

# Algebra 1 Double Block Syllabus 2015 – 2016

Instructor: Mrs. Jen Nesler

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School Phone #: (540) 289 – 3100

**Textbook:** Glencoe Algebra I (VA Edition)

**Course Description:** Algebra I is an SOL course. Upon completion of the class, each student will take the SOL Test. This course continues to develop the language of mathematics with topics including linear equations and inequalities, polynomial expressions, factoring, quadratic equations, statistics, and graphing. The use of technology will play an important role throughout the year.

## Course Outline and SOLs:

Chapter 1 – The Language of Algebra (SOL A.1, SOL A.4, SOL A.5)

Chapter 2 – Real Number System (SOL A.1, SOL A.3)

Chapter 3 – Solving Linear Equations (SOL A.1, SOL A.4)

Chapter 8 – Polynomials (SOL A.2)

Chapter 9 – Factoring (SOL A.2)

Chapter 12 – Rational Expressions and Equations (SOL A.2, SOL A.8)

Chapter 4 – Graphing Relations and Functions (SOL A.7)

Chapter 5 – Analyzing Linear Equations (SOL A.6, SOL A.8)

Chapter 6 – Solving Linear Inequalities (SOL A.5, SOL A.6)

Chapter 7 – Solving Systems of Linear Equations and Inequalities (SOL A.4, SOL A.5)

Chapter 11 – Radical Expressions and Triangles (SOL A.3)

Chapter 10 – Quadratic and Exponential Functions (SOL A.4, A.7)

Chapter 13 – Statistics (A.9, A.10)

## Materials:

- ✓ 3-Ring Binder with loose leaf paper – Each student will be required to organize all material from class and finished homework in this binder.
- ✓ 4 Notebook Dividers – Each student will place 4 dividers in their binders labeled: **Warm Up, Class Notes, Homework, Tests/Quizzes**. The student is responsible for placing the correct material in the correct section.
- ✓ **Pencil ONLY!** – All work needs to be completed in pencil only! **I will not grade assignments completed in pen.** (This includes quizzes, tests, projects, and graded assignments)
- ✓ Calculator - We have a classroom set of Casio CFX-9850GC Plus graphing calculators to be used during class. It is suggested, **NOT required**, students buy their own calculator for work completed outside of class. All work completed in this class may be done by hand or using a scientific calculator.

## Class Rules and Expectations:

- ✓ Classroom Rules
  - ★ Stay On Task – Work on proper assignments.
  - ★ Be Respectful – Be quiet and pay attention so you and others can learn.
  - ★ Be Ready to Learn – Have all material and assignments ready.
  - ★ Electronics/Cell Phones Only Allowed With Given Permission

- ✓ Attendance: If a student is absent from class it is their responsibility to find out what they missed. **All assignments due the day the student is absent will be due the day they return to school.** If a student is absent on the day of a test/quiz, he or she may either take the test/quiz the day he or she returns or may schedule a time with me before or after school. The assignment **must be made up within 5 days of the absence** or points will be taken off for each day after.
- ✓ Late Work – For each class day the assignment is late (days this class meets), a letter grade will be taken off until the assignment is turned in. All students should complete **ALL** work on time.
- ✓ Tardy Policy: Follows the school wide policy. Students are to be in class when the bell rings.
- ✓ Bullying will **NOT** be tolerated in this classroom. See student handbook for consequences.

### Grading:

I grade on a point scale only. This means students will earn a certain amount of points for each assignment they complete. Students should keep all graded work for proof they completed the assignment. Students can determine their grade by adding up their total number of points and dividing by the total possible points. Extra credit will be given throughout the year.

Grading Scale:	A: 100% – 90	B: 89%– 80	C: 79% – 70
	D: 69% – 60	F: 59% and Below	

Homework Policy – Homework will be assigned daily. Students are responsible for completing all homework assignments. I will check each day for completeness unless otherwise stated. To receive full credit on homework, **all problems must be attempted and work must be shown for each problem.**

**Homework assignments and upcoming Test/Quiz/Projects can be found at <http://jnesler.weebly.com>**

Tests/Quizzes/Projects – Expect a quiz each week on the material covered. A unit test will be given after completing each chapter in the textbook. Projects will be given throughout the year when appropriate.

Honor Code – Students are expected to abide by the school’s honor code. Failure to do so will result in disciplinary action.

**Homework and Bathroom Pass** – Each student will be given 6 ‘Free Homework’ passes each 9-weeks. This DOES NOT excuse you from doing the homework, it just prevents the student from losing credit on this assignment. The assignment MUST be turned in within 2 school days. After that, I will NOT accept the pass. Each student will be given 12 bathroom passes each 9-weeks. These passes are used whenever the student leaves my room to either use the bathroom or get a drink of water. Students are allowed to ask other students for passes if they forget/lose/or run out of their own passes during the 9-weeks. Students are responsible for their OWN passes. I will not replace lost passes! Passes not used during the 9-weeks can be turned in for extra credit.

### Extra Help:

Please feel free to contact me at school at 289-3100 or email me at [jnesler@rockingham.k12.va.us](mailto:jnesler@rockingham.k12.va.us). If I am unavailable, I will return your call. Math Lab will be available every morning 7:45 – 8:05 and after school on Tuesday – Thursday 3:05 – 3:25 for help. I am also available before school and after school to provide addition help or for making up missed work. Please make prior arrangements with me to make sure I am available to meet with you. Please make sure your child takes advantage of this opportunity. Daily assignments and all grades will be posted on PowerSchool. I will do my best to have PowerSchool updated by Fridays at 3pm.

## Algebra I Standards Of Learning (SOLs)

- A.1 The student will represent verbal quantitative situations algebraically and evaluate these expressions for given replacement values of the variables.
- A.2 The student will perform operations on polynomials, including
- applying the laws of exponents to perform operations on expressions;
  - adding, subtracting, multiplying, and dividing polynomials; and
  - factoring completely first- and second-degree binomials and trinomials in one or two variables.
- Graphing calculators will be used as a tool for factoring and for confirming algebraic factorizations.
- A.3 The student will express the square roots and cube roots of whole numbers and the square root of a monomial algebraic expression in simplest radical form.
- A.4 The student will solve multistep linear and quadratic equations in two variables, including
- solving literal equations (formulas) for a given variable;
  - justifying steps used in simplifying expressions and solving equations, using field properties and axioms of equality that are valid for the set of real numbers and its subsets;
  - solving quadratic equations algebraically and graphically;
  - solving multistep linear equations algebraically and graphically;
  - solving systems of two linear equations in two variables algebraically and graphically; and
  - solving real-world problems involving equations and systems of equations.
- Graphing calculators will be used both as a primary tool in solving problems and to verify algebraic solutions.
- A.5 The student will solve multistep linear inequalities in two variables, including
- solving multistep linear inequalities algebraically and graphically;
  - justifying steps used in solving inequalities, using axioms of inequality and properties of order that are valid for the set of real numbers and its subsets;
  - solving real-world problems involving inequalities; and
  - solving systems of inequalities.
- A.6 The student will graph linear equations and linear inequalities in two variables, including
- determining the slope of a line when given an equation of the line, the graph of the line, or two points on the line. Slope will be described as rate of change and will be positive, negative, zero, or undefined; and
  - writing the equation of a line when given the graph of the line, two points on the line, or the slope and a point on the line.
- A.7 The student will investigate and analyze function (linear and quadratic) families and their characteristics both algebraically and graphically, including
- determining whether a relation is a function;
  - domain and range;
  - zeros of a function;
  - $x$ - and  $y$ -intercepts;
  - finding the values of a function for elements in its domain; and
  - making connections between and among multiple representations of functions including concrete, verbal, numeric, graphic, and algebraic.
- A.8 The student, given a situation in a real-world context, will analyze a relation to determine whether a direct or inverse variation exists, and represent a direct variation algebraically and graphically and an inverse variation algebraically.
- A.9 The student, given a set of data, will interpret variation in real-world contexts and calculate and interpret mean absolute deviation, standard deviation, and z-scores.
- A.10 The student will compare and contrast multiple univariate data sets, using box-and-whisker plots.
- A.11 The student will collect and analyze data, determine the equation of the curve of best fit in order to make predictions, and solve real-world problems, using mathematical models. Mathematical models will include linear and quadratic functions.

To the Parent/Guardian:

Please read and discuss this material with your son/daughter. It is very important to me, as the instructor, that you and your child understand the expectations and requirements of this course. If you have any questions, concerns, or would like to set up a conference please feel free to contact me via email or call me at Spotswood. I appreciate your support and look forward to a very successful year!

Sincerely,  
Jen Nesler

**Students and Guardians, please sign to indicate that you have read the syllabus and understand the expectations and requirements for this class.**

Student's Name Printed \_\_\_\_\_

Student's Signature \_\_\_\_\_

Date \_\_\_\_\_

Guardian's Signature \_\_\_\_\_

Date \_\_\_\_\_

Guardians, when I do need to contact you, what would be the best way/time to contact you?

\_\_\_\_\_ Phone \_\_\_\_\_

\_\_\_\_\_ Email \_\_\_\_\_

**\*\*\*PLEASE SIGN AND RETURN THIS PAGE BY AUGUST 28, 2015\*\*\***