

Novato Unified School District
Course Outline
Subject: Mathematics

Course Title: Personal Finance

(For NUSD Curriculum and Instruction Use Only)

Transcript Title: Personal Financ

Transcript Abbreviation: MMG155

Pre-Requisite or Co-Requisite: Algebra 1

Required: ☒ Required: ☐ Recommended: ☐ Co-requisite: ☐ None: ☐

Additional Pre-Requisite or Co-Requisite:

Required: ☐ Recommended: ☐ Co-requisite: ☐ None: ☒

Elective Subject Area: Mathematics

Is this a CTE Course? ☐ Yes ☒ No

If yes, name of Industry Sector:

Grade Level: 11, 12

Is this course modeled after a course from another school? ☐ Yes ☒ No

If Yes: Name of School: King City High School

Title of Course: Advanced Algebra with Financial Applications

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Brief Course Description: (Student Friendly)

Personal Finance is a mathematical modeling course that is algebra-based, applications-oriented, and technology-dependent. The course addresses college preparatory mathematics topics from Algebra, Geometry, Advanced Algebra, Statistics, and Probability. Financial Topics include: Banking, Investing, Credit, Employment and Income Taxes, Automobile Ownership, Independent Living, and Retirement Planning and Household Budgeting. The course allows students to experience the inter-relatedness of mathematical topics, find patterns, make conjectures, and extrapolate from known situations to unknown situations. Students are encouraged to use a variety of problem-solving skills and strategies in real-world contexts, and to question outcomes using mathematical analysis and data to support their findings. The course offers students multiple opportunities to use, construct, question, model, and interpret financial situations through symbolic algebraic representations, graphical representations, geometric representations, and verbal representations. It provides students a motivating, young-adult centered financial context for understanding and applying the mathematics they are guaranteed to use in the future, and is aligned with the recommendations of the Common Core State Standards.

Course Content:

Unit 1: Banking Services

Unit Description and Mathematical Topics: In this unit, students use exponential functions to compute compound interest and compare it to simple interest. They derive formulas and use iteration to compute compound interest. They apply their findings to short-term, long-term, single deposit and periodic deposit accounts.

- Exponential functions
- Natural logarithm as the inverse of the exponential function
- Exponential growth and decay
- Solving exponential equations
- Using inductive reasoning
- Derivation of the compound interest formula

Mathematics Learning Goals

- Students will use the simple interest formula and use inverse operations to solve for all four variables I (interest), P (principal), R (rate), and T (time).
- Students will compute compound interest with and without the formula.
- Students will be able to identify equations as models for exponential decay when the exponent is less than 1.
- Students will be able to identify equations as models for exponential growth when the exponent is greater than 1.
- Students will graph exponential functions.

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- Students will compute Annual Percentage Yield (APY), given the Annual Percentage Rate (APR).
- Students will use the compound interest formula to model the present value of a single deposit investment formula.
- Students will use the compound interest formula to model the present value of a periodic deposit investment.
- Students will use the future value of a periodic deposit investment formula.

- Students will adapt the algebra from banking formulas for input into a spreadsheet.

Key Assignment 1.1: How Interest Method Affects Monetary Growth

Mathematics: Simple interest, compound interest

Mathematics Learning Goals: To determine how increased compounding affects growth.

Students are first introduced to the meaning of compounding numerically via mathematical iteration. Before embarking on a rigorous study of limits and compound interest algebraic formulas, students are asked. How much would \$1,000 grow to, in one year, at 100% interest compounded continuously. The 100% interest and continuous compounding often leads them to guess much higher than the actual amount. Their guesses are recorded, and a statistical analysis of their guesses is made. Outliers are carefully noted.

Key Assignment 1.2: Future Value and College Costs

Mathematics: Rational functions, regression

Mathematics Learning Goals: To estimate the cost of a college education in 18 years and determine how much needs to be saved each month to have the costs covered by the 18th year.

Students pick a college and find out the cost of tuition, room and board (if necessary) and fees over the past ten years. They set up a regression line or curve of best fit. They then predict the cost of a college education in 18 years (as if they just had a child and were trying to save for college). They then use the prevailing interest rate and the future value formula to determine the monthly periodic deposit that would be necessary to have the full college cost saved by the child's 18th birthday. They then do the problem with interest rates slightly higher than the prevailing rate.

Unit 2: Investing

Unit Description and Mathematics Topics: Students are introduced to basic business organization terminology in order to read, interpret, chart and algebraically model stock ownership and transaction data. Statistical analysis plays a very important role in the modeling of a business. Using linear, quadratic, and regression equations in that process assists students in getting a complete picture of

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supply, demand, expense, revenue, and profit as they model the production of a new product.

- Algebraic ratios and proportions
- Algebraic representations of percent increase and decrease
- Pictorial representations of data
- Scatter plots
- Operations with functions
- Function domains
- Function evaluation
- Linear and quadratic functions to model situations
- Rational functions
- Systems of equations (linear/linear and linear/quadratic)
- Systems of inequalities
- Regression equations
- Axis of symmetry, roots, and intercepts parabolas
- Quadratic formula
- Explanatory, response, and lurking variables
- Causation vs. correlation for bivariate data
- Transitive Property of Dependence
- Zero Net Difference

Mathematical Learning Goals

- Students will construct, use, and interpret algebraic ratios and proportions.
- Given a set of n compound ratios and a total T , students will write and solve equations in terms of x and T where the variable coefficients are the ratios and determine the amount associated with each ratio.
- Students will determine, use, and interpret percent increase/decrease of monetary amounts.
- Students will determine, use, and interpret percent net change of monetary amounts.
- Students will construct and interpret pictorial representations of data.
- In any a -for- b stock split, where P represent the pre-split price per share, students will calculate the post-split price per share using the split ration b/a
- In any a -for- b stock split, where D represent the pre-split number of shares, students will calculate the post-split number of shares using the split ratio a/b
- Students will calculate the stock yield percentage using the formula using the yield ratio A/C where A represents the annual dividend per share and C represents the current price per share.
- Students will construct and interpret scatterplots .
- Students will identify form, direction, and strength from a scatterplot.
- Students will perform operations with functions.

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- Students will evaluate functions and use them to model situations.
- Students will translate verbal situations into algebraic linear functions.
- Students will translate verbal situations into quadratic functions.
- Students will create rational average-value functions of the form $f(x) = (mx+b)/x$
- Students will translate verbal situations into linear and quadratic inequalities.
- Students will solve linear systems of equations and inequalities and identify points of intersection and domains in the context of the problem situation.
- Students will solve systems of linear equations and inequalities in two variables.
- Students will identify domains for which $f(x) > g(x)$, $f(x) = g(x)$, and $f(x) < g(x)$.
- Students will use the quadratic formula to find the roots of a quadratic equation and interpret those roots in the context of the problem situation.
- Students will find and interpret quadratic regression equations.
- Students will solve linear-quadratic systems of equations and inequalities, and interpret the roots, intersection points, relative extrema, absolute extrema, and domains in the context of the problem situation.
- Students will find absolute and relative extrema.
- Students will delineate Causation vs. correlation for bivariate data.
- Students will identify explanatory and response variables.
- Students will identify and diagram lurking variables.
- Students will use the transitive property of dependence.
- Students will determine the zero net difference.
- Students will write algebraic formulas for use in spreadsheets.
- Students will use, interpret and evaluate rational expressions.
- Students will use, interpret and evaluate algebraic fractions, ratios, and proportions.

Key Assignment 2.1:Charting a Corporate Stock

Mathematics: Data Analysis, regression, prediction, modeling, graphical interpretation

Mathematics Learning Goals: The goal of this assignment is to have students use mathematical modeling to chart and interpret stock market trends over a 15-day period.They will make trend predictions based on simple moving average crossover analysis as well as regression models.

Each student selects a corporation traded on the New York Stock Exchange. They produce a background paper, PowerPoint presentation or poster board display on that corporation.

Students chart the open, close, high, low and volume data for 15 consecutive trading days.They graph the data using two different formats and then discuss trends that the data shows. They will also calculate three different cluster-lengths of moving averages and, using those clusters, they will

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create superimposed line graphs. Students discuss trading implications based upon stated domains of graph pairs before and after any intersection points. Finally, they determine the closing price curve of best fit using regression analysis. They must state the regression equation and support why their stated curve best fits the data of closing prices. Students will then use the curve of best fit to predict a closing price on the 16th trading day. They compare that predicted price with the actual closing price on the 16th day and find a percent error.

Key Assignment 2.2: Mathematically Modeling A Business

Mathematics: Linear and quadratic functions, linear/linear Systems, linear/quadratic systems, regression analysis

Mathematics Learning Goals: To have students create linear and quadratic models for a start-up business. They will graph and interpret systems of these regression and modeling equations in order to explore the relationship between and among expense, demand, price, revenue and profit.

Students are given a market research scenario for a new product, attained from a focus group questionnaire. The research contains a list of ordered pairs in the form (p,q) where p is a potential price and q is the quantity of the product that the focus group member would purchase if it was set at that price. Using these ordered pairs, students construct a scatter plot, determine the correlation coefficient, and identify a linear regression equation in which q is the independent variable and p is the dependent variable. Then, given information about expenses, they are to set up a linear expense function in terms of the quantity demanded. The quadratic revenue and profit equations are determined and graphed on the same axes with the expense function. Students identify and interpret the break even points, the coordinates of the maximum point on the revenue graph, the coordinates of the maximum point on the profit graph, and the price at which the product should be sold in order to maximize profit. Finally, students are told the initial price per share for the company's stock and asked to determine the number of shares that must be sold in order to have enough money to start this business.

Unit 3: Employment and Income Taxes

Unit Description and Mathematical Topics: Many Internal Revenue Service and Social Security Administration regulations can be modeled by using linear and polygonal functions that have different slopes over different domains. Line-by-line instructions for IRS forms can also be algebraically symbolized.

- Point-slope form of linear equations
- Jump discontinuities
- Slope
- Compound inequality notation
- Piecewise functions

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- Interval notation
- Percent increase and decrease
- Data analysis
- Algebraic modeling

Mathematics Learning Goals

- Students will identify continuous and discontinuous functions by their graphs.
- Students will determine and interpret domains of piecewise functions.
- Students will graph exponential functions that model pay schedules.
- Students will compute measures of central tendency and rational functions that model average value..
- Students will use geometric sequences and identify common ratio r .
- Students will express percent increases and decreases as rational functions.
- Students will use the point-slope form of the equation of a line and convert to slope-intercept form.
- Students will graph continuous polygonal functions with multiple slopes and cusps.
- Students will translate verbal expressions into literal rational, exponential, and linear equations.
- Students will express domains using compound inequality notation and interval notation.
- Students will express domains using tax schedule notation.
- Students will model a tax bracket, given a compound inequality statement, and model a tax bracket to determine the tax using a linear equation.
- Students will write equations in point-slope form.
- Students will model algebraically a tax schedule matrix
- Students will create and interpret piecewise functions, and give the domains and literal interpretations of the algebraic model.
- Students will graph piecewise functions of the form and determine the cusps of piecewise functions from the function notation.
- Students will interpret the graphs, slopes, and cusps of continuous polygonal functions with multiple slopes and cusps.
- Students will adapt all algebraic formulas in the unit for use in spreadsheets.

Key Assignment 3.1: Creating the Tax Worksheet

Mathematics: Domains, piecewise functions, linear functions and graphs, point-slope form, slope-intercept form, graphs with cusps.

Mathematics Learning Goals: To derive the slope-intercept form used on the IRS tax worksheet by

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translating tax tables into piecewise functions.

The tax tables give taxpayers a function in which the independent variable is the taxable income and the dependent variable is the tax. It is convoluted and has confused taxpayers for years. Within the last decade, the IRS created a worksheet that uses the slope-intercept form of the equations of a line to simplify calculations for the taxpayer. In this Key Assignment, students interpret the IRS Schedule, express the domains using compound inequality notation, and create the piecewise function that models the IRS intentions. They then convert this function, which is a translated version of point-slope form, into the slope-intercept form to create the tax worksheet.

Key Assignment 3.2: Graphing the FICA Tax Function

Mathematics: Piecewise functions, slope, cusps, linear equations

Mathematics Learning Goals: To use graphs to compare the FICA tax longitudinally over a prescribed number of years.

Students look up the FICA tax percents, and maximum taxable incomes to create piecewise functions for each of the last six years. They compute the maximum FICA tax, and graph all six years on the same axes, and use the graph to write a paragraph on what has happened to FICA taxes over those years. They discuss the significance of the coordinates of the cusp. They do the same for the tax years 1981-86, and compare the last six years to the years 1981-1986. The assignment is replicated using the Medicare tax percent.

Unit 4: Automobile Ownership

Unit Description and Mathematics Topics: Various functions, their graphs, and data analysis can be instrumental in the responsible purchase and operation of an automobile.

- Exponential/linear systems of equations
- Irrational functions
- Quadratic functions
- Piecewise functions
- Graphs of piecewise functions
- Systems of linear equations
- Frequency distributions
- Stem-and leaf plots
- Modified box-and-whisker plots
- Quartiles
- Interquartile range
- Outliers of a frequency distribution

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Mathematics Learning Goals

- Students will model exponential depreciation as $y = Px^b$ where P is the purchase price and $x < 1$, and compare the depreciation to an increasing linear expense function.
- Students will transform raw data into a frequency distribution.
- Students will create and interpret stem and leaf plots and side-by-side steam plots that display two distributions simultaneously.
- Students will create and interpret side-by-side, modified box and whisker plots, and learn how to display them on a graphing calculator.
- Students will compute measures of dispersion including the range and the interquartile range.
- Students will compute Q_1 , Q_2 , Q_3 , and Q_4 manually and with the graphing calculator.
- Students will compute boundaries for outliers using the expressions $Q_1 - 1.5(IQR)$ and $Q_3 + 1.5(IQR)$.
- Students will compute and interpret percentiles.
- Students will compute measures of central tendency including the mean, median and mode, and explain appropriate uses of each.
- Students will create and interpret piecewise (split) functions based on classified ad costs and commission payment schedules.
- Students will determine the domains of a piecewise function from verbal situations.
- Students will graph piecewise functions using mutually exclusive domains.
- Students will determine the reaction distance using a quadratic function.
- Students will compute braking distance using the formula.
- Students will compute total stopping distance as a function of reaction distance and braking distance..
- Students will compute distance, rate and time using the $D = R \times T$ formula.
- Students will compute miles per gallon and distance using the formula $D = (MPG)(G)$.
- Students will use dilations D_k to transform formulas between the English Standard and Metric measurement systems.
- Students will adapt all algebraic formulas from the chapter for use in spreadsheets.

Key Assignment 4.1: Using Statistics to Negotiate Auto Transactions

Mathematics: Bivariate data, correlation, regression, mean, median, mode, quartiles, interquartile range, outliers, modified box-and-whisker plots, stem-and-leaf plots, frequency distributions, scatterplots.

Mathematics Learning Goals: To use measures of central tendency and measures of dispersion to mathematically negotiate the buying and/or selling of an automobile.

Students choose a make, model and year for an automobile. They use the Internet and newspaper classified ads to find 10-20 of those cars for sale. They get the price of the car and the mileage it has.

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They construct modified box-and-whisker plots and describe the frequency distribution. They pair each car's price with its mileage to create a scatterplot. They classify the association as positive or negative. They find the regression line and correlation coefficient and interpret the relationship as strong, moderate or weak, and discuss its linearity. Their results are presented to the class via PowerPoint presentation or poster presentation.

Key Assignment 4.2: Automobile Cost and Depreciation

Mathematics: Exponential regression, graphing linear and exponential functions, rational functions, linear/exponential systems, systems of linear equations, slope-intercept form.

Mathematics Learning Goals: To use graphing techniques to compare the value of a car to the expense of purchasing it throughout its lifetime.

Using the monthly payment rational function, students graph the cost C of purchasing a new car, using the down payment as the y-intercept, and the monthly payment as the slope. They then investigate three types of depreciation: straight-line, exponential, and historical bath tub graphs. They graph the cost and depreciation functions on the same set of axes to find the month at which the total cost C of owning the car surpasses its value V as it depreciates. They identify and interpret the domains on which $C > V$ and $C < V$.

Unit 5: Consumer Credit

Unit Description and Mathematics Topics: Becoming familiar with credit terminology and regulations is critical in making wise credit decisions. Credit comes at a price and in this unit students learn how to use mathematics to make wise credit choices that fit their needs, current financial situation, and future goals.

- Algebraic proportions
- Linear, quadratic, cubic, and exponential equations
- Exponential growth and decay
- Regression equations
- Inverse function of an exponential equation
- Summation notation

Mathematics Learning Goals

- Students will create, evaluate, interpret and solve algebraic proportions.
- Students will model situations using linear, quadratic, cubic, and exponential equations.
- Students will determine the curve of best fit using linear and quadratic regression equations.
- Students will create, use, and interpret exponential growth and decay equations that model given situations.
- Students will apply an exponential equation in the form of the monthly payment formula

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where the exponent is present in both the numerator and the denominator.

- Students will use the slope-intercept form $y=Mx+b$ where M is the exponential monthly payment equation.
- Students will use model and calculate the finance charge using the exponential monthly payment formula and the retail price.
- Students will interpret and use summation notation to model the average daily balance
- Students will calculate the finance charge using the summation notation formula.
- Students will create and use algebraic formulas and apply them for use in spreadsheets.

Key Assignment 5.1: Can I Afford This Loan?

Mathematics: Exponential functions, system of exponential and linear functions, modeling, graphical interpretation

Mathematics Learning Goals: To use two modalities to determine the affordability of a loan: exponential formula evaluation, and interpreting an exponential/linear system. To use technology (graphing utility and/or spreadsheet) to make the determinations required and justify their responses.

Students are given a scenario in which a family must make a decision about the affordability of a loan based on the principal, the loan-length, the APR and the maximum affordable monthly payment the family is able to make towards loan debt reduction. Students determine the affordability of the loan in two different ways: using the monthly payment function and interpreting the graphs of the system of equations defined by the exponential monthly payment function and the linear maximum affordable monthly payment. They are then asked to construct two spreadsheets: a monthly payment spreadsheet that charts the monthly payment as loan length time varies from 1 to 20 years, and a loan length spreadsheet that charts time as monthly payments vary from \$100 to \$1000. Finally, students must write up a summary analysis for this situation explaining how the algebraic modeling by the spreadsheet formulas supports their prior work.

Key Assignment 5.2: Mathematically Modeling a Credit Card Statement

Mathematics: Algebraic modeling and spreadsheet formula creation

Mathematics Learning Goals: To algebraically model a month of activity on a person's credit card.

Students create a 21-day credit calendar that depicts algebraic representations of daily balances based upon an opening balance of Y dollars, an X-dollar purchased on the 8th day, a Z dollar payment on the 13th day, and a W-dollar purchased on the 20th day. Using these representations from the calendar, they write algebraic expressions for the sum of the daily balances, the average daily balance, and the finance charge for this 21-day period given that the APR on this credit card is P%. Students then create a spreadsheet that models the situation described above and test their

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spreadsheet for a given data set.

Unit 6: Independent Living

Unit Description and Mathematics Topics: In this unit, students work their way through the mathematics that models moving, renting, and purchasing a place to live. They also explore the geometric demands of floor plans and design, and discover the relationship between area and probability.

- Area of a regular polygon
- Areas of shaded regions
- Rational functions
- The Monte Carlo Method
- Exponential functions

Mathematics Learning Goals

- Students will use rational functions with multiple independent variables to compute back-end and front-end ratios for mortgage applications.
- Students will make computations based on the monthly payment rational function.
- Students will compute mortgage interest.
- Students will use probability and proportions to find the area of irregular plane region (The Monte Carlo Method).
- Students will use factors of dilations to draw to scale.
- Students will compute areas of irregular and shaded regions.
- Students will solve scale problems using proportions.
- Students will use exponential equations to model percentage rent increases.
- Students will model rent increases using exponential regression functions.
- Students will read and interpret data.
- Students will use the future value of a periodic deposit formula to make comparisons to mortgage payments and increasing resale value of a home.
- Students will adapt all algebraic formulas for use in spreadsheets.
- Students will translate verbal expressions into literal equations.

Key Assignment 6.1: Areas of Irregular Plane Figures

Mathematics: Probability, ratios, random integers, graphing, random number table

Mathematics Learning Goals: To use the Monte Carlo method to find the area of any regular or irregular plane figure.

Students superimpose a grid on an irregular plane figure that is part of a landscape design. They outline the irregular figure with a rectangle and use a random number generator from a calculator, or

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a random number table, to generate 500 points, which they plot on their rectangular grid. As they plot each point, they note if it is inside or outside of the irregular region. They find the percent of random points that landed in the irregular region and take that percent of the area of the enclosing rectangle to approximate the area of the irregular region.

Key Assignment 6.2: Areas of Shaded Regions

Mathematics: Area formulas

Mathematics Learning Goals: To determine areas of plane figures that have sections removed from them.

As part of a unit on floor plans and interior design, students compute areas of floors to find the cost of new flooring. They also compute the cost of paint by taking the areas of the walls and subtracting window and door areas. They employ the area of a circle, square, triangle, rectangle, trapezoid, and parallelogram, and create a poster display on what a specific room cost to redo.

Key Assignment 6.3: How Increased Payments Affect Mortgages

Mathematics: Rational functions

Mathematics Learning Goals: To determine the reduction in interest that extra mortgage payments result in.

Students use the monthly payment formula to compute the monthly payment for a hypothetical mortgage amount over 15 and 30 years. They compute the total payments, based on 12 monthly payments each year, and the total interest for the entire loan. They then use a mortgage calculator to assume an extra, 13th payment is made each year, so payments are made once every 4 weeks instead of once each month. They compute the interest and new total repayment period and compare the total interest to the original conventional mortgage to see the savings in total years and interest.

Unit 7: Retirement Planning and Budgeting

Unit Description and Mathematical Topics: The focus of this unit is on the mathematics of fiscal plans that workers can make years ahead of their retirement date. This involves a detailed study of retirement savings plans, both personal and federal, employee pension programs, and life insurance. Additionally, students are asked to call upon the knowledge acquired in all of the preceding units in order to create and chart a responsible personal budget plan, to mathematically analyze cash flow, and to determine net worth.

- Expected value of a probability distribution
- Greatest Integer function
- Exponential Equations
- Piecewise Greatest Integer Function

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- Systems of linear and piecewise functions
- Domains, constants, coefficients, dependent and independent variable

Mathematics Learning Goals

- Students will use the exponential future value of a periodic investment formula to predict balances after t years when given a periodic deposit amount, an investment return rate, and compounding information.
- Students will use the exponential present value of a periodic investment formula of the form to determine the principal when given a future value, a time in years, an investment return rate, and compounding information.
- Students will use inequalities to define domains when creating algebraic expressions.
- Students will analyze the effect that a change in multipliers has to the value of an algebraic expression.
- Students will write rational expressions to represent increase over time.
- Students will use and interpret the greatest integer function.
- Students will determine and interpret the expected value of a probability distribution.
- Students will read and interpret data presented in multiple formats.
- Students will create interpret, and graph greatest integer functions of the form.
- Students will understand the algebraic and contextual differences between various forms of greatest integer functions.
- Students will incorporate the greatest integer function into a piecewise function.
- Students will evaluate a piecewise function that includes a greatest integer function for various values on the domain of the piecewise function.
- Students will create, interpret, and graph a system of a linear and a piecewise function and determine the point of intersection.
- Students will create and interpret budget line equations of the type $Ax + By = C$ where A represents the cost of the first of two items and B represents the cost of the second of two items, x and y represent quantities under consideration and C represents an amount budgeted.
- Students will interpret points on a budget line graphs in the context of their relationship to the budget line.
- Students will compare budget line graphs and interpret them as transformations in the plane.
- Students will use multiple representations to chart data relating to retirement and budgeting.

Key Assignment 7.1: Planning For Retirement

Mathematics: Exponential equations, expected value, data analysis, modeling and predicting

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Mathematics Learning Goals: To apply prior knowledge from the banking unit to make decisions about the feasibility of a retirement plan.

Students are given financial information about a prospective retiree and asked to act as a financial retirement planner. The prospective retiree has also supplied the planner with desired monetary goals in retirement. Based upon information about savings plans, social security benefits, pensions, and life insurance policies, and using formulas learned in this unit, the planner is to write up a financial plan for the prospective retiree that includes at least two ways of meeting the goals and has mathematical justification for the recommendations made.

Key Assignment 7.2: Cash Flow, Net Worth and Debt Reduction

Mathematics: Algebraic ratios, modeling, linear equations

Mathematics Learning Goals: To create a spreadsheet that calculates cash flow, net worth, and debt to income ratio.

Students are given a budget spreadsheet that contains the headings of income, fixed expenses, variable expenses, and non-monthly expenses. There are sub-headings under each of these listing specific categories relating to the heading. Students are given a full accounting of a person's financial status and asked to build a spreadsheet that calculates that person's cash flow. In addition, the students are given information about the person's assets and liabilities and are asked to add it to the spreadsheet and determine the net worth. Finally, based upon the calculation of the debt-to-income ratio, students are asked to develop a debt reduction plan for the individual if necessary.

Textbook:

Title: Financial Algebra: Advanced Algebra with Financial Applications

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Author(s): Robert Gerver; Richard J. Sgroi

Supplemental Resources: Access to a variety of print and online new periodicals (ie. The New York Times, Wall Street Journal, Forbes, The Economist, etc)