  *Grouping Strategy:*  *Assessment:* | **Differentiation:**  *Content/Process/Product:* Cornell notes, white boards, USATestPrep  *Grouping Strategy:*  *Assessment:* | | **Differentiation:**  *Content/Process/Product:* Partners  *Grouping Strategy:* random  *Assessment:* | **Differentiation:**  *Content/Process/Product:* graphic organizer, graph boards, USATestPrep  *Grouping Strategy:*  *Assessment:* | **Differentiation:**  *Content/Process/Product:* graphic organizer, guided notes  *Grouping Strategy: Partners*  *Assessment:* teacher observation |
| **Assessment :**  *Formative:* graph boards, thumbs up/down  *Summative:* | **Assessment :**  *Formative:* white boards, ticket-out-the-door  *Summative:* | | **Assessment :**  *Formative:* quiz on graphing equations  *Summative:* | **Assessment :**  *Formative:* thumbs up/down  *Summative:* | **Assessment :**  *Formative:* thumbs up/down, monitoring classwork  *Summative:* |
| **Homework:** worksheets | **Homework:** worksheets | | **Homework:** worksheets | **Homework:** worksheets | **Homework**: Solving by Substitution WS |

• **Algebra**. The branch of mathematics that deals with relationships between numbers, utilizing letters and other symbols to represent specific sets of numbers, or to describe a pattern of relationships between numbers.

• **Arithmetic Sequence**. A sequence of numbers in which the difference between any two consecutive terms is the same.

• **Average Rate of Change**. The change in the value of a quantity by the elapsed time. For a function, this is the change in the y-value divided by the change in the x-value for two distinct points on the graph.

• **Coefficient**. A number multiplied by a variable in an algebraic expression.

• **Constant Rate of Change**. With respect to the variable x of a linear function y = f(x), the constant rate of change is the slope of its graph.

• **Continuous**. Describes a connected set of numbers, such as an interval.

• **Discrete**. A set with elements that are disconnected.

• **Domain**. The set of x-coordinates of the set of points on a graph; the set of x-coordinates of a given set of ordered pairs. The value that is the input in a function or relation.

• **End Behaviors**. The appearance of a graph as it is followed farther and farther in either direction.

• **Equation**. A number sentence that contains an equals symbol.

• **Explicit Formula**. A formula that allows direct computation of any term for a sequence a1, a2, a3, . . . , an, . . . .

• **Expression**. Any mathematical calculation or formula combining numbers and/or variables using sums, differences, products, quotients including fractions, exponents, roots, logarithms, functions, or other mathematical operations.

• **Factor**. For any number x, the numbers that can be evenly divided into x are called factors of x. For example, the number 20 has the factors 1, 2, 4, 5, 10, and 20.

• **Inequality**. Any mathematical sentence that contains the symbols > (greater than), < (less than), ≤ (less than or equal to), or ≥ (greater than or equal to).

• **Interval Notation**. A notation representing an interval as a pair of numbers. The numbers are the endpoints of the interval. Parentheses and/or brackets are used to show whether the endpoints are excluded or included.

• **Linear Function**. A function with a constant rate of change and a straight line graph.

• **Linear Model**. A linear function representing real-world phenomena. The model also represents patterns found in graphs and/or data.

• **Ordered Pair**. A pair of numbers, (x, y), that indicate the position of a point on a Cartesian plane.

• **Parameter**. The independent variable or variables in a system of equations with more than one dependent variable.

• **Range**. The set of all possible outputs of a function.

• **Recursive Formula**. A formula that requires the computation of all previous terms to find the value of an.

• **Slope**. The ratio of the vertical and horizontal changes between two points on a surface or a line.

• **Substitution**. To replace one element of a mathematical equation or expression with another.

• **Term**. A value in a sequence--the first value in a sequence is the 1st term, the second value is the 2nd term, and so on; a term is also any of the monomials that make up a polynomial.

• **Variable**. A letter or symbol used to represent a number.

• **X-intercept**. The point where a line meets or crosses the x-axis

• **Y-intercept**. The point where a line meets or crosses the y-axis