

BASIC INFORMATION

Course Number:	1200500
Course Title:	Advanced Algebra with Financial Applications
Course Abbreviated Title:	Advanced Algebra with Financial Applications
Course Path:	Section: Grades PreK to 12 Education Courses» Grade Group: Grades 9 to 12 and Adult Education Courses » Subject: Mathematics » SubSubject: Algebra »
Number of Credits:	One credit (1)
Course Length:	Year
Course Type:	Core
Course Level:	2
Status:	State Board Approved

RELATED BENCHMARKS (45)

<u>LA.1112.3.1.3#:</u>	The student will prewrite by using organizational strategies and tools (e.g., technology, spreadsheet, outline, chart, table, graph, Venn Diagram, web, story map, plot pyramid) to develop a personal organizational style.
<u>LA.910.1.6.1#:</u>	The student will use new vocabulary that is introduced and taught directly;
<u>MA.912.A.2.1#:</u>	Create a graph to represent a real-world situation.
<u>MA.912.A.2.2#:</u>	Interpret a graph representing a real-world situation.
<u>MA.912.A.3.5#:</u>	Symbolically represent and solve multi-step and real-world applications that involve linear equations and inequalities.
<u>MA.912.A.3.15#:</u>	Solve real-world problems involving systems of linear equations and inequalities in two and three variables.

<u>MA.912.A.8.7#:</u>	Solve applications of exponential growth and decay.
<u>MA.912.D.1.1#:</u>	Use recursive and iterative thinking to solve problems, including identification of patterns, population growth and decline, and compound interest.
<u>MA.912.F.1.1#:</u>	Explain the difference between simple and compound interest.
<u>MA.912.F.1.2#:</u>	Solve problems involving compound interest.
<u>MA.912.F.1.3#:</u>	Demonstrate the relationship between simple interest and linear growth.
<u>MA.912.F.1.4#:</u>	Demonstrate the relationship between compound interest and exponential growth.
<u>MA.912.F.2.1#:</u>	Calculate the future value of a given amount of money with and without technology.
<u>MA.912.F.2.2#:</u>	Calculate the present value of a certain amount of money for a given length of time in the future with and without technology.
<u>MA.912.F.3.1#:</u>	Compare the advantages and disadvantages of using cash versus a credit card.
<u>MA.912.F.3.2#:</u>	Analyze credit scores and reports.
<u>MA.912.F.3.3#:</u>	Calculate the finance charges and total amount due on a credit card bill.
<u>MA.912.F.3.4#:</u>	Compare the advantages and disadvantages of deferred payments.
<u>MA.912.F.3.5#:</u>	Calculate deferred payments.
<u>MA.912.F.3.6#:</u>	Calculate total cost of purchasing consumer durables over time given different down payments, financing options, and fees.
<u>MA.912.F.3.7#:</u>	<p>Calculate the following fees associated with a mortgage:</p> <ul style="list-style-type: none"> • discount points • origination fee • maximum brokerage fee on a net or gross loan • documentary stamps • prorated expenses (interest, county and/or city property taxes, and mortgage on an assumed mortgage)
<u>MA.912.F.3.9#:</u>	Calculate the total amount to be paid over the life of a fixed rate loan.

<u>MA.912.F.3.10#:</u>	Calculate the effects on the monthly payment in the change of interest rate based on an adjustable rate mortgage.
<u>MA.912.F.3.11#:</u>	Calculate the final pay out amount for a balloon mortgage.
<u>MA.912.F.3.12#:</u>	Compare the cost of paying a higher interest rate and lower points versus a lower interest rate and more points.
<u>MA.912.F.3.13#:</u>	Calculate the total amount paid for the life of a loan for a house including the down payment, points, fees, and interest.
<u>MA.912.F.3.14#:</u>	Compare the total cost for a set purchase price using a fixed rate, adjustable rate, and a balloon mortgage.
<u>MA.912.F.3.17#:</u>	Compare interest rate calculations and annual percentage rate calculations to distinguish between the two rates.
<u>MA.912.F.4.1#:</u>	Develop personal budgets that fit within various income brackets.
<u>MA.912.F.4.2#:</u>	Explain cash management strategies including debit accounts, checking accounts, and savings accounts.
<u>MA.912.F.4.3#:</u>	Calculate net worth.
<u>MA.912.F.4.4#:</u>	Establish a plan to pay off debt.
<u>MA.912.F.4.5#:</u>	Develop and apply a variety of strategies to use tax tables, and to determine, calculate, and complete yearly federal income tax.
<u>MA.912.F.4.6#:</u>	Compare different insurance options and fees.
<u>MA.912.F.4.7#:</u>	Compare and contrast the role of insurance as a device to mitigate risk and calculate expenses of various options.
<u>MA.912.F.4.8#:</u>	Collect, organize, and interpret data to determine an effective retirement savings plan to meet personal financial goals.
<u>MA.912.F.4.9#:</u>	Calculate, compare, and contrast different types of retirement plans, including IRAs, ROTH accounts, and annuities.
<u>MA.912.F.4.10#:</u>	Analyze diversification in investments.
<u>MA.912.F.4.11#:</u>	Purchase stock with a set amount of money, and follow the process through gains, losses, and selling.
<u>MA.912.F.4.12#:</u>	Compare and contrast income from purchase of common stock, preferred stock, and bonds.
<u>MA.912.F.4.13#:</u>	Given current exchange rates be able to convert from one form of currency to another.

<p><u>MA.912.S.3.1#:</u></p>	<p>Read and interpret data presented in various formats. Determine whether data is presented in appropriate format, and identify possible corrections. Formats to include:</p> <ul style="list-style-type: none"> • bar graphs • line graphs • stem and leaf plots • circle graphs • histograms • box and whiskers plots • scatter plots • cumulative frequency (ogive) graphs
<p><u>MA.912.S.3.3#:</u></p>	<p>Calculate and interpret measures of the center of a set of data, including mean, median, and weighted mean, and use these measures to make comparisons among sets of data.</p>
<p><u>MA.912.T.5.1#:</u></p>	<p>Use a variety of problem-solving strategies, such as drawing a diagram, guess-and-check, solving a simpler problem, examining simpler problems, and working backwards, using technology when appropriate.</p>
<p><u>MA.912.T.5.2#:</u></p>	<p>Decide whether a solution is reasonable in the context of the original situation.</p>