

Mathematics: Applied Business Math A
Unit 4: Spend Wisely

<p>Essential Understandings</p>	<ul style="list-style-type: none"> ▪ Many purchases also include a sales tax. ▪ Sales slips are receipts. ▪ Unit prices help shoppers compare prices. ▪ Renting an item may be an alternative to buying the item. ▪ To connect your home computer to the internet you will need an Internet Service Provider.
<p>Essential Questions</p>	<ul style="list-style-type: none"> ▪ What is sales tax? ▪ How is sales tax calculated? ▪ How are sales slip totals calculated? ▪ Why are unit prices used? ▪ How are unit prices calculated? ▪ How does one compare prices? ▪ How does one compare rental options? ▪ How does one compare renting vs. buying? ▪ What are the different options provided by an Internet Service Provider?
<p>Essential Knowledge</p>	<ul style="list-style-type: none"> ▪ Sales tax is a percentage of the price of an item and is added to the cost of an item at the time of sale ▪ Some items are non-taxable. ▪ Sales slips are used by shoppers to verify purchases and prices, and for record-keeping. ▪ Unit prices help shoppers compare prices of similar items and identify the lowest-priced items. ▪ Renting an item that is not used often or is only needed for a short period of time may be the appropriate alternative to buying the item. ▪ For items that are used on a regular basis, it may be less expensive to buy the item than to rent it. ▪ Internet Service Providers allow you to connect your home computer to the internet. ▪ There are many different options and costs for Internet Service.
<p>Vocabulary</p>	<ul style="list-style-type: none"> ▪ <u>Terms:</u> <ul style="list-style-type: none"> ○ assessed value, bodily injury, closing costs, collision, comprehensive damage, depreciation, down payment, homeowners insurance, lease, manufacturer's suggested retail price (MSRP), mortgage loan, premium, property damage, property taxes, renters policy, resale value, security deposit, trade-in value
<p>Essential Skills</p>	<ul style="list-style-type: none"> ▪ Calculate sales tax. ▪ Calculate extensions. ▪ Calculate sales totals. ▪ Calculate unit cost from a group cost. ▪ Use unit costs as a price comparison tool. ▪ Compare sale prices at different stores. ▪ Compare rental options. ▪ Compare cost of renting vs. cost of buying. ▪ Calculate download and upload times.

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<p>Related Maine Learning Results</p>	<ul style="list-style-type: none"> ▪ Compare internet access costs of different ISPs. <p><u>Mathematics</u></p> <p>A. Number</p> <p>Real Number</p> <p>A1.Students know how to represent and use real numbers.</p> <ol style="list-style-type: none"> 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. <p>B. Data</p> <p>Data Analysis</p> <p>B2.Students understand correlation and cause and effect.</p> <ol style="list-style-type: none"> 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. <p>B3.Students understand and know how to describe distributions and find and use descriptive statistics for a set of data.</p> <ol style="list-style-type: none"> 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. <p>B4.Students understand that the purpose of random sampling is to reduce bias when creating a representative sample for a set of data.</p> <ol style="list-style-type: none"> 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.
	<p>Sample Lessons And</p>

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Activities	
Sample Classroom Assessment Methods	<ul style="list-style-type: none">▪ Quizzes▪ Take-home Worksheets▪ Tests
Sample Resources	<ul style="list-style-type: none">▪ <u>Publications:</u><ul style="list-style-type: none">○ <u>Business Math</u>