FBLA HS: Introduction to Financial Math

Competency A: Basic Math Concepts	MBA Research Performance Indicators	LAPs
Tasks		
1. Develop fluency in addition, subtraction, multiplication, and division of basic operations with and without calculators.		
2. Solve one- and two-step problems involving whole numbers, fractions, and decimals using addition, subtraction, multiplication, and division.		
3. Solve practical computation problems for business such as calculating wages after taxes, developing a budget, and balancing a checkbook.	FI:438 Calculate employee earnings (SP) FI:439 Calculate employee deductions (SP) FI:442 Calculate payroll taxes (SP) FI:066 Develop personal budget (CS) FI:099 Develop company's/department's budget (MN) FI:070 Balance a bank account (PQ) FI:451 Calculate the cost of goods sold (SP) OP:270 Calculate commissions (MN) PI:006 Calculate break-even point (MN) SE:475 Calculate miscellaneous charges (CS) FI:782 Calculate the cost of credit (CS)	LAP-FI-099 Build Your Game Plan (Developing a Company/Department Budget) LAP-PI-006 Tipping Point (Calculating Break-Even Point)
4. Analyze problem statements for missing/irrelevant data; estimate/exact values, and inconsistent parameters.		
5. Identify business math terms.		
6. Prove that results of computations using whole numbers, fractions, decimals, percents, and proportions are correct.		

7. Recognize patterns and relationships among numbers.		
8. Estimate the results of rational number computations and judge the reasonableness of the results.		
9. Identify and use relationships between operations, such as division as the inverse of multiplication to solve problems.		
10. Apply relational (equal, greater than, less than, etc.) and logical operations in a logical expression.		
11. Select appropriate methods and tools for computing with whole numbers from mental computation, estimation, calculators, and paper and pencil.		
12. Convert within and between measurement systems (metric and customary) and monetary systems using technology where appropriate.		
13. Estimate conversions between the customary and metric systems.		
14. Use the appropriate type of unit to calculate measurement of length, area, weight, volume, angles, and perimeter.		
15. Construct or draw figures with given perimeters and areas.	PR:270 Create planograms (MN)	
16. Interpret scale drawings and models using maps and blueprints.	PR:349 Read/Implement planograms (SP)	
17. Use touch method on calculator to solve math problems that relate to business and industry.	OP:197 Operate calculator (PQ)	

Competency B: Consumer Credit	MBA Research Performance Indicators	LAPs
Tasks		
1. Define credit and credit terms.	FI:002 Explain the purposes and importance of credit (CS)	LAP-FI-002 Give Credit Where Credit Is Due (Credit and Its Importance)
2. Identify the costs and benefits of various types of credit.	FI:002 Explain the purposes and importance of credit (CS)	LAP-FI-002 Give Credit Where Credit Is Due (Credit and Its Importance)
3. Calculate sales tax.	SE:475 Calculate miscellaneous charges (CS)	
4. Compute total purchase price with interest added.	SE:475 Calculate miscellaneous charges (CS)	
5. Compute the costs involved in owning and buying an item such as an automobile.		
6. Compute finance charges for single payment loans.	FI:782 Calculate the cost of credit (CS)	
7. Compare installment and revolving credit costs.	FI:782 Calculate the cost of credit (CS)	
8. Calculate installment loan costs such as amount financed the installment price, finance charge, and installment payment.	FI:782 Calculate the cost of credit (CS)	
9. Find the estimated annual percentage rate (APR) using a table.	FI:782 Calculate the cost of credit (CS)	
10. Find the finance charge and new balance using the average daily balance method.	FI:782 Calculate the cost of credit (CS)	
Competency C: Data Analysis and Probability	**MBA Research Performance Indicators**	**LAPs**
Tasks		
1. Using a data set, determine mean, median, and mode.	NF:093 Interpret statistical findings (SP)	
2. Determine the type of average that best represents the measure of central tendency.	NF:093 Interpret statistical findings (SP)	

3. Distinguish between a simple average and a weighted average and calculate each.	FI:646 Use the time value of money to make business decisions (e.g., projects, investments, etc.) (SP) NF:093 Interpret statistical findings (SP)	
4. Identify and construct various types of graphs and charts.	IM:347 Display data in charts/graphs or in tables (SP)	
5. Compile and arrange facts in an organized manner for a table, chart, or figure.	IM:347 Display data in charts/graphs or in tables (SP)	
6. Explain or prepare written summary of findings expressed in tables, charts, graphs, and figures.	NF:093 Interpret statistical findings (SP) NF:216 Translate research findings into actionable business recommendations (SP)	
7. Make predictions and decisions based on data and communicate their reasoning.	NF:278 Draw conclusions based on information analysis (CS) NF:216 Translate research findings into actionable business recommendations (SP) NF:237 Interpret descriptive statistics for business decision making (SP)	
Competency D: Decimals	**MBA Research Performance Indicators**	**LAPs**
Tasks		
1. Round decimals to the nearest tenth and nearest hundredth.		
2. Add, subtract, multiply, and divide decimals.		
3. Convert a decimal to a fraction.		
4. Convert a fraction to a decimal.		
5. Read and write decimals using the place-value structure of the base-ten number system.		
6. Solve business problems with currency.		

Competency E: Discounts	MBA Research Performance Indicators	LAPs
Tasks		
1. Identify the various types of discounts.	PI:022 Determine discounts and allowances that can be used to adjust base prices (MN)	
2. Calculate the percentage of a discount of an item.	PI:022 Determine discounts and allowances that can be used to adjust base prices (MN)	
3. Calculate a chain discount and net selling price.	PI:022 Determine discounts and allowances that can be used to adjust base prices (MN)	
4. Calculate trade discounts and net selling price.	PI:022 Determine discounts and allowances that can be used to adjust base prices (MN)	
5. Calculate cash discounts and net selling price.	PI:022 Determine discounts and allowances that can be used to adjust base prices (MN)	
Competency F: Fractions	**MBA Research Performance Indicators**	**LAPs**
Tasks		
1. Add, subtract, divide, and multiply fractions and mixed numbers with like (common) and unlike denominators.		
2. Work flexibly with fractions to solve application problems.		
3. Convert fractions to decimals, decimals to fractions, and use properties of basic operations to simplify fractional arithmetic expressions.		
4. Convert an improper fraction to a whole or mixed number.		
5. Convert a whole or mixed number to an improper fraction.		

6. Reduce a fraction to lowest terms and raise a fraction to higher terms.		
7. Apply appropriate methods for computing with fractions from among mental computation, estimation, calculators, or computers and paper and pencil.		
Competency G: Percentages	**MBA Research Performance Indicators**	**LAPs**
Tasks		
1. Define the terms base, rate, and percentage and identify them in word problems.		
2. Solve for base, rate, or part in a percent problem.		
3. Convert a whole number, fraction, or decimal to a percent.		
4. Convert a percent to a whole number, fraction, or decimal.		
5. Use the percentage formula to find the unknown value when two values are known.		
6. Find the rate or the base in the increase or decrease of an item.		
7. Calculate markup and markdown of original value of item.	PI:019 Determine cost of product (breakeven, ROI, markup) (MN)	
8. Calculate simple interest.	FI:544 Compute key banking calculations (e.g., interest, annual percentage rate, exchange rates, etc.) (SP)	