Mathematics: Applied Business Math B
Unit 1: Insurance and Investments

Essential Understandings	▪ Understanding insurance and investments is important in the twenty-first century economy.
Essential Questions	▪ What is the purpose of life, health and disability insurance? ▪ How does the bond market work? ▪ How does the stock market work? ▪ What is a mutual fund? ▪ How does the real estate market work? ▪ How does one prepare for retirement?
Essential Knowledge	▪ Insurance is a way of protecting you from financial hardship. ▪ Bonds are a form of long term promissory notes. ▪ Stocks represent ownership in a company. ▪ Mutual funds allow investors to diversify risk with a single purchase. ▪ Real estate investments can produce income through rents and capital gains. ▪ Retirement income may come from various sources.
Vocabulary	▪ <u>Terms</u>: ○ life insurance, health insurance, disability insurance, bonds, interest, yields, cash value, stocks, dividends, mutual funds, load, commission, real estate, net income, retirement, pension, benefits
Essential Skills	▪ Numerical calculations with percents. ▪ Calculate the cost of health insurance. ▪ Calculate the costs of buying stocks and bonds. ▪ Calculate the costs and incomes of investment properties. ▪ Calculate retirement savings.

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Related Maine Learning Results	Mathematics A. Number Real Number A1. Students know how to represent and use real numbers. a. Use the concept of nth root. b. Estimate the value(s) of roots and use technology to approximate them. c. Compute using laws of exponents. d. Multiply and divide numbers expressed in scientific notation. e. Understand that some equations do not have real solutions and that there exist other number systems to allow for solutions to these equations. B. Data Data Analysis B2. Students understand correlation and cause and effect. a. Recognize when correlation has been confused with cause and effect. b. Create and interpret scatter plots and estimate correlation and lines of best fit. c. Recognize positive and negative correlations based on data from a table or scatter plot. d. Estimate the strength of correlation based on a scatter plot. B3. Students understand and know how to describe distributions and find and use descriptive statistics for a set of data. a. Find and apply range, quartiles, mean absolute deviation, and standard deviation (using technology) of a set of data. b. Interpret, give examples of, and describe key differences among different types of distributions: uniform, normal, and skewed. c. For the same mean of normal distributions, use the standard deviation for a group of observations to establish 90%, 95%, or 99% confidence intervals. B4. Students understand that the purpose of random sampling is to reduce bias when creating a representative sample for a set of data. a. Describe and account for the difference between sample statistics and statistics describing the distribution of the entire population. b. Recognize that sample statistics produce estimates for the distribution of an entire population and recognize that larger sample sizes will produce more reliable estimates. c. Apply methods of creating random samples and recognize possible sources of bias in samples.

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Sample Lessons And Activities	▪ Write a persuasive essay convincing workers to save for retirement. ▪ Track a hypothetical portfolio over time and evaluate your investments.
Sample Classroom Assessment Methods	▪ Homework ▪ Quizzes ▪ Chapter Test
Sample Resources	▪ Publications: o Business Math