

<b>Course Code</b>	1205080
<b>Course Category</b>	6-12
<b>Subject Area</b>	Mathematics
<b>Course Type</b>	Core
<b>Course Title</b>	M/J Mathematics: 3 Advanced - 8th Advanced
<b>Course Level</b>	3
<b>Course Length</b>	Full Year
<b>Credit Description</b>	NA
<b>Abbreviated Title</b>	M/J Mathematics: 3 Advanced - 8th Advanced

**RELATED BENCHMARKS (29) :**

Scheme	Descriptor
LA.8.1.6.5	The student will relate new vocabulary to familiar words;
LA.8.2.2.3	The student will organize information to show understanding or relationships among facts, ideas, and events (e.g., representing key points within text through charting, mapping, paraphrasing, summarizing, or comparing/contrasting);
LA.8.3.1.2	The student will prewrite by making a plan for writing that addresses purpose, audience, main idea, logical sequence, and time frame for completion; and
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.1.3	Use tables, graphs, and models to represent, analyze, and solve real-world problems related to systems of linear equations.
MA.8.A.1.4	Identify the solution to a system of linear equations using graphs.
MA.8.A.1.5	Translate among verbal, tabular, graphical and algebraic representations of linear functions.
MA.8.A.1.6	Compare the graphs of linear and non-linear functions for real-world situations.
MA.8.A.4.1	Solve literal equations for a specified variable.
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.2.1 Use similar triangles to solve problems that include height and distances.
- 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.
- MA.912.A.1.1 Know equivalent forms of real numbers (including integer exponents and radicals, percents, scientific notation, absolute value, rational numbers, irrational numbers).
- MA.912.A.1.2 Compare real number expressions.
- MA.912.A.3.1 Solve linear equations in one variable that include simplifying algebraic expressions.
- MA.912.A.3.2 Identify and apply the distributive, associative, and commutative properties of real numbers and the properties of equality.
- MA.912.A.3.5 Symbolically represent and solve multi-step and real-world applications that involve linear equations and inequalities.
- MA.912.A.4.1 Simplify monomials and monomial expressions using the laws of integral exponents.
- MA.912.A.4.2 Add, subtract, and multiply polynomials.