

Welcome to
Curriculum Night (Jan-2020)

Algebra 2 & Algebra 2 Honors

Matt Thorsen
mbthorsen@fcps.edu

Goals

Compare and contrast Algebra 2 vs. Algebra 2 Honors:

- Prerequisite knowledge
- Scope of Course Content & Lesson Structure
- Skills needed for success
- Tests, Quizzes, Homework, & Projects
- Teacher expectations
- Typical next course

Prerequisite Knowledge

Algebra 2

- ☐ Geometry grade of C or better
- ☐ Solid foundation of basic Algebra skills
 - May need to refresh algebra skills if “rusty”

Algebra 2 Honors

- ☐ Grade of B or better in Honors Geometry, or...
- ☐ Grade of A in Geometry...
- ☐ Well-developed understanding of algebra concepts & skills
 - ☐ (A in Algebra 1)
- ☐ Advanced, precise math vocabulary

Course Content & Lesson Structure

Algebra 2

- ☐ Cover Virginia SoL and FCPS content rqmts.
- ☐ Broad range of topics
(See next page)
- ☐ Lesson often lecture-based **with** guided notes
- ☐ All material presented in class
(external research or reading typically not required)
- ☐ Some memorization required
- ☐ Problems in lessons map directly to problems in homework and assessments
- ☐ Same textbook as Honors

Algebra 2 Honors

- ☐ More challenging problems, more depth of content, and *extensions*
- ☐ Explore multiple ways to solve a problem
- ☐ Frequent “discovery” learning & peer discussion
- ☐ Fast-paced instruction/classwork
- ☐ Student responsible for note-taking, and supplementing class instruction with textbook reading & external research (internet...)
- ☐ Encounter “new” problems in homework and tests that require novel application of knowledge

Algebra 2 Covers a very broad range of concepts/topics:

Graphing

Absolute Value

Linear Programming

Polynomial Functions (equations with x^3 , x^4 , x^5 , ...)

Square Roots, Cube Roots, 4th Roots, ...

Logarithms & Exponents

Complex (Imaginary) Numbers

Rational Functions

Probability with Sequence & Series

Matrix Algebra

Algebra 2 Honors adds several extensions

Matrix Algebra

Conics

Families of Lines

Piecewise Functions ...

Skills for Success

Algebra 2

- ☐ Organized notes / materials
- ☐ Completes homework on time
- ☐ Prepares for tests/quizzes
- ☐ Gets help when needed
- ☐ Willing to work through difficult problems
- ☐ Willing to learn procedures to solve problems

Algebra 2 Honors

- ☐ Well-organized notes / materials
- ☐ Completes homework and further researches topics of interest
- ☐ Confident in math abilities
- ☐ Proactively seeks help when needed; uses peer study groups
- ☐ Seeks challenging problems and enjoys overcoming obstacles
- ☐ Wants to understand concepts behind math rules & procedures
- ☐ Seeks *best* way to solve a problem
- ☐ Enjoys talking about math
- ☐ Actively participates in class
- ☐ Finds math FUN! [like a game]

Homework & Assessments

Algebra 2

- ☐ 30-45 minutes for homework per block class
- ☐ Homework problems match problems covered in class
- ☐ Additional examples & practice available in textbook
- ☐ Basic homework problems assigned
- ☐ Some tests are cumulative
- ☐ Test questions mirror classwork and homework
- ☐ Flexible test time (generally)
- ☐ More Review Provided

Algebra 2 Honors

- ☐ 45-60 minutes for homework per block class
- ☐ Most homework and test problems match lesson examples, but some problems require students to apply what they have learned to a unique context
- ☐ Challenging homework problems assigned
- ☐ Most tests are cumulative
- ☐ Test problems may require creative approach applying skills
- ☐ Tests are time-constrained
- ☐ Occasional “project” assignments

Teacher Expectations

Algebra 2

- ☐ Attend class on time
- ☐ Complete homework
- ☐ Take accurate class notes
- ☐ Ask for help when needed
- ☐ Prepare for assessments
- ☐ Contribute to class discussions
- ☐ Actively participate in group work

Algebra 2 Honors

- ☐ Engage in active class discussions
- ☐ Complete problems quickly and accurately
- ☐ Homework is neat, correct, and thorough
- ☐ Proactively seek help when needed, and offer help to peers
- ☐ Research related math topics and share insights with class
- ☐ Offer different / better ways to solve a problem
- ☐ Make connections & conjectures based on prior knowledge
- ☐ Precise math vocabulary & skills

Typical Next Course

Algebra 2

- ❑ Most Algebra 2 students are sophomores, and will follow one of the following paths in their final two high school years:

Pre-Calculus → Calculus AB

Pre-Calculus → Calculus (non-AP)

Pre-Calculus → Prob/Stat

Pre-Calculus → CompSci

Always consult with Student Services (Guidance) and the Career Center for insight into course selection and college placement.

Algebra 2 Honors

- ❑ Algebra 2 Honors students are usually freshmen or sophomores, and may plan on one of these paths for the next two years:

Pre-Calculus Honors → Calculus BC

Pre-Calculus Honors → Calculus AB

If schedules permit, these students may additionally schedule one of these math courses:

AP Statistics

AP Computer Science

Always consult with Student Services (Guidance) and the Career Center for insight into course selection and college placement.