

Course Code	1205050
Course Category	6-12
Subject Area	Mathematics
Course Type	Core
Course Title	M/J Mathematics: 2 Advanced - 7th Advanced
Course Level	3
Course Length	Full Year
Credit Description	NA
Abbreviated Title	M/J Mathematics: 2 Advanced - 7th Advanced

RELATED BENCHMARKS (31) :

Scheme	Descriptor
LA.7.1.6.5	The student will relate new vocabulary to familiar words;
LA.7.3.2.2	The student will draft writing by organizing information into a logical sequence and combining or deleting sentences to enhance clarity; and
MA.7.A.1.1	Distinguish between situations that are proportional or not proportional and use proportions to solve problems.
MA.7.A.1.2	Solve percent problems, including problems involving discounts, simple interest, taxes, tips and percents of increase or decrease.
MA.7.A.1.3	Solve problems involving similar figures.
MA.7.A.1.4	Graph proportional relationships and identify the unit rate as the slope of the related linear function.
MA.7.A.1.5	Distinguish direct variation from other relationships, including inverse variation.
MA.7.A.1.6	Apply proportionality to measurement in multiple contexts, including scale drawings and constant speed.
MA.7.A.5.1	Express rational numbers as terminating or repeating decimals.
MA.7.G.2.1	Justify and apply formulas for surface area and volume of pyramids, prisms, cylinders, and cones.
MA.7.G.4.1	Determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and apply these relationships to solve problems.
MA.7.G.4.2	Predict the results of transformations and draw transformed figures, with and without the coordinate plane.
MA.7.G.4.3	Identify and plot ordered pairs in all four quadrants of the coordinate plane.
MA.7.P.7.1	Determine the outcome of an experiment and predict which events are likely or unlikely, and if the experiment is fair or unfair.

- MA.7.P.7.2 Determine, compare, and make predictions based on experimental or theoretical probability of independent or dependent events,
- MA.7.S.6.1 Evaluate the reasonableness of a sample to determine the appropriateness of generalizations made about the population.
- MA.7.S.6.2 Construct and analyze histograms, stem-and-leaf plots, and circle graphs.
- MA.8.A.1.1 Create and interpret tables, graphs, and models to represent, analyze, and solve problems related to linear equations, including analysis of domain, range and the difference between discrete and continuous data.
- MA.8.A.1.2 Interpret the slope and the x- and y-intercepts when graphing a linear equation for a real-world problem.
- MA.8.A.1.6 Compare the graphs of linear and non-linear functions for real-world situations.
- MA.8.A.4.2 Solve and graph one- and two-step inequalities in one variable.
- MA.8.A.6.1 Use exponents and scientific notation to write large and small numbers and vice versa and to solve problems.
- MA.8.A.6.2 Make reasonable approximations of square roots and mathematical expressions that include square roots, and use them to estimate solutions to problems and to compare mathematical expressions involving real numbers and radical expressions.
- MA.8.A.6.3 Simplify real number expressions using the laws of exponents.
- MA.8.A.6.4 Perform operations on real numbers (including integer exponents, radicals, percents, scientific notation, absolute value, rational numbers, and irrational numbers) using multi-step and real world problems.
- MA.8.G.2.2 Classify and determine the measure of angles, including angles created when parallel lines are cut by transversals.
- MA.8.G.2.3 Demonstrate that the sum of the angles in a triangle is 180-degrees and apply this fact to find unknown measure of angles, and the sum of angles in polygons.
- MA.8.G.2.4 Validate and apply Pythagorean Theorem to find distances in real world situations or between points in the coordinate plane.
- MA.8.G.5.1 Compare, contrast, and convert units of measure between different measurement systems (US customary or metric (SI)) and dimensions including temperature, area, volume, and derived units to solve problems.
- MA.8.S.3.1 Select, organize and construct appropriate data displays, including box and whisker plots, scatter plots, and lines of best fit to convey information and make conjectures about possible relationships.
- MA.8.S.3.2 Determine and describe how changes in data values impact measures of central tendency.