# Mathematics: Applied Business Math B
## Unit 4: Sales and Marketing

| | |
|---|---|
| **Essential Understandings** | ▪ Sales and marketing techniques are used to ensure success in the 21st century corporate world. |
| **Essential Questions** | ▪ How does one estimate the amount of money a company will generate?<br>▪ What role does advertising play in the corporate work place? |
| **Essential Knowledge** | ▪ A trade discount is granted by a manufacturer or wholesaler to a retailer.<br>▪ A mark up is used to cover overhead and provide profit.<br>▪ Marketing plays an important role in a successful advertising campaign. |
| **Vocabulary** | ▪ <u>Terms</u>:<br> o cash discount, mark ups, invoice, market share, trends, list price |
| **Essential Skills** | ▪ Calculate cost and selling price when markup is based on selling price.<br>▪ Calculate cash trade discount and invoice price.<br>▪ Calculate market share.<br>▪ Calculate the results of surveys.<br>▪ Calculate future sales using forecast methods.<br>▪ Calculate the cost of advertising. |

# Mathematics: Applied Business Math B
## Unit 4: Sales and Marketing

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

# Mathematics: Applied Business Math B
# Unit 4: Sales and Marketing

| | |
|---|---|
| **Sample Lessons And Activities** | ▪ Enter data into a template or spreadsheet that uses various functions to produce different projections.<br>▪ Design a spreadsheet to calculate series discounts. |
| **Sample Classroom Assessment Methods** | ▪ Homework<br>▪ Quizzes<br>▪ Chapter Test |
| **Sample Resources** | ▪ <u>Publications:</u><br>　○ <u>Business Math</u><br>▪ <u>Other Resources:</u><br>　○ Calculators<br>　○ The A+ learning system for remediation |