

Course Syllabus (Revised 4/29/2019)

Integrated Math Course I



The Eastlake Middle School community will provide a positive and safe school culture where each student is empowered to grow emotionally and develop academically leading to resiliency and life-long success.

Course Description

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(from the [California Mathematics Framework](#), adopted November 2013)

The fundamental purpose of Mathematics I is to formalize and extend students' understanding of linear functions and their applications. The critical topics of study deepen and extend understanding of linear relationships, in part by contrasting them with exponential phenomena, and in part by applying linear models to data that exhibit a linear trend. Mathematics I uses properties and theorems involving congruent figures to deepen and extend understanding of geometric knowledge from prior grades. The courses in the Integrated Pathway follow the structure began in the K-8 standards of presenting mathematics as a coherent subject, mixing standards from various conceptual categories.

The standards in the integrated Mathematics I course come from the following conceptual categories: Modeling, Functions, Number and Quantity, Algebra, Geometry, and Statistics and Probability. The content of semester 1 will be expanded upon in the following units, but teachers and administrators alike should note that the standards are not topics to be checked off a list during isolated units of instruction, but rather content that should be present throughout the school year through rich instructional experiences.

In Mathematics I, students continue their work with expressions and modeling and analyzing situations. In earlier grades, students informally define, evaluate, and compare functions, and use them to model relationships between quantities. In Mathematics I, students will learn function notation and develop the concepts of domain and range. They move beyond viewing functions as processes that take inputs and yield outputs and start viewing functions as objects that can be combined with operations (e.g., finding $(f + g)(x) = f(x) + g(x)$). They explore many examples of functions, including sequences. They interpret functions represented graphically, numerically, symbolically, and verbally, translate between representations, and understand the limitations of various representations. They work with functions given by graphs and tables, keeping in mind that, depending upon the context these representations are likely to be approximate and incomplete. Their work includes functions that can be described or approximated by formulas as well as those that cannot. When functions describe relationships between quantities arising from a context, students reason with the units in which those quantities are measured. Students build on and informally extend their understanding of integer exponents to consider exponential functions. They compare and contrast linear and exponential functions, distinguishing between additive and multiplicative change. They interpret arithmetic sequences as linear functions and geometric sequences as exponential functions.

By the end of the eighth grade content standards, students have learned to solve linear equations in one variable and have applied graphical and algebraic methods to analyze and solve systems of linear equations in two variables. Mathematics I builds on these earlier experiences by asking Compacted Integrated Math I Instructional Guide 2018-2019 Semester 1 2 students to analyze and explain the process of solving an equation and to justify the process used in solving a system of equations. Students develop fluency writing, interpreting, and translating between various forms of linear equations and inequalities, and using them to solve problems. They master solving linear equations and apply related solution techniques

and the laws of exponents to the creation and solving of simple exponential equations. Students explore systems of equations and inequalities, and they find and interpret their solutions. All of this work is grounded on understanding quantities and on relationships between them.

In Mathematics I, students build on their prior experiences with data, developing more formal means of assessing how a model fits data. Students use regression techniques to describe approximately linear relationships between quantities. They use graphical representations and knowledge of the context to make judgments about the appropriateness of linear models. With linear models, they look at residuals to analyze the goodness of fit.

In previous grades, students were asked to draw triangles based on given measurements. They also have prior experience with rigid motions: translations, reflections, and rotations, and have used these to develop notions about what it means for two objects to be congruent. In Mathematics I, students establish triangle congruence criteria, based on analyses of rigid motions and formal constructions. They solve problems about triangles, quadrilaterals, and other polygons. They apply reasoning to complete geometric constructions and explain why they work. Finally, building on their work with the Pythagorean Theorem in the grade eight standards to find distances, students use a rectangular coordinate system to verify geometric relationships, including properties of special triangles and quadrilaterals and slopes of parallel and perpendicular lines

Pre-requisites: Successful completion of Compacted Math 7/8 or Summer Bridge Integrated Math 8

Suggested Course Materials

Text: *Core Connections, Integrate I* is the first of a three-year sequence of courses designed to prepare students for a rigorous college preparatory course. Your teacher will provide a 5-character pin number you will only need to enter in one time. The ebook can be found at this link:

Go to <https://ebooks.cpm.org>

Suggested Materials: See teacher's class room policies for specific materials

Course Pacing Guide and Topics

Semester 1	Semester 2
Unit 1: Functions and Exponent Rules	Unit 6: Systems of Equations
Unit 2: Linear Functions	Unit 7: Congruence and Coordinate Geometry
Unit 3: Transformations and Solving Equations	Unit 8: Exponential Functions
Unit 4: Modeling Two-Variable Data	Unit 9: Inequalities
Unit 5: Arithmetic and Geometric Sequences	Unit 10: Functions and Data
	Unit 11: Constructions and Closure

Grading Policy

Scholarship Expectations

Grading Policy: Students' grades will be based on the following:

- 80% Assessments
- 15% Classwork
- 5% Homework

Standard letter grades will be assigned to indicate student progress towards mastery of learning objectives and district/state standards. Since this is a high school level course and eligible for A-G credit at UC/CSU, students are expected to maintain a grade of C or higher. **If a student has a grade of D or F at the end of the first semester, they will be recommended for transfer to Integrated Math 8 for semester 2.**

Homework Policy: Homework and practice are valued as a necessary component to the learning process. The primary purpose of homework is to build understanding in order to increase student achievement as demonstrated on a summative assessment. See teacher's class room policies for specific homework guidelines and policies.

Assessments: Assessments are utilized to inform instruction and students of their current level of mastery. These take many forms. Summative assessments (Unit Exams) may include constructed response, multiple-choice and on-demand writing questions.

Citizenship Expectations

Teamwork is an integral part of this course to promote student communication, collaboration, and to further their mathematical reasoning. Students are expected to be active participants and make a positive contribution to the atmosphere and work of the classroom and their teams. They are also expected to complete their assignments on time, arrive on time prepared to learn, and follow all classroom rules. ELM website has posted a suggested/general Citizenship Rubric for view. See teacher's class room policies for specific citizenship guidelines and policies.

The Student Handbook can be found at the following link: <http://elm.sweetwaterschools.org/student-handbook/>

Plagiarism & Academic Dishonesty: Student work must be an accurate reflection of student understanding, with an expectation that all work submitted by a student represents that student's understanding of the material. Plagiarism or cheating on school work and assessments will not be tolerated. A student cheating on an assessment will receive a failing grade for that assignment, and may not be allowed to make-up that assignment. Additionally, students will receive a failing citizenship grade.

Accessing Grades: Students and parents will be able to access grade reports on-line at www.jupitergrades.com. Additional log-in information will be provided by each teacher.

Support Systems

Triton Time. ELM offers tutoring in the library before and/or after school. Refer to the schedule on the ELM website or hardcopies are provided in the Counseling Center.

Triton Study Period (TSP). TSP was developed as an opportunity for students to acquire extra academic help, seek out teachers on a one-on-one basis, re-take assessments and to complete assignments. TSP is a required part of the instructional program where attendance is taken daily and is required.

Homework Help: The textbook provides assistance for the Review and Preview section, which is typically assigned as the homework. Every homework problem has a link to the Homework Help for that problem.

Homework help may provide:

Hints

Steps

Answers

Interactive eTools

Parent Guide. Extra Practice and Parent Support is provided by the textbook company at the link below:

https://pdfs.cpm.org/CoreConnections/ParentGuide/cc2/CC2_PG.pdf

I acknowledge that I read and understood the common syllabus. I will discuss any concerns or questions with the teacher. I also am aware of the citizenship and academic honest policy outlined for the class and in the student handbook.

Student (Print Name):

Date:

Signature:

Parent (Print Name):

Date:

Signature: