Mathematics

Brunswick School Department 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? 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. A mark up is used to cover overhead and provide profit. Marketing plays an important role in a successful advertising campaign.
Vocabulary	 Terms: cash discount, mark ups, invoice, market share, trends, list price
Essential Skills	 Calculate cost and selling price when markup is based on selling price. Calculate cash trade discount and invoice price. Calculate market share. Calculate the results of surveys. Calculate future sales using forecast methods. Calculate the cost of advertising.

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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.
 - Describe and account for the difference between sample statistics and statistics describing the distribution of the entire population.
 - 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.

Related Maine Learning Results

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Sample Lessons And Activities	 Enter data into a template or spreadsheet that uses various functions to produce different projections. Design a spreadsheet to calculate series discounts.
Sample Classroom Assessment Methods	HomeworkQuizzesChapter Test
Sample Resources	 Publications: Business Math Other Resources: Calculators The A+ learning system for remediation