**MATH ANALYSIS HONORS**

**UNIT 10**

**CAN YOU…**

 **GRAPH A PIECEWISE FUNCTION. STATE THE DOMAIN AND RANGE.**

 **GRAPH A QUADRATIC FUNCTION**

 **FIND THE LOCAL MAXIMUM AND LOCAL MINIMUM OF A FUNCTION**

 **FIND INTERVALS WHERE A FUNCTION IS INCREASING, DECREASING, CONCAVE UP, AND CONCAVE DOWN.**

 **GIVEN FUNCTIONS OR A GRAPH OF FUNCTIONS PERFORM OPERATIONS BETWEEN FUNCTIONS, INCLUDING COMPOSTION. STATE THE DOMAIN OF THESE FUNCTIONS.**

 **GRAPH THE INVERSE OF A FUNCTION.**

 **FIND THE INVERSE ALGEBRACIALLY, INCLUDING THOSE ON RESTRICTED DOMAINS.**

 **ALGEBRACIALLY PROVE (OR DISPROVE) TWO FUNCTIONS ARE INVERSES OF EACH OTHER.**

 **FIND THE ITERATIONS OF A FUNCTION.**

 **GIVEN A GRAPH OR A FUNCTION DETERMINE THE AVERAGE RATE OF CHANGE OVER AN INTERVAL.**

 **STATE THE GEOMETRIC INTERPRETATION OF AVERAGE RATE OF CHANGE.**

* **WRITE A QUADRATIC EQUATION TO MODEL GIVEN INFORMATION OR DATA.**
* **FIND THE DIMENSIONS OF A RECTANGLE THAT GIVE THE RECTANGLE ITS MAXIMUM AREA**