

MA872O/ Algebra 2-1 Syllabus

Course Title-----	Algebra 2-1
Course Number-----	MA872O
Grades:-----	09-12
High School Credit Value:-----	0.5
Prerequisites:-----	Successful completion of year one of Algebra.
Course Length:-----	Regular courses: 17 weeks CR: 9-17 weeks.
Course Time:-----	Regular courses: 17 week schedule: 75 - 90 minutes per school day (6-7.5 hours per week) Credit Retrieval: 75 - 90 minutes per school day (6-7.5 hours per week) until course completion.

{ Course Description }

This first semester of algebra 2 course covers function notation and computation; solving linear equations and inequalities; parent functions; composition and inverses of functions; complex numbers; solving and graphing quadratic equations and inequalities; adding, subtracting, multiplying and dividing polynomials; and rational expressions.

Odyssey High School Math focuses on foundational skills to support learners, emphasizes repetition and practice of key skills, reinforces study habits, including note-taking, to sharpen students' comprehension, and covers National Mathematics Advisory Panel's concepts for success in algebra.

Course Materials:

The student should plan on 60 to 90 minutes of working in this math class per week day.

This math class requires the use of Compass Learning Odyssey. The student will run a system checkup in order to be able to fully take advantage of the course. This course may be taken on the PC or Mac platform.

The student is required to participate with the instructor online, thus the student needs to have headphones with a microphone in order to meet with the teacher online.

State Alignments

Washington State Standards guided the design of the course. Learning expectations are found within the course itself.

Algebra 2 Standard 1 - Solve problems that can be represented by systems of equations and inequalities including systems of equation in three variables.

Algebra 2 Standard 2 - Solve problems involving probability and solve problems involving combinations and permutations.

Algebra 2 Standard 3 - Use the laws of **exponents** to simplify and evaluate numeric and algebraic **expressions** that contain rational exponents.

Algebra 2 Standard 5 - Translate between the standard form of a quadratic function, the vertex form, and the factored form; graph and interpret the meaning of each form.

Algebra 2 Standard 6 - Solve quadratic equations and inequalities, including equations with complex roots and solve problems that can be represented by quadratic functions, equations, and inequalities.

Algebra 2 Standard 7 - Solve exponential and logarithmic equations.

Algebra 2 Standard 8 - Construct new functions using the transformations $f(x - h)$, $f(x) + k$, $cf(x)$, and by adding and subtracting functions, and describe the effect on the original graph(s).

Algebra 2 Standard 10 - Given a finite sample space consisting of equally likely outcomes and containing events A and B, determine whether A and B are independent or dependent, and find the conditional probability of A given B.

Algebra 2 Standard 11 - Calculate and interpret measures of variability and standard deviation and use these measures and the characteristics of the normal distribution to describe and compare data sets.

Algebra 2 Standard 12 - Find the terms and partial sums of arithmetic and geometric **series** and the infinite **sum** for geometric series.

Course Outline

Unit	Lessons	17 weeks
Functions I	Notation and Computation, Functions and Equations	3
Linear Equations	Solving Linear Equations and Inequalities, Linear Functions, Piecewise Linear Functions	3
Functions II	Parent Functions and Transformations, Composition and Inverses of Functions	3
Quadratic Functions	Complex Numbers, Solving Quadratic Equations and Inequalities, Graphing Quadratic Functions	3
Polynomial Functions	Adding, Subtracting, Multiplying and Dividing Polynomial Functions	2
Rational Functions	Rational Expression	3

Course Work

The homework that is completed for this course is assigned on the student's Learning Plan Contract or pacing guide found in the students Unit page. The Learning Plan Contract of 17 weeks is based upon the student's contracted start and end date.

The student is required to complete the weekly checkpoint as assigned on the Learning Plan Contract as well as reflection assignments that will contain their percentage earned on the "Chapter Test" after their efforts in the different units.

Grading

Grades will be generated from the following:

Weekly Checkpoints - These checkpoint summative assessments have the student demonstrating to the instructor their complete understanding of taught skills.

Chapter Test Results - This Chapter Test score is a summative assessment based upon the students learning and practicing within the various lessons of the unit. This assignment includes having the student reflect upon their learnings for the unit and their Chapter Test percentage.

Revision Policy - While working within the Compass Learning textbook, the student is able to attempt the quizzes up to three times to surpass the 70% mark until they are able to move ahead. The student is not able to "redo" or "revise" the Chapter Test activity. Currently, teachers are unable to "reset" this test. So, students want to make sure that they do their best on their first only attempt.

Checkpoints are able to be revised one more time based upon teacher feedback given the first attempt.

Grades - Grades are posted within the iA math course. Students can click on the Student Grades tab in their class to view their gradebook. Grades or scores in the Compass Learning textbook are there for the student and parent to see their practice and progress in the different skills. Only the Chapter Test score will be placed within the iA math gradebook. As stated above, the gradebook will be consisted of checkpoint scores and chapter test scores.

Occupational Credit:

This course may qualify for *occupational credit. Please consult your school counselor for further clarification.

*Please note that FLA901 (Sign Language) does not qualify for occupational credit.

Copyright Internet Academy (iAcademy.org), Federal Way School District, WA