

Common Core Math Classes for TVUSD

The following are the math classes available to students in Middle School.

6th grade

6th Grade Math

Compacted Year 1

7th grade

7th Grade Math

Accelerated 7

Compacted Year 2

8th grade

8th Grade Math

Accelerated 8

Compacted Year 3

No matter the class a student is in, the following mathematical practices will be expected of them.

- 1) Make sense of problems and persevere in solving them.
- 2) Reason abstractly and quantitatively.
- 3) Construct viable arguments and critique the reasoning of others.
- 4) Model with mathematics.
- 5) Use appropriate tools strategically.
- 6) Attend to precision.
- 7) Look for and make use of structure.
- 8) Look for and express regularity in repeated reasoning.

Below you will find a short description of each class, please note the rigor that will accompany it.

6th Grade Math: This is the class that most 6th grade students will take.

- Ratios and proportional reasoning; including but not limited to unit rates, ratios and proportions, percent of a quantity, transformation of units.
- The Number System; including but not limited to multiplication and division of fractions, all operations of multi-digit integers and decimals, greatest common factor, understanding of all rational numbers, graphing points in the coordinate plane.
- Expressions and Equations; including but not limited to expressions with whole number exponents, correct use of variables, all properties of operations, identify equivalent expressions, solving one variable equations and inequalities, dependent and independent variables.
- Geometry; including but not limited to area, surface area, volume, perimeter and circumference.
- Statistics and Probability; including but not limited to data distributions, measures of center, measures of variation, deviations, data plots.

Compacted Year 1: This class is year one of a 3 year program that will allow students to be ready for Algebra 2 as freshman in high school. This is an extremely rigorous course of which students are only placed after passing the placement test from the district. This is year one of compacting the following 5 classes into 3 years of study – 6th grade math, 7th grade math, 8th grade math, Algebra 1, Geometry.

7th Grade Math: This is the class that most 7th grade students will take.

- Ratios and Proportional Relationships; including but not limited to ratios associated with unit rates and fractions, recognize and represent proportional relationships.
- The Number System; including but not limited to additive inverse, distance as absolute value, apply all operations to rational numbers, convert rational numbers to decimals, approximate irrational numbers, estimate using rational and irrational numbers.
- Expressions and Equations; including but not limited to using properties of equations to generate equivalent expressions, solving multi-step problems involving rational numbers in any form, calculate reasonableness using estimation, correct use of variables, solve multi-step inequalities, graph inequalities, use square roots and cube roots, understand irrational numbers, scientific notation.
- Geometry; including but not limited to construction of geometrical figures, solve problems involving scale drawings, draw and describe cross sections, describe how two or more objects relate in space, calculate angle measures, area, surface area and volume, area and circumference of a circle, angle relationships.
- Statistics and Probability; including but not limited to relationships within random sampling, drawing inferences from statistics, draw informal comparative inferences about two populations, compare data distributions, use measures of center and measures of variability, understand probability of chance, approximate probability of chance, develop a probability model, probability of compound events.

Accelerated 7: This class is year one of a 2-year program that will allow students to be ready for Geometry as freshman in high school. This is a very rigorous course of which students are only placed after passing the placement test given by the district office. This is year one of compacting the following 3 classes into 2 years of study – 7th grade math, 8th grade math and Algebra 1.

Compacted 7: This class is year two of a 3-year program that will allow students to be ready for Algebra 2 as freshman in high school. This is an extremely rigorous course of which students are only placed after passing the placement test given by the district office. A student who previously took Compacted Year 1 is NOT guaranteed a placement in this course. This is year two of compacting the following 5 classes into 3 years of study – 6th grade math, 7th grade math, 8th grade math, Algebra 1, Geometry.

8th Grade Math: This is the class that most 8th grade students will take.

- The Number System; including but not limited to approximating irrational numbers by understanding the rational numbers.
- Expressions and Equations; including but not limited to working with radicals and integer exponents, square roots and cube roots, scientific notation, graph proportional relationships, compare proportional relationships, use similar triangles to understand slope, solve linear equations in one variable, analyze and solve pairs of linear equations, solve systems of linear equations.
- Functions; including but not limited to understanding function rules, interpret functions represented in different ways, give examples of functions that are not linear, use functions to model relationships between two quantities, analyze and sketch graphs.
- Geometry; including but not limited to rotations, reflections, translations, congruent two dimensional figures, describe dilations, understand similarity between two dimensional figures, angle sum theorem, exterior angle sum theorem, properties of parallel lines cut by a transversal, the Pythagorean Theorem, volume of cylinders, cones and spheres.
- Statistics and Probability; including but not limited to investigations of associations in bivariate data, scatter plots, lines of best fit, patterns of association, two-way tables.

Accelerated 8: This class is year two of a 2-year program that will allow students to be ready for Geometry as freshman in high school. This is a very rigorous course of which students are only placed after passing the placement test given by the district office. A student who previously took Accelerated Year 1 is NOT guaranteed a placement in this course. This is year two of compacting the following 3 classes into 2 years of study – 7th grade math, 8th grade math and Algebra 1.

Compacted 8: This class is year three of a 3 year program that will allow students to be ready for Algebra 2 as freshman in high school. This is an extremely rigorous course of which students are only placed after passing the placement test given by the district office. A student who previously took Compacted Year 2 is NOT guaranteed a placement in this course. This is year three of compacting the following 5 classes into 3 years of study – 6th grade math, 7th grade math, 8th grade math, Algebra 1, Geometry.

Note: Information about the California Common Core State Standards may be viewed on the TVUSD website under the “Academics” tab.