

Mathematics: Applied Business Math A
Unit 3: Loans and Credit Cards

Essential Understandings	Basic understanding of borrowing money, securing loans, and using credit cards are fundamental money skills.
Essential Questions	- How do you calculate interest on interest-bearing promissory notes? - How do you calculate interest using the exact interest method? - How do you calculate the rate of interest? - How do you calculate interest and proceeds for discounted promissory notes? - How do you calculate the true rate of interest on a discounted promissory note? - How do you calculate interest using simple interest tables? - How do you find the due date of a note? - How do you find the number of days between dates of a note? - How do you calculate the installment price and finance charge on an installment plan purchase? - How do you calculate the number and amount of monthly payments on an installment loan? - How do you calculate interest, principal payment, and new balance on an installment loan? - How do you calculate APR on a loan? - How do you identify the important information found on a credit card statement? - How do you verify transactions on a credit card statement? - How do you calculate the cost of using a credit card? - How do you calculate finance charges using previous balance method? - How do you calculate finance charges using adjusted balance method? - How do you calculate finance charges using average daily balance method? - How do you calculate charges on cash advances?
Essential Knowledge	- A wise consumer understands the basic financial costs and how to compare loan options such as promissory notes, installment loans, credit card purchases, and cash advances. - Interest rate methods for loans vary depending upon the type of loan. - Different finance charge methods are used for credit card purchases and cash advances.

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Vocabulary	▪ <u>Terms:</u> ○ adjusted balance method, annual percentage rate, average daily balance method, bank discount, cash advance, down payment, exact interest method, finance charge, interest, ordinary interest method, periodic rate, previous balance method, principal, promissory note, rate of interest, time,
Essential Skills	▪ Describe the difference between promissory notes, installment loans, credit card purchases, and cash advances. ▪ Read and interpret loan and credit card statements. ▪ Calculate interest on promissory notes and loans using the appropriate interest rate method. ▪ Calculate APR. ▪ Calculate monthly payments and break out by interest and principal for promissory notes and loans. ▪ Calculate finance charges on credit card purchases and cash advances using the appropriate method. ▪ Calculate the cost of credit card use.
Related Maine Learning Results	<u>Mathematics</u> 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.

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Related Maine Learning Results	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.
Sample Lessons And Activities	▪ Orally respond to questions. ▪ Utilize worksheets and notes to demonstrate individual understanding of concepts.
Sample Classroom Assessment Methods	▪ Quizzes ▪ Take-home worksheets ▪ Projects ▪ Test
Sample Resources	▪ <u>Publications:</u> ○ <u>Business Math</u> - 15th Edition