**Algebra 2**

 Welcome to all students!! My name is Ms. Stallworth and I am excited to be your child’s teacher this year. I am looking forward to a great year full of possibilities and great strides for all my students. If there is anything you or your child may need to discuss with me please do not hesitate to call. I would be more than happy to talk about whatever questions or concerns you may have. I will help them in any way I can. My door is always open for assistance if they ask. I am looking forward to meeting your child and helping them achieve their goals this school year.

* **Required Material:** *Prentice Hall Algebra* *2* is the required text for the course. You will need a 3 prong 2 pocket notebook and composition book for use in class every day.

**Classroom Expectations:** The student is responsible for:

* Following directions the first time they are given.
* Being respectful to everyone in the classroom at all times (teacher, students and visitors).
* Being in the classroom when the bell rings.
* Attending school regularly
* Getting the assignment, homework and/or assessments done when the student is absent
* Bringing required materials to class.
	+ **TWO** #2 pencils!
	+ **NO PENS IN ALGEBRA CLASSES ARE PERMITTED!**
* Using appropriate behavior and language to everyone in the classroom.
* ELECTRONIC DEVICES ARE **PROHIBITED** IN CLASS! If seen in class,
* student will give device to teacher.
	+ **Refusal** will result in a **written referral to assistant principal.**

For additional information regarding school rules and policies, see the WHS Handbook.

**Common Core State Standards (CCSS) Course Objectives:**

The student will understand (and/or):

* Interpret expressions that represent a quantity in terms of its context.\*
1. Interpret parts of an expression, such as terms, factors, and coefficients.
2. Interpret complicated expressions by viewing one or more of their parts

as a single entity. (A.SSE. 1a, b)

* Use the structure of an expression to identify ways to rewrite it. (A.SSE. 2)
* Explain properties of the quantity represented by the expression.\*
1. Factor a quadratic expression to reveal the zeros of the function it defines.
2. Complete the square in a quadratic expression to reveal the maximum or

minimum value of the function it defines.

 c. Use the properties of exponents to transform expressions for exponential

functions. (A.SSE. 3 a, b, c)

* Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial. (A.APR 3)
* Create equations and inequalities in one variable and use them to solve

problems. *Include equations arising from linear and quadratic functions,*

*and simple rational and exponential functions.* (A.CED. 1)

* Create equations in two or more variables to represent relationships

between quantities; graph equations on coordinate axes with labels and

scales. (A.CED. 2)

* Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. (A.CED. 4)
* Solve quadratic equations by inspection (e.g., for *x*2 = 49), taking square

roots, completing the square, the quadratic formula and factoring, as

appropriate to the initial form of the equation. Recognize when the

quadratic formula gives complex solutions and write them as *a* } *bi* for

real numbers *a* and *b*. (A.REI. 4b)

* Prove that, given a system of two equations in two variables, replacing one

 equation by the sum of that equation and a multiple of the other produces a

system with the same solutions. (A.REI. 5)

* Solve systems of linear equations exactly and approximately (e.g., with

graphs), focusing on pairs of linear equations in two variables. (A.REI 6)

* Understand that the graph of an equation in two variables is the set of all

its solutions plotted in the coordinate plane, often forming a curve (which

could be a line). (A.REI 10)

* Explain why the x-coordinates of the points where the graphs of the

equations *y* = *f(x)* and *y* = *g(x)* intersect are the solutions of the equation *f(x)*= *g(x)*; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where *f(x)* and/or *g(x)* are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.★ (A.REI 11)

* Graph the solutions to a linear inequality in two variables as a half- plane

(excluding the boundary in the case of a strict inequality), and graph

the solution set to a system of linear inequalities in two variables as the

intersection of the corresponding half-planes. (A.REI 12)

* Understand that a function from one set (called the domain) to another

Set (called the range) assigns to each element of the domain exactly one

element of the range. If f is a function and *x* is an element of its domain,

then *f(x)* denotes the output of *f* corresponding to the input *x*. The graph of *f*

is the graph of the equation *y* = *f(x)*. ( F.IF. 1)

* Use function notation, evaluate functions for inputs in their domains, and

interpret statements that use function notation in terms of a context. (F.IF.2)

* For a function that models a relationship between two quantities, interpret

 key features of graphs and tables in terms of the quantities, and sketch

graphs showing key features given a verbal description of the relationship.

*Key features include: intercepts; intervals where the function is increasing,*

*decreasing, positive, or negative; relative maximums and minimums;*

*symmetries; end behavior; and periodicity.\** (F. IF. 4)

* Relate the domain of a function to its graph and, where applicable, to the

quantitative relationship it describes. *For example, if the function h(n)*

*gives the number of person-hours it takes to assemble n engines in a*

*factory, then the positive integers would be an appropriate domain for the*

*function.\** (F. IF 5)

* Calculate and interpret the average rate of change of a function (presented

symbolically or as a table) over a specified interval. Estimate the rate of

change from a graph.\* (F. IF 6)

* 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. 7b)

* Write a function defined by an expression in different but equivalent forms

to reveal and explain different properties of the function. (F. IF. 8)

# **GRADING PROCEDURE**

\*\* Your grade is based on classroom assignments, quizzes, tests, homework and classroom participation. Your grade each quarter is based on total points possible.

\*\* Your grade is calculated by dividing the total number of points you earned amount of points.

EXAMPLE: Your points= 122 out of a total of 150 points

122

150 = 81% your grade = B

100% - 90% A \*\* Cheating in any form

89% - 80% B ***will not*** be tolerated.

 79% - 70% C

 69% - 60% D **Failure will occur.\*\***

 59% or below F

*THE CHOICE IS* **YOURS!**

YOUR GRADES ARE AFFECTED IF YOU DON’T FEEL LIKE WORKING OR FOLLOWING DIRECTIONS!

**CHOOSE WISELY HOW YOU WANT THIS YEAR TO GO!**