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| **INSTRUCTIONAL OBJECTIVES:** Pages 115 – 121 (Chapter 1: *Inverse Relations and Inverse Functions*). |
| * Review the definitions of relation and function. |
| * Understand the definition of a *One-to-One Function.* |
| * Be able to use the *Vertical Line Test* and the *Horizontal Line Test* to identify *One to One Functions.* |
| * Find the inverse of a function. |
| * Know when to use inverse functional notation. |
| * Know how to prove that 2 functions are inverses of each other by the appropriate use of composition. |
| * Define a relation parametrically. |
| * **Technology:** Smart Board, graphing calculator (TI-83 or TI-84). |

**CHAPTER 2: *Quadratic Functions and Their Graphs* (Pages 158-162)**

**Key Concepts**: Quadratic Function, Parabola, Axis of Symmetry, Vertex, Concave Upward, Concave Downward, Maximum, Minimum, Vertex Quadratic Form, Standard Quadratic Form, X-Intercept, Zero, Y-Intercept

**Essential Questions:**  In what ways are you able to characterize the graph of a quadratic function, both in standard and in vertex forms? How can you use your graphing calculator to characterize the graph of a quadratic function? How can you use quadratic functions to solve real-life problems?

**Objective:** The student will demonstrate an understanding of the characteristics of functions.

**Technology:** Graphing calculator (TI-84).

***MONDAY, 10.14.24* Student Holiday**

***WEDNESDAY, 10.16.24***

**Student Presentations of the following problems. Please enter your work into Google Classroom before the beginning of this class.**

* Graph the following parabolas. Be sure to plot and label the vertex, y-intercept, x-intercepts, if any, and the axis of symmetry. If there are no x-intercepts, be sure to find and label points to the left and right of the vertex to establish the correct curvature. Round all values to the nearest tenth.

1. **TALON** y = 3x2 + 8x – 16
2. **ALYSSA** y = - 2x2 + 8x – 1
3. **MICAH** y = 3x2 + 4x
4. **RILEY** y = 4x2 + 6x + 3
5. **ANNA** y = 6(x – 5)2
6. **LOLA KATE** y = -4(x + 4)2 + 2

**Class Work/Homework:** Page 241 (#3 – 8, 13 – 15).

These students will present their solutions to the class on Friday, 10.18.

(3) Naser

(4) Su’kira

(5) Paul

(6) Suhasra

(7) Connor

(8) Shaun

(13) Omar

(14) Vassilis

(15) Joshua

***FRIDAY, 10.18.24***

**Student presentations of** Page 241 (#3 – 8, 13 – 15).

**Class Work/Homework: Handout (6 Quadratic Modeling Problems)**