Middle School Math Courses

One math course for each grade is required.

Math 6……..……..……...…….. 3100
TECH Core…….....…… 3128
Math 6 SDA……...……. 3102
Math 6 SDA PLS……..……..…. 3103
Math 6 SDC……..…….……. 5606

Length of Course: 2 Semesters
Grade Level Options: 6
Prerequisite: None

The foundation for this course is the Grade 6 California State Math Standards. By the end of grade six, students have mastered the four arithmetic operations with whole numbers, positive fractions, positive decimals, and positive and negative integers; they accurately compute and solve problems. They apply their knowledge to statistics and probability. Students understand the concepts of mean, median, and mode of data sets and how to calculate the range. They analyze data and sampling processes for possible bias and misleading conclusions; they use addition and multiplication of fractions routinely to calculate the probabilities for compound events. Students conceptually understand and work with ratios and proportions; they compute percentages (e.g., tax, tips, interest). Students know about π and the formulas for the circumference and area of a circle. They use letters for numbers in formulas involving geometric shapes and in ratios to represent an unknown part of an expression. They solve one-step linear equations.

Math 6 ACC……...…... 3104

Length of Course: 2 Semesters
Grade Level Options: 6
Prerequisite: Proficient on Grade 5 CST

This is an accelerated course that will be taught with more depth and complexity than the regular Math 6 course. Topics that review grade 5 standards have been omitted from this course, and selected topics from the grade 7 standards are included.

The foundation for this course is the Grade 6 California State Math Standards. By the end of grade six, students have mastered the four arithmetic operations with whole numbers, positive fractions, positive decimals, and positive and negative integers; they accurately compute and solve problems. They apply their knowledge to statistics and probability. Students understand the concepts of mean, median, and mode of data sets and how to calculate the range. They analyze data and sampling processes for possible bias and misleading conclusions; they use addition and multiplication of fractions routinely to calculate the probabilities for compound events. Students conceptually understand and work with ratios and proportions; they compute percentages (e.g., tax, tips, interest). Students know about π and the formulas for the circumference and area of a circle. They use letters for numbers in formulas involving geometric shapes and in ratios to represent an unknown part of an expression. They solve one-step linear equations.

Math 7……..…….. 3108
Math 7 SDA……..……. 3110
Math 7 SDA PLS……..…...……. 3111
Math 7 SDC……..……..5021

Length of Course: 2 Semesters
Grade Level Options: 7
Prerequisite: None

The foundation for this course is the Grade 7 California State Math Standards. By the end of grade seven students are adept at manipulating numbers and equations and understand the general principles at work. Students understand and use factoring of numerators and denominators and properties of exponents. They know the Pythagorean theorem and solve problems in which they compute the length of an unknown side. Students know how to compute the surface area and volume of basic three-dimensional objects and understand how area and volume change with a change in scale. Students make conversions between different units of measurement. They know and use different representations of fractional numbers (fractions, decimals, and percents) and are proficient at changing from one to another. They increase their facility with ratio and proportion, compute percents of increase and decrease, and compute simple and compound interest. They graph linear functions and understand the idea of slope and its relation to ratio.

Math 7 ACC …… 3135

Length of Course: 2 Semesters
Grade Level Options: 7
Prerequisite: Proficient on Grade 6 CST

This is an accelerated course that will be taught with more depth and complexity than the regular Math 7 course. Topics that review grade 6 standards have been omitted from this course, and selected topics from the Algebra standards are included.

The foundation for this course is the Grade 7 California State Math Standards. By the end of grade seven students are adept at manipulating numbers and equations and understand the general principles at work. Students understand and use factoring of numerators and denominators and properties of exponents. They know the Pythagorean theorem and solve problems in which they compute the length of an unknown side. Students know how to compute the surface area and volume of basic three-dimensional objects and understand how area and volume change with a change in scale. Students make conversions between different units of measurement. They know and use different representations of fractional numbers (fractions, decimals, and percents) and are proficient at changing from one to another. They increase their facility with ratio and proportion, compute percents of increase and decrease, and compute simple and compound interest. They graph linear functions and understand the idea of slope and its relation to ratio.

Pre-Algebra 8..... 3112
Pre-Algebra SDA..... 3115
Pre-Algebra SDA PLS..... 3101
Pre-Algebra 8/9 SDC..... 5607

Length of Course: 2 Semesters
Grade Level Options: 8
Prerequisite: None

The foundation for this course is the grade 7 California Mathematics Standards. This course allows eighth grade students who scored less than Proficient on the grade 7 Math CST an opportunity to review arithmetic skills necessary for the successful completion of Algebra. By the end of this course, students are adept at manipulating numbers and equations and understand the general principles at work. Students understand and use factoring of numerators and denominators and properties of exponents. They know the Pythagorean theorem and solve problems in which they compute the length of an unknown side. Students know how to compute the surface area and volume of basic three-dimensional objects and understand how area and volume change with a change in scale. Students make conversions between different units of measurement. They know and use different representations of fractional numbers (fractions, decimals, and percents) and are proficient at changing from one to another. They increase their facility with ratio and proportion, compute percents of increase and decrease, and compute simple and compound interest. They graph linear functions and understand the idea of slope and its relation to ratio.

Algebra CD 3010
Algebra CD SDAIE..... 3020
Algebra CD SDAIE PLS..... 3074

Length of Course: 4 Semesters
Grade Level Options: 8
Prerequisite Algebra CD "C" or better in Algebra AB

The foundation for this course is the Algebra I California Mathematics Standards. Symbolic reasoning and calculations with symbols are central in algebra. Through the study of algebra, a student develops an understanding of the symbolic language of mathematics and the sciences. In addition, algebraic skills and concepts are developed and used in a wide variety of problem-solving situations.

This course will meet the "c" entrance requirement for the University of California and California State University Systems.

NCAA Approved

Algebra 1-2 3004
Algebra 1-2 SDAIE..... 3011
Algebra 1-2 SDAIE PLS..... 3054

Length of Course: 2 Semesters
Grade Level Options: 7, 8
Prerequisite: Proficient Previous Grade CST

The foundation for this course is the Algebra I California Mathematics Standards. Symbolic reasoning and calculations with symbols are central in algebra. Through the study of algebra, a student develops an understanding of the symbolic language of mathematics and the sciences. In addition, algebraic skills and concepts are developed and used in a wide variety of problem-solving situations.

This course will meet the "c" entrance requirement for the University of California and California State University Systems.

NCAA Approved

Geometry 1-2 3035

Length of Course: 2 Semesters
Grade Level Options: 8
Prerequisite: Proficient on Algebra CST

The geometric skills and concepts in this discipline are useful to all students. Aside from learning these skills and concepts, students will develop their ability to construct formal, logical arguments and proofs in geometric settings and problems.

This course will meet the "c" entrance requirement for the University of California and California State University Systems.

NCAA Approved

Math Electives

Math 6 Development 3120
Math 7 Development 3121
Pre-Algebra Development 3136

Length of Course: 2 Semesters
Grade Level Options: 6, 7, 8
Prerequisite: Basic, Below Basic or Far Below Basic on the CST

Students in this course have major gaps and misunderstandings about mathematics. These students have not achieved the elementary math standards and are not proficient in arithmetic. The Math Development course provides a second hour of instruction to support the core period and allows the opportunity for students to preview review the standards and skills at grade level. This course will focus on a hands-on approach and modeling for learning the operations with whole numbers, decimals and fractions. Applications of using basic arithmetic will be embedded in the daily problem solving activities. Literacy strategies will be emphasized for learning key vocabulary and note-taking skills necessary for success in mathematics. Diagnostic assessment tools will be used, so students work on the gaps in their learning.

Algebra 1-2 Development 3165
Algebra CD Development 3164

Length of Course: 2 Semesters
Grade Levels Options: 7, 8
Prerequisite: Students who perform high-Basic or low-Proficient on the Grade 7 Math CST.

The Algebra Development course is the second period course for Algebra 1-2 or CD students. The course provides time to remediate gaps in students learning, homework support for the math class and previews the next lesson which will be taught in the math class. This class allows time to use a more hands-on approach for important concepts.

Mathematics Interventions

Summer School Programs

Middle Intervention Summer School..... 3126

Length of Course 4 weeks
Grade Level 5, 6, 7
Prerequisite Below Basic or Far Below Basic on Grade Level CST

This course is designed for summer school and will focus on the Number Sense Standards in Grade 4, 5 and 6 that cover whole numbers, decimals and fractions needed for success in mathematics. A pre-test and post-test will be given for each unit. Students must master each unit, before moving to the next unit. The sequence of the units will be Whole Numbers, Decimals, Fraction Concepts and Fraction Operations. The course will also help the students to develop skills in test taking procedures. The course will work on the understanding of whole numbers, decimals and fractional operations for addition, subtraction, multiplication and division. Students will also continue to work on becoming advanced proficient on the basic facts and other concepts that need to be memorized for success in mathematics. Problem solving will also be incorporated into all lessons.

After School Programs

Math Intervention Decimals..... 3146

Length of Course 20 hours
Grade Level 6-8
Prerequisite Below Basic or Far Below Basic on grade level CST

The foundation for this course is the California State Math Standards for grades 3 - 7. The course reviews and completes the study of decimals and their applications from elementary school. Diagnostic assessment will be provided so that only students who are weak in the unit will be enrolled in the course.

Math Intervention Number Theory and Fraction Concepts..... 3145

Length of Course 20 hours
Grade Level 6-8
Prerequisite Below Basic or Far Below Basic on grade level CST

The foundation for this course is the California State Math Standards for grades 3 - 7. The course reviews and completes the study of number theory and fraction concepts from elementary school. Diagnostic assessment will be provided so that only students who are weak in the unit will be enrolled in the course.

Math Intervention Ratio, Proportion and Percent..... 3144

Length of Course 20 hours
Grade Level 6-8
Prerequisite Below Basic or Far Below Basic on grade level CST

The foundation for this course is the California State Math Standards for grades 3 - 7. The course reviews and completes the study of ratio, proportion and percent from elementary school. Diagnostic assessment will be provided so that only students who are weak in the unit will be enrolled in the course.

Math Intervention Measurement and Geometry..... 3143

Length of Course 4 weeks
Grade Level 6-8
Prerequisite Below Basic or Far Below Basic on grade level CST

The foundation for this course is the California State Math Standards for grades 3 - 7. The course reviews and completes the study of measurement and geometry from elementary school. Diagnostic assessment will be provided so that only students who are weak in the unit will be enrolled in the course.