



CCSS Algebra 3-4 Course Syllabus

Lincoln High School

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This course focuses on the four critical areas of the Common Core model pathway for Algebra 3-4: functions, polynomials, periodic phenomena, and collecting and analyzing data.

The course begins by extending the student's repertoire of functions from the linear, quadratic and exponential relations they learned in Algebra 1-2, to include rational, radical, absolute value, logarithmic, periodic and polynomial functions. Students will make connections between verbal, numeric, algebraic, and graphical representations of functions and apply this knowledge as they create equations and inequalities that can be used to model and solve mathematical and real-world problems.

As students refine and expand their algebraic skills, they will draw analogies between the operations and properties of real numbers and those of complex numbers and algebraic expressions. The eight Common Core Standards for Mathematical Practice are embedded throughout the course, as students solve novel problems, reason abstractly, and think critically.

Topics Covered in this Course:

- AA 0- Presumed knowledge
- AA 1- Creating and Solving Equations
- AA 2- Graphs and their Transformations
- AA 3- Inverses
- AA 4- Logarithms
- AA 5- Trigonometric Functions
- AA 6- Polynomials
- AA 7- Complex Numbers
- AA 8- Statistics

Textbook:

College Preparatory Mathematics (CPM) Algebra 2 Connections

Resources

- **Website:** www.mahonymath.weebly.com for the class calendar, textbook, resources for help, printable worksheets, keys to some assignments, retake information and more.
- **Grades** are updated regularly and will be available online in **Synergy** (login link on Lincoln homepage)

Prerequisites

Successful Completion (C or above) of Algebra 1-2, Geometry 1-2 or Bridges to Algebra

Recommended Equipment and Supplies:

- Three-ring binder with dividers for Advanced Algebra
- Hole punched graph-paper (in 3-ring binder)
- Pencils
- Highlighters / colored pencils or pens
- Ruler (for nice neat graphs and diagrams)
- Texas Instruments (TI) 84+ graphing calculator (TI-83 may also be used). If you own a **TI-89** graphing calculator, be advised that they are **NOT allowed during exams**.

STUDENT'S RESPONSIBILITIES

Classroom Expectations

Class time is for math. Students should be ready to work at the start of class: assignments completed, work and supplies out, discussing warm-up with neighbors. Everyone is expected to participate in whole class and small group discussions. Electronic devices other than calculators should be off and away. Calculators are to be used for math only. Students are expected to follow the “*Three R’s*”: *Respect for self, Respect for others, and Responsibility for all of your actions*. This includes:

- Treat everyone with respect
- Attend class regularly and be on time and prepared with supplies.
- Actively contribute in whole class and study-team work and discussions.
- Complete or attempt all assigned problems.
- Ask for help from their study-team or/and the teacher. **Use Flex as needed.**
- Take notes and keep well-organized notebooks.
- Do not distract self and/or other students from their opportunity to learn.

Attendance and missed tests: Good attendance is imperative to success in this course. Check with another student or with the website first if you have been absent. It is the student's responsibility to check on what work they missed due to an absence. Oftentimes assignments are available in advance if the absence is prearranged. Homework is due within 1 week of the absence to receive full credit for the assignment.

Should you be absent on the day of a test, arrangements should be made for the make-up to be taken within 2 days of the student's return to school. Email or talk with me outside of class-time to make arrangements ASAP. The opportunity to make-up tests will not be given for unexcused absences or delayed communication to arrange a make-up.

Homework Policy: Homework is required and will be checked at the beginning of each class. Homework is on-time if it is complete when the bell rings. On time, complete homework receives full credit. On time, incomplete homework that is at least halfway done receives partial credit (4 out of 7). Late, complete homework will be accepted for partial credit (4 out of 7) up to three weeks late. After 3 weeks no credit will be recorded.

Though homework will not be graded on correctness, it is expected and anticipated that the student has worked as far as possible on each problem and has sought help before the due date if there are many questions. If a student does not know how to complete a problem, s/he should leave as much work as s/he knew how to do. Then, they should write a sentence about what s/he did not know. This will help the student articulate and identify the specific challenges and help the teacher provide more efficient and helpful feedback.

A student's homework grade must be at least 80% to be eligible to retake assessments. In the case that a student has lower than an 80% completion rate, s/he must have every assignment turned in.

Other Late Work: Because mathematical ideas will build throughout a unit, it is important for work to be completed in a timely manner. Out of respect for the teacher's time and students' ability to keep up with concepts it is expected that work be turned in on time. Projects and other larger assignments will not be accepted late unless a student contacts the teacher outside of class time or through email PRIOR to the day the assignment is due. The student might be granted an extension depending on the circumstances.

Grading Philosophy:

This course is two classes: Advanced Algebra 3/4 with an attached Support class as an elective.

Advanced Algebra 3/4 uses a proficiency-based grading system. Grades are based solely on demonstration of mastery of the concepts. Students must show proficiency in ALL major concepts to earn credit for the class. Higher order thinking questions will be used to determine grades higher than a C. Students will demonstrate their mastery of concepts through formal assessments (either written or oral) that may take the form of a quiz, test, presentation, or project. Any assessment, other than final exams and the final draft of a project, can be retaken, though students must complete the requirements prior to a retake. To help increase retention, any previously learned skill can appear on later tests.

The Support Class will be graded based on the student's homework grade and the student's full participation, and hard work in class daily.

How Are The Skills Scored?

Each skill will be assessed a minimum of 2 times. A student's overall score on a skill is based on the median of the scores. If a skill is assessed 2 times, the score will be rounded up if the student shows improvement, and rounded down if performance declines. If a skill is assessed three or more times, only the most recent three scores will be used in the median calculation. Assessments of skills will be scored using the following rubric.

Scoring Scale:

7	In addition to score 6 performance, demonstration of inferences and applications that go beyond what was taught.
6	In addition to score 5 performance, partial demonstration of inferences/applications that go beyond what was taught.
5	No major errors/omissions of any of the information and/or processes (simple or complex) that were explicitly taught.
4	No major errors/omissions of simpler details/processes; partial demonstration of more complex ideas/processes.
3	Partial demonstration of simpler details/processes; major errors/omissions regarding more complex ideas/processes.
2	Limited demonstration of the simpler details/processes; either major errors/omissions or needs help on the more complex ideas/processes.
1	With help, partial understanding of some of the simpler ideas and processes demonstrated.
0	Even with help, no understanding or skill demonstrated.

Adapted from Robert J. Marzano "Classroom Assessment and Grading that Work"

How Are Overall Grades Calculated?

Calculation of a student's overall semester grade in the course is based on the scores in each of the skills. The skill scores will be averaged.

	Skill Score Average
A	Avg ≥ 5.8 with no skill score lower than a 5
B	Avg ≥ 4.8 with no skill score lower than a 4
C	Avg ≥ 3.8 with no skill score lower than a 3
D	Avg ≥ 3.0 with no skill score lower than a 3
F	Avg < 3.0 or any skill score of 2 or lower

Retake Policy:

Any skill earning a 5 or below can be retaken to demonstrate mastery of that skill. **Revisions + Reflections + Homework** will be required prior to retakes. Retakes for a skill are typically available after the second assessment:

1. A student must have either an **80% homework completion or all homework assignments turned in** to be eligible to retake.
2. Completed retake forms are due Tuesday prior to retaking during Flex that week. **NO EXCEPTIONS.**
3. The retake form must be complete. Incomplete forms will be rejected. **NO EXCEPTIONS.**
4. No single skill may be taken more than once in a week – this is to promote retention.
5. Retakes on skills may have deadlines. Be sure to retake as soon as possible and do not save retakes for the end of the semester!
6. If the grade does not improve with a retake, additional problems will be required before another retake can be taken.
7. Once you begin a retake and start the assessment, the assessment counts. Do not begin an assessment that you will not have time to finish, or do not feel adequately prepared for.

Honor Code:

Honesty and respect are highly valued in this classroom. Any information garnered from unauthorized sources will result in a 0 grade for the assessment or project. The teacher also follows Lincoln and District policies for discipline regarding cheating. Remember: Speaking with another student about an exam **before** that student has taken it, is cheating. For example, if you have math 2nd period, and you tell your friend in 4th period what was on the test, you are cheating.

Extra Help:

I will be available to give help during FLEX time and after school on some days. Please don't wait until the last minute to get help! It is also helpful to have the phone numbers of several classmates just in case you are absent or need help in the evening.

Classroom Guidelines:

1. **Have fun** doing math.
2. **Come to class on time and prepared with materials.**
3. **Follow** the guidelines set by the **school and district disciplinary code.**
4. Remember that **cell phones and all electronic devices** should be **OFF and out of sight during class time!!** Such devices may be confiscated and turned in to the principal's office for parents pick up.

Parents:

For emergencies, please **call the school phone number** (503) 916-5200 and your student will be contacted. *Please do not call or text your student's cell phone number during class* as it may cause disruption.

*Please read this syllabus carefully and have your **parents or guardians read it. Log onto classroom.google.com to complete your electronic homework assignment to acknowledge reading this.***