

# Business Math: Recommended 10 & 11

## Math Concepts

### **1 Students demonstrate the knowledge and skills necessary to determine the correct algebraic process to solve problems for a variety of business situations.**

- 1 Reinforce basic math skills, such as but not limited to percents, decimals, and fractions, and algebraic skills of solving equations with one or two variables **BMH-1.1**
- 2 Select and use appropriate formulas to solve problems **BMH-1.2**
- 3 Construct and solve an equation for a given problem using units **BMH-1.3**
- 4 Determine if a solution to an algebraic computation is reasonable **BMH-1.4**
- 5 Use algebraic graphs in real world situations **BMH-1.5**
- 6 Apply complex functions to business financials **BMH-1.6**

### **2 Students apply geometry principles to solve problems for a variety of business situations.**

- 1 Demonstrate ability to take measurements and convert as needed **BMH-2.1**
- 2 Use formulas and geometric reasoning necessary for area, perimeter, circumference, diameter, and volume **BMH-2.2**
- 3 Determine if a solution to a geometry computation is reasonable **BMH-2.3**

### **3 Students analyze and interpret data using common probability and statistical procedures to solve problems for a variety of business situations.**

- 1 Construct, read, and interpret tables, charts, and graphs **BMH-3.1**
- 2 Use probability concepts to predict events **BMH-3.2**
- 3 Construct and interpret frequency distribution **BMH-3.3**
- 4 Calculate measures of range and central tendency (e.g., mean, median, mode) **BMH-3.4**
- 5 Determine if a solution to probability and statistical computation is reasonable **BMH-3.5**

## Accounting Principles

### 1 Students apply math concepts to analyze and solve problems related to accounting principles for business.

- 1 Calculate equity using the accounting equation [BMH-4.1](#)
- 2 Calculate and plan for taxes including, sales, income, and property [BMH-4.2](#)
- 3 Calculate cost of goods sold, gross profit, operating expenses, and net profit [BMH-4.3](#)
- 4 Determine cost of goods sold using different inventory valuation methods (e.g., LIFO, FIFO) [BMH-4.4](#)
- 5 Calculate manufacturing costs and break-even point [BMH-4.5](#)
- 6 Calculate and plan for a variety of expenses [BMH-4.6](#)
- 7 Calculate company or department overhead based on various situations (e.g., sales or floor space) [BMH-4.7](#)
- 8 Calculate depreciation of assets using various methods (e.g., declining-balance method, sum-of-the-years method) [BMH-4.8](#)
- 9 Compare the costs of renting, leasing, or buying plant or current assets [BMH-4.9](#)

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### 2 Students apply math concepts to analyze and solve problems related to payroll for business.

- 1 Calculate and maintain employee payroll records [BMH-5.1](#)
- 2 Calculate employee and employer taxes and prepare related reports [BMH-5.2](#)
- 3 Calculate fringe benefits and analyze their effect on the total wage package [BMH-5.3](#)
- 4 Analyze costs of recruiting, placing, and training employees [BMH-5.4](#)

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## Banking and Financial Services

### 1 Students apply math concepts to analyze and solve problems related to banking services for business.

- 1 Maintain checking account records (e.g. checks, check register, and deposit slips) [BMH-6.1](#)
- 2 Show a reconciliation of a bank statement [BMH-6.2](#)
- 3 Compare and contrast different financial institutions and their services Assess data from the stock markets used in making investment decisions [BMH-6.3](#)

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**2 Students apply math concepts to analyze and solve problems related to the principles of business finance.**

- 1 Calculate various types of interest, (e.g., simple, compound, variable, exact, or ordinary) **BMH-7.1**
- 2 Calculate the costs associated with installment purchases **BMH-7.2**
- 3 Compare cash price to installment price in order to make a purchasing decision **BMH-7.3**
- 4 Compute the monthly payment, interest, and total amount required to amortize a loan (e.g. mortgage) **BMH-7.4**
- 5 Compare and contrast benefits and cost of long-term debt options for promissory notes and bonds **BMH-7.5**
- 6 Compare and contrast benefits and costs of investment options (e.g. money-markets, CD's, stocks, bonds) **BMH-7.6**
- 7 Understand and calculate present value and future value **BMH-7.7**
- 8 Determine the finance charges on credit card balances **BMH-7.8**
- 9 Compare and contrast the advantages and disadvantages of employee credit card use for business expenses **BMH-7.9**
- 10 Compare and contrast the advantages and disadvantages of offering credit to customers **BMH-7.10**

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**Marketing Principles**

**1 Students apply math concepts to analyze and solve problems related to marketing principles for business.**

- 1 Compare and contrast expenses associated with various advertising mediums
  - 2 Compute extensions, subtotals, sales tax, and sales totals for a sales transaction
  - 3 Compute markup or markdown
  - 4 Calculate and analyze different types of trade discounts
  - 5 Calculate the response rate and results of surveys
  - 6 Analyze demographic information to make sound marketing decisions
  - 7 Using trend data and forecasting models, calculate future sales
  - 8 Calculate and analyze market share
  - 9 Plan and design various displays for products with different size and shape requirements
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## Management Principles

### **1 Students apply math concepts to analyze and solve problems related to management principles.**

- 1 Interpret financial statements to make sound managerial decisions [BMH-9.1](#)
  - 2 Create and analyze budgets [BMH-9.2](#)
  - 3 Calculate inventory balances and stock reorder points [BMH-9.3](#)
  - 4 Calculate necessary ratios to make sound managerial decisions [BMH-9.4](#)
  - 5 Calculate the cost of full-time versus part-time employees [BMH-9.5](#)
  - 6 Compare and contrast the different types and costs relating to insurance (e.g. property, automobile, bonding) [BMH-9.6](#)
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## Communication

### **1 Students develop skills to create and present accurate and effective communication for specific business related purposes and audiences.**

- 1 Use clear and legible handwriting in all written work and communication [BMH-10.1](#)
- 2 Demonstrate active listening skills [BMH-10.2](#)
- 3 Use discussion skills to assume leadership and participant roles [BMH-10.3](#)
- 4 Use research, composition, and oral skills to present information for a variety of situations utilizing appropriate technology [BMH-10.4](#)
- 5 Work cooperatively with peers and authority figures [BMH-10.5](#)
- 6 Use clear and concise writing skills to describe, explain, and inform various audiences [BMH-10.6](#)
- 7 Follow and interpret directions, graphs, charts and diagrams found in technical writing [BMH-10.7](#)
- 8 Use appropriate industry terminology [BMH-10.8](#)