## Algebra CCSS Lesson Plans

Teacher: Angela Estrada
Week: Jan. 22-26, 2024

| DATE | OBJECTIVES | BELL <br> RINGER | $\begin{array}{\|c\|} \hline \text { ANTICIPATORY } \\ \text { SET } \end{array}$ | PROCEDURES | ASSESSMENT | CLOSURE |
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| MONDAY | The student will be able to: <br> 1. Use the structure of an expression to identify ways to rewrite it. A.SSE. 2 <br> 2. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. A.SSE. 3 <br> Essential Question: Can I factor polynomials and determine which method is best for factoring? | ACT Practice Test | ACT Test Taking Strategies | 1. Room Assignments for the MOCK ACT <br> 2. Mixed PracticeFactoring Polynomials <br> HW) Mixed Practice of Factoring Polynomials | Observation/ <br> Participation <br> Student <br> Feedback | Concerns <br> Regarding <br> Polynomial <br> Concepts <br> Tutoring <br> Schedule <br> Reminder: <br> Monday <br> afternoon <br> until 4:30 <br> Tutoring Daily at 8:00 a.m. |
| TUESDAY | The student will be able to complete the MOCK ACT with at least $65 \%$ or more accuracy. <br> Essential Question: Can I complete the MOCK ACT with at least $65 \%$ or more accuracy? | MOCK ACT | MOCK ACT | 1. MOCK ACT <br> 2. Classes meeting after the Mock ACT: Recap of Factoring Polynomials | Mock ACT | AM- Mock ACT <br> Later Classes: Factoring Polynomials |


|  | Later Classes: Can I factor polynomials and determine which method is best for factoring? |  |  |  |  |  |
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| WEDNESDAY | The student will be able to: <br> 1. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. F.IF. 7 <br> 2. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal description. F.IF. 9 <br> Essential Question: <br> Can I analyze graphing characteristics of Quadratics to determine the vertex, axis of symmetry, and turning points (maximum or minimum)? | Analyzing Quadratic Graphs | Exploration of Using Calculators to Sketch Graphs <br> Vocabulary <br> Support: <br> *Vertex <br> *Axis of <br> Symmetry <br> *Turning Points- <br> *Minimum <br> *Maximum | Introduction to <br> Quadratic Equations: <br> Graphing <br> Characteristics- <br> Standard Form, Axis of <br> Symmetry, Vertex, <br> Minimum, Maximum: <br> Standard Form of a Quadratic Equation: $y=$ $a x^{2}+b x+c$ <br> Types of Parabolas: Positive and Negative <br> Axis of Symmetry <br> Formula: $\quad \mathbf{x}=-\frac{b}{2 a}$ <br> Emphasis: Given quadratic equations, determine the following aspects: Vertex, Axis of Symmetry, <br> And Turning Points <br> (Maximum or Minimum) <br> *Findings will be | Portfolio Points <br> Teacher Observation <br> Student <br> Feedback- <br> Boards and <br> Written <br> Responses | What pattern characteristics can you share for quadratic models? |


|  |  |  |  | checked with graphing calculators or desmos.com upon completion. <br> HW) Charact. Of Quadratics Equations WS \#1 |  |  |
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| THURSDAY | The student will be able to: <br> 1. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. F.IF. 7 <br> 2. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal description. F.IF. 9 <br> Essential Question: Can I graph and analyze key features of quadratic functions? | Cumulative Mixed Practice | Calculators: <br> Solving Quadratic <br> Equations by <br> Tables and Graphs | Graphing Quadratic Functions: <br> 1. Steps for Graphing <br> 2. Graphing Each Quadratic using a Table and Identifying: AOS, Vertex, Domain, and Range <br> 3. Analyzing Quadratic Graphs including Minimum, Maximum, Domain, and Range <br> Graphing Quadratic Equations WS \#2 | Portfolio Points <br> Teacher Observation <br> Student <br> Feedback- <br> Boards and <br> Written <br> Responses | Analyze classmate responses. |


| FRIDAY | The student will be able to: <br> 1. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. F.IF. 7 <br> 2. Graph linear and quadratic functions and show intercepts, maxima, and minima. F.IF.7. a <br> 3. Identify the effect on the graph of replacing $f(x)$ by $f(x)+k, k f(x), f(k x)$, and $f(x$ $+k$ ) for specific values of $k$. Find the values of $k$. F.BF. 3 | ACT Practice Test Analysis | Brainstorm <br> Previous <br> Knowledge of Graphing Quadratics | Vertex Form of a <br> Quadratic Equation and Transformations <br> Vertex Form of a Quadratic Equation: $y=a(x-h)^{2}+k$ : <br> 1. Given an equation in vertex form, determine the AOS and vertex. <br> 2. Graph using table of values and determine the following aspects: Axis of Symmetry, Vertex, Domain and Range of the Graph <br> 3. Begin transformations from the quadratic parent function of $y=x^{2}$. Compare transformations. | Teacher Observation <br> Student <br> Feedback <br> Graphing <br> Calculator Skills <br> For Checking <br> Solutions | Graphing <br> Analysis- <br> Creations of <br> Tables and <br> Graphing <br> Responses |
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