June, 2008

Mathematics Alignment Guide

Mason-Lake Tech Prep

Course: Computer Information Systems, Office Information Systems, Computerize Multimedia Accounting

Business Mathematics curriculum is embedded in all three courses listed above.
Italicized information applies to certain courses that contain mathematics concepts beyond the Business Mathematics Curriculum.

***** Note: If a standard is covered partially, then the part that is covered is underlined.**

High School Content Expectations							
Standard	Level of Coverage		Applied Concepts Linked to this Standard	Assessment Method		Assessment Correlation	Approximate Time Spend of on the Standard
	Partial	Complete		Performance Based	Written		
L1.1.3 Explain how the properties of associativity, commutativity, and distributivity, as well as identity and inverse elements, are used in arithmetic and algebraic calculations.		x	Students use properties in solving equations; Business Math chapter 5.		x	Students demonstrate proficiency on chapter 5 test, in-class assignments, and the articulation test.	Concept learned in approximately 2 weeks and applied throughout the course
L1.2.1 Use mathematical symbols to represent quantitative relationships and situations.		x	Students use mathematical symbols to represent quantitative relationships throughout the Business Math chapters.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Concept applied throughout the course

L1.2.4 Organize and summarize a data set in a table, plot, chart, or spreadsheet; find patterns in a display of data; understand and critique data displays in the media.	x		Students organize and summarize data in tables, plots, charts, and spreadsheets and find patterns in the data for critiquing the data in business; in various Business Math chapters.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Concept applied throughout the course
L2.1.1 Explain the meaning and uses of weighted averages.		x	Students use weighted averages in the fractions chapter; Business Math chapter 2.		x	Students demonstrate proficiency on the chapter 2 test, in-class assignments, and the articulation test.	Approximately 2 weeks
L2.1.2 Calculate fluently with numerical expressions involving exponents; use the rules of exponents; evaluate numerical expressions involving rational and negative exponents; transition easily between roots and exponents.	x		Students calculate compound interest; Business Math chapter 12.		x	Students demonstrate proficiency on the chapter 12 test, in-class assignments, and the articulation test.	Approximately 2 weeks

L2.3.1 Convert units of measurement within and between systems; explain how arithmetic operations on measurements affect units, and carry units through calculations correctly.		x	Students convert monetary units of measure and time units of measure. Students understand how rounding and/or truncating impacts the overall calculations. Students carry labels through calculations; Business Math chapters 3, 9, 10, 12.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 8 weeks
L2.4.1 Determine what degree of accuracy is reasonable for measurements in a given situation; express accuracy through use of significant digits, error tolerance, or percent of error; describe how errors in measurements are magnified by computation; recognize accumulated error in applied situations.	x		Students describe how multiple calculations with rounding or truncating may impact overall calculations; Business Math chapters 6, 7, 8, 9, 10, 12, 14.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 14 weeks

L2.4.2 Describe and explain round-off error, rounding, and truncating.	x		Students perform rounding and truncating when working with calculations that involve division; Business Math chapters 1, 3, 6, 7, 8, 9, 10, 11, 12, 13, 15 and 21.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 24 weeks
L3.2.2 *Use the connectives "NOT," "AND," "OR," and "IF…,THEN," in mathematical and everyday settings. Know the truth table of each connective and how to logically negate statements involving these connectives.*	*x*		*Students use connectives in CIS in programming development and OIS to write logical functions while developing spreadsheets.*	*x*		*Students demonstrate proficiency by developing programs and/or spreadsheets in class projects.*	*CIS – Throughout the course* *OIS – Approximately 3 weeks*
L3.2.3 *Use the quantifiers "THERE EXISTS" and "ALL" in mathematical and everyday settings and know how to logically negate statements involving them.*	*x*		*Students use connectives in CIS in programming development and in OIS to write logical functions while developing spreadsheets.*	*x*		*Students demonstrate proficiency by developing programs and/or spreadsheets in class projects.*	*CIS – Throughout the course* *OIS – Approximately 3 weeks*

A1.1.1 Give a verbal description of an expression that is presented in symbolic form, write an algebraic expression from a verbal description, and evaluate expressions given values of the variables.	x		Students use verbal description of financial situations, write expressions based on the information, and substitute in known quantities for unknowns to arrive at solutions; Business Math chapters 9, 10, 11, 14, 15, 22.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 12 weeks
A1.2.1 Write equations and inequalities with one or two variables to represent mathematical or applied situations, and solve.	x		Students write equations for simple interest, discounts, payroll, and percent mark-ups and then students solve the equations; Business Math chapters 8, 9, 10, 13.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
A1.2.3 Solve linear and quadratic equations and inequalities including systems of up to three linear equations with three unknowns. Justify steps in the solution, and apply the quadratic formula appropriately.	x		Students solve linear and quadratic equations in simple interest, and compound interest as well as in the review chapter on solving generic equations; Business Math chapters 5, 10, 12, 21.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year

A1.2.7 Solve exponential and logarithmic equations, and justify steps in the solution.	x		Students solve exponential equations with compound interest; Business Math chapter 12.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 2 weeks
A1.2.9 Know common formulas and apply appropriately in contextual situations.		x	Students know common formulas for business math and solve the equations for the unknowns; Business Math chapters 10-16, 21, 22.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 18 weeks
A2.1.3 Represent functions in symbols, graphs, tables, diagrams, or words, and translate among representations.	x		Students represent quantities in algebraic symbols, tables, and words and need to understand how to use the information from all sources; Business Math chapters 10 – 16, 21, 22.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year

S1.1.1 Construct and interpret dot plots, histograms, relative frequency histograms, bar graphs, basic control charts, and box plots with appropriate labels and scales; determine which kinds of plots are appropriate for different types of data; compare data sets and interpret differences based on graphs and summary statistics.	x		Students use and create histograms and bar graphs with appropriate labels and scales. Students compare different sets of data and use summary statistics to do comparisons and determine best approaches; Business Math chapter 22.		x	Students demonstrate proficiency on chapter 22 test, in-class assignments, and the articulation test.	Approximately 2 weeks
S1.1.2 Given a distribution of a variable in a data set, describe its shape, including symmetry or skewness, and state how the shape is related to measures of center (mean and median) and measures of variation (range and standard deviation) with particular attention to the effects of outliers on these measures.	x		Students use bell-shaped curves to business statistics; Business Math chapter 22.		x	Students demonstrate proficiency on chapter 22 test, in-class assignments, and the articulation test.	Approximately 2 weeks

S1.2.1 Calculate and interpret measures of center including: mean, median, and mode; explain uses, advantages and disadvantages of each measure given a particular set of data and its context.	x		Students apply measures of center to business statistics; Business Math chapter 22.		x	Students demonstrate proficiency on chapter 22 test, in-class assignments, and the articulation test.	Approximately 2 weeks
S1.2.3 Compute and interpret measures of variation, including percentiles, quartiles, interquartile range, variance, and standard deviation.	x		Students calculate and use the standard deviation; Business Math chapter 22.		x	Students demonstrate proficiency on chapter 22 test, in-class assignments, and the articulation test.	Approximately 2 weeks
S1.3.2 Describe characteristics of the normal distribution, including its shape and the relationships among its mean, median, and mode.	x		Students use the relationship between the bell shaped curve and the relationship to the mean; Business Math chapter 22.		x	Students demonstrate proficiency on chapter 22 test, in-class assignments, and the articulation test.	Approximately 2 weeks

S1.3.3 Know and use the fact that about 68%, 95%, and 99.7% of the data lie within one, two, and three standard deviations of the mean, respectively in a normal distribution.		x	Students use the percentages of data relative to the mean with a bell-shaped curve in business statistics; Business Math chapter 22.		x	Students demonstrate proficiency on chapter 22 test, in-class assignments, and the articulation test.	Approximately 2 weeks

ACT Standards							
Perform one-operation computation with whole numbers and decimals (Range 13 – 15)		x	Students perform computations with whole numbers and decimals starting in chapter 1 and continuing throughout the course.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Solve problems in one or two steps using whole numbers (Range 13 – 15)		x	Students perform computations with whole numbers and decimals starting in chapter 1 and continuing throughout the course.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Perform common conversions (e.g., inches to feet or hours to minutes) (Range 13 – 15)		x	Students convert monetary units of measure and time units of measure. Students understand how rounding and/or truncating impacts the overall calculations. Students carry labels through calculations; Business Math chapters 3, 9, 10, 12.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 8 weeks

Calculate the average of a list of positive whole numbers (Range 13 – 15)		x	Students calculate averages in business statistics; Business Math chapter 22.		x	Students demonstrate proficiency on chapter 22 test, in-class assignments, and the articulation test.	pproximately 2 weeks
Perform a single computation using information from a table or chart (Range 13 – 15)		x	Students perform computations from data in tables or charts with whole numbers and decimals starting in chapter 1 and continuing throughout the course.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Recognize equivalent fractions and fractions in lowest terms (Range 13 – 15)		x	Students recognize equivalent fractions when reducing fractions to lowest terms; Business Math chapter 2.		x	Students demonstrate proficiency on chapter 2 test, in-class assignments, and the articulation test.	Approximately 2 weeks
Exhibit knowledge of basic expressions (e.g., identify an expression for a total as b + g) (Range 13 – 15)		x	Students use expressions in pure math and applied settings, such as in totaling a payroll or determining discounts; Business Math chapters 5 – 16, 21, 22.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year

Solve equations in the form x + a = b, where a and b are whole numbers or decimals (Range 13 – 15)		x	Students solve simple linear equations in "naked" form in chapter 5 and then in applied settings for the rest of the course.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Solve routine one-step arithmetic problems (using whole numbers, fractions, and decimals) such as single-step percent (Range 16 – 19)		x	Students simplify one-step arithmetic problems in "naked" form in chapters 1, 2, and 3 and then in applied settings for the rest of the course.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Solve some routine two-step arithmetic problems (Range 16 – 19)		x	Students solve two-step arithmetic problems in "naked" form in chapters 1, 2, and 3 and then in applied settings for the rest of the course.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Calculate the average of a list of numbers (Range 16 – 19)		x	Students calculate averages for installment loans and business statistics; Business Math chapters 14, 22.		x	Students demonstrate proficiency on chapter 14, 22 tests, in-class assignments, and the articulation test.	Approximately 4 weeks

Calculate the average, given the number of data values and the sum of the data values (Range 16 – 19)		x	Students find individual data points from a mean for determining average daily sales.		x	Students demonstrate proficiency on chapter 22 test, in-class assignments, and the articulation test.	Approximately 2 weeks
Read tables and graphs (Range 16 – 19)		x	Students read data from tables and graphs in all chapters.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Perform computations on data from tables and graphs (Range 16 – 19)		x	Students read data from tables and graphs and use the data for calculations in all chapters except the first three.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately ¾ of the school year
Recognize one-digit factors of a number (Range 16 – 19)		x	Students use factors of a number to reducing fractions; Business Math chapter 2.		x	Students demonstrate proficiency on chapter 2 test, in-class assignments, and the articulation test.	Approximately 2 weeks

Identify a digit's place value (Range 16 – 19)		x	Students identify place values in whole numbers and decimals; Business Math chapter 1.		x	Students demonstrate proficiency on chapter 1 test, in-class assignments, and the articulation test.	Approximately 2 weeks
Substitute whole numbers for unknown quantities to evaluate expressions (Range 16 – 19)		x	Students perform substitution in "naked" problems in chapter 5 and then in applied settings for the rest of the course.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Solve one-step equations having integer or decimal answers (Range 16 – 19)		x	Students solve one-step equations in "naked" problems in chapter 5 and then in applied settings for the rest of the course.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Combine like terms (e.g., 2x + 5x) (Range 16 – 19)		x	Students combine like terms in "naked" problems; Business Math chapter 5.		x	Students demonstrate proficiency on chapter 5 test, in-class assignments, and the articulation test.	Approximately 2 weeks

Solve routine two-step or three-step arithmetic problems involving concepts such as rate and proportion, tax added, percentage off, and computing with a given average (Range 20 – 23)	x		Students solve multi-step problems beginning in chapter 6 with percents and applications. Applications of percents, discounts, averages, and rates are incorporated throughout the rest of the year.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately ¾ of the school year
Exhibit knowledge of elementary number concepts including rounding, the ordering of decimals, pattern identification, absolute value, primes, and greatest common factor (Range 20 – 23)	x		Students use rounding and ordering of decimals starting in chapter 1 and continuing through the rest of the course. Students use primes and GCF for work with fractions starting in chapter 2 and continuing through the course.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Evaluate algebraic expressions by substituting integers for unknown quantities (Range 20 – 23)		x	Students perform substitution in "naked" problems in chapter 5 and then in applied settings for the rest of the course.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year

Add and subtract simple algebraic expressions (Range 20-23)		x	Students simplify algebraic expressions in Chapter 5 of Business Math.		x	Students demonstrate proficiency on chapter 5 test, in-class assignments, and the articulation test.	Approximately 2 weeks
Solve routine first-degree equations (Range 20 – 23)		x	Students solve first-degree equations in "naked" problems in chapter 5 and then in applied settings for the rest of the course.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Perform straightforward word-to-symbol translations (Range 20 – 23)		x	Students read various real-world problems and convert to mathematical expressions and equations and solve.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Manipulate data from tables and graphs (Range 24 – 27)		x	Students read data from tables and graphs and use the data for calculations in all chapters except the first three.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately ¾ of the school year
Find and use the least common multiple (Range 24-27)		x	Students use least common multiple to add and subtract fractions; Business Math chapter 2.		x	Students demonstrate proficiency on chapter 2 test, in-class assignments, and the articulation test.	Approximately 2 weeks

Order fractions (Range 24 – 27)		x	Students order fractions in Business Math chapter 2.		x	Students demonstrate proficiency on chapter 2 test, in-class assignments, and the articulation test.	Approximately 2 weeks
Work with numerical factors (Range 24 – 27)		x	Students work with numerical factors for simplifying fractions in Business Math chapter 2.		x	Students demonstrate proficiency on chapter 2 test, in-class assignments, and the articulation test.	Approximately 2 weeks
Solve real-world problems using first-degree equations (Range 24 – 27)		x	Students solve real-world problems using first degree equations after the first marking period.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately ¾ of the school year
Write expressions, equations, or inequalities with a single variable for common pre-algebra settings (e.g., rate and distance problems and problems that can be solved by using proportions) (Range 24-27)	x		Students write expressions and equations for various business settings; Business Math chapters 5 – 16, 21, 22.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately ¾ of the school year

Solve word problems containing several rates, proportions, or percentages (Range 28-32)	x		Students use rates in interest and percentages in discounts, mark-ups, and sales; Business Math chapters 6 – 8, 10 – 16, 21, 22.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 24 weeks
Calculate or use a weighted average (Range 28-32)		x	Students calculate weighted averages for daily sales; Business Math chapter 22.		x	Students demonstrate proficiency on chapter 22 test, in-class assignments, and the articulation test.	Approximately 2 weeks
Interpret and use information from figures, tables, and graphs (Range 28 – 32)		x	Students read and interpret data from tables and graphs and use the data for calculations in all chapters except the first three.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately ¾ of the school year
Manipulate expressions and equations (Range 28 - 32)		x	Students manipulate expressions and equations when dealing with simple interest, compound interest, discounts, annuities, and revolving credit; Business Math chapters 10, 11, 12, 13, 14.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 10 weeks

Write expressions, equations, and inequalities for common algebra settings (Range 28 – 32)	x		Students write expressions and equations; Business Math chapters 5 – 16, 21, 22.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately ¾ of the school year
Solve complex arithmetic problems involving percent of increase or decrease and problems requiring integration of several concepts from pre-algebra and/or pre-geometry (e.g., comparing percentages or averages, using several ratios) (Range 33 – 36)	x		Students calculate percent discounts, percent increase and decrease, ratios of expenditures and income, and average sales; Business Math chapters 6, 7, 8, 15.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 8 weeks
Distinguish between mean, median, and mode for a list of numbers (Range 33- 36)		x	Students distinguish between measures of center when analyzing business statistics; Business Math chapter 22.		x	Students demonstrate proficiency on chapter 22 test, in-class assignments, and the articulation test.	Approximately 2 weeks
Analyze and draw conclusions based on information from figures, tables, and graphs (Range 33 – 36)		x	Students read and interpret data from tables and graphs and use the data for calculations in all chapters except the first three.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately ¾ of the school year

Draw conclusions based on number concepts, algebraic properties, and/or relationships between expressions and numbers (Range 33 – 36)		x	Students draw business conclusions based on calculations in dealing with financial reports, stocks, and business statistics; Business Math chapters 16, 21, 22.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 6 weeks
Write expressions that require planning and/or manipulating to accurately model a situation (Range 33 – 36)		x	Students write various expressions for percent increase, percent decrease, interest, daily rates, etc.; Business Math chapters 6, 7, 8, 10, 11, 12, 13, 14, 15		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 18 weeks
Write equations and inequalities that require planning, manipulating, and/or solving (Range 33 – 36)	x		Students write expressions and equations based on information and manipulate equations to solve for needed variables; Business Math chapters 5 – 16, 21, 22.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately ¾ of the school year
Solve problems integrating multiple algebraic and/or geometric concepts (Range 33 – 36)	x		Students do multi-step algebraic problems when calculating interest problems and annuities; Business Math chapters 12 and 13.		x	Students demonstrate proficiency on chapter 12 and 13 tests, in-class assignments, and the articulation test.	Approximately 4 weeks

WorkKeys Standards							
Solve problems that require a single type of mathematics operation (addition, subtraction, multiplication, and division) using whole numbers (Level 3)		x	Students simplify single step arithmetic problems starting in chapter 1 and continuing throughout the year.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Change numbers from one form to another using whole numbers, fractions, decimals, or percentages (Level 3)		x	Students perform conversions between types of numbers in "naked" problems in chapters 2 and 3 and use the concept for the remainder of the year.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Solve problems that require one or two operations (Level 4)		x	Students perform computations with whole numbers and decimals starting in chapter 1 and continuing throughout the course.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year

Calculate averages, simple ratios, simple proportions, or rates using whole numbers and decimals (Level 4)	x		Students use ratios in acid tests, calculating stock values, and in percentage calculations. Students use averages for business statistics; Business Math chapters 6, 16, 21, 22.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 8 weeks
Add commonly known fractions, decimals, or percentages (e.g., 1/2, .75, 25%) (Level 4)		x	Students add common fractions, decimals, and percents in "naked" problems in chapter 2 and continue using this concept throughout the year.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Add up to three ctions that share a mmon denominator (Level 4)		x	Students add common fractions in "naked" problems in chapter 2 and continue using this concept throughout the year.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Multiply a mixed number by a whole number or decimal (Level 4)		x	Students multiply mixed numbers and whole numbers in "naked" problems in chapter 2 and continue using this concept throughout the year.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year

Put the information in the right order before performing calculations (Level 4)		x	Students put information in the right order to do calculations on fractions, compound interest, sinking funds, annuities, etc.; Business Math chapters 2, 12, 13.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 6 weeks
Decide what information, calculations, or unit conversions to use to solve the problem (Level 5)		x	Students look up information from charts and tables, put the information in order, do conversions, and solve business-related problems; Business Math chapters 3, 5 – 16, 21, 22.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Look up a formula and perform single-step conversions within or between systems of measurement (Level 5)		x	Students convert monetary units of measure and time units of measure. Students understand how rounding and/or truncating impacts the overall calculations. Students carry labels through calculations; Business Math chapters 3, 9, 10, 12.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 8 weeks

Find the best deal using one- and two-step calculations and then comparing results (Level 5)		x	Students do calculations and find the best deals with discounts, mark-ups, and mark-downs; Business Math chapters 6, 7, 8.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 6 weeks
Calculate percent discounts or markups (Level 5)		x	Students do calculations and find the best deals with discounts, mark-ups, and mark-downs; Business Math chapters 6, 7, 8.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 6 weeks
Use fractions, negative numbers, ratios, percentages, or mixed numbers (Level 6)	x		Students do calculations with fractions in chapter 2 with "naked" problems. Students use percentages with "naked" problems and their applications in chapter 6. Students use ratios with interest and financial reports in chapters 16 and 22.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 8 weeks

Rearrange a formula before solving a problem (Level 6)		x	Students manipulate equations when dealing with simple interest, compound interest, discounts, annuities, and revolving credit; Business Math chapters 9, 10, 11, 12, 13, 14.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 12 weeks
Find mistakes in questions that belong at Levels 3, 4, and 5 (Level 6)		x	Students find mistakes and make corrections in various problems; especially payroll problems.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year
Calculate multiple rates (Level 6)		x	Students calculate simple and compound interest; Business Math chapters 10, 11, 12, 13.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 8 weeks
Solve problems that include nonlinear functions and/or that involve more than one unknown (Level 7)	x		Students do calculations with compound interest; Business Math chapter 12.		x	Students demonstrate proficiency on chapter 12 test, in-class assignments, and the articulation test.	Approximately 2 weeks
Find mistakes in Level 6 questions (Level 7)		x	Students find mistakes and make corrections in various problems.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Incorporated into various chapters throughout the year

Convert between systems of measurement that involve fractions, mixed numbers, decimals, and/or percentages (Level 7)		x	Students convert monetary units of measure and time units of measure. Students carry labels through calculations; Business Math chapters 3, 9, 10, 12.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 8 weeks
Set up and manipulate complex ratios or proportions (Level 7)	x		Students do acid test ratios, average day collections and company values; Business Math chapter 16.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 2 weeks
Find the best deal when there are several choices (Level 7)		x	Students find the best deals with mark-ups and mark-downs, stocks, interest rates, installment buying and reading financial reports; Business Math chapters 7, 8, 14, 16, 21.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 10 weeks
Apply basic statistical concepts (Level 7)		x	Students apply statistical concepts in business statistics; Business Math chapter 22.		x	Students demonstrate proficiency on chapter tests, in-class assignments, and the articulation test.	Approximately 2 weeks

Information listed in italic applies to certain course; not all OIS, CIS and Accounting.
*** Note: If a standard is covered partially, then the part that is covered is underlined.