

*Missouri Business Education Competencies
(Performance Standards)*

Mathematics in Business

Course Rationale: This area of instruction provides content to prepare students for various life roles by offering multiple opportunities to develop and use mathematical skills. Computational skills are essential for students as they become citizens, consumers, wage earners, employees, employers, investors, and entrepreneurs. Demand for this skill will continue to be essential in the workplace as well as in personal money management.

The following suggested competencies, developed by an advisory committee, are intended to serve as a basis for your course curriculum. The list is neither inclusive nor required in its entirety. You may select competencies from other lists, and develop competencies of your own to define the outcomes you expect your students to achieve. The Show-Me Standards identified provide a guide. If activities you choose better aligned with other Standards, you should align your competencies/objectives to those Standards instead of these shown here.

COMPETENCIES		SHOW-ME STANDARDS
A. Math Applications		
1.	Compare career opportunities that use mathematical concepts in everyday work.	CA6, 4.8
2.	Proofread numerical data.	1.7
3.	Develop and apply math shortcuts to solve business problems.	MA1, 1.6
4.	Compare an estimated answer to a computed solution.	MA1, 1.7
5.	Apply problem-solving processes to real world situations.	MA1, 3.8
6.	Communicate mathematical solutions (oral and written).	CA1, 2.1
7.	Utilize team skills to analyze and solve business math problems.	CA6, 3.6
B. Workplace Technology		
1.	Define math terms related to the work place (e.g., gross pay, net pay, FICA, commission).	CA1, 1.10
2.	Complete employee payroll forms (e.g., W-4, W-2, insurance).	CA1, 1.10
3.	Operate a calculator by the touch method.	2.5
4.	Determine and count back change to customers.	MA1, 1.10
5.	Express a relationship as a ratio.	MA5, 1.8
6.	Calculate mark-ups and mark-downs based on cost and selling prices.	MA1, 3.6
7.	Calculate trade and cash discounts.	MA1, 3.6
8.	Complete business forms related to sales and purchasing.	CA1, 2.6
9.	Compute inventory values using LIFO, FIFO, average cost.	MA1, 3.6

10.	Compare/contrast inventory values (e.g., LIFO, FIFO, average cost).	MA1, 3.6
11.	Compute depreciation expense (e.g., using IRS tables and software)	MA1, 3.6
12.	Compare/contrast depreciation methods (e.g., straight line, weighted average, double declining balance).	MA1, 3.6
13.	Identify the order of mathematical operations as it relates to computer spreadsheet applications.	MA1, 1.4
14.	Analyze business data using statistical functions.	MA4, 1.10
15.	Construct and interpret computer-generated business graphs and/or charts.	CA4, 1.8
16.	Assess the cost effectiveness of telecommunication services (e.g., cell phone, FAX, e-mail, bulletin board).	MA1, 3.8
C. Personal Money Management		
1.	Compute gross and net earnings for salaried employees.	MA1, 1.10
2.	Compute gross and net earnings for hourly employees.	MA1, 1.10
3.	Compute gross and net earnings for commissioned employees.	MA1, 1.10
4.	Compute gross and net earnings for piecework employees.	MA1, 1.10
5.	Calculate the value of non-compensation employee benefits (e.g., vacation, health insurance).	MA1, 1.10
6.	Prepare personal budgets.	MA1, 4.5
7.	Record checking account transactions and maintain accurate balances.	MA1, 1.10
8.	Compute simple interest.	MA1, 1.10
9.	Compute compound interest.	MA1, 1.10
10.	Evaluate characteristics, costs and benefits of investments (e.g., savings account, IRA, CD, annuity).	MA1, 3.8
11.	Analyze amortization schedules for short- and long-term loans.	MA1, 3.8
12.	Compare interest and other charges (e.g., annual fees, late fees) on credit cards.	MA1, 3.8
13.	Compare insurance rates and services.	MA1, 3.8
14.	Compute property taxes.	MA1, 1.10
15.	Compute personal federal income tax forms.	MA1, 4.2
16.	Complete personal state income tax forms.	MA1, 4.2
D. Entrepreneurial Math		
1.	Develop a business plan.	CA4, 1.8
2.	Investigate types and costs of business loans.	MA1, 3.8

3.	Determine the cost of employee benefits and employer taxes (e.g., health insurance, FICA, disability, unemployment).	MA1, 1.10
4.	Complete business tax forms (e.g., income, sales, payroll).	MA1, 4.2
5.	Prepare and interpret financial statements.	MA1, 1.8
6.	Compute working capital and return on assets.	MA1, 1.10
7.	Apply probability measures to determine chances of business success.	MA3, 3.8
8.	Describe consequences of business closure and/or restructuring (e.g., liquidation, downsizing, bankruptcy).	SC8, 3.7
E. International Math		
1.	Apply currency exchange rates.	MA1, 1.10
2.	Compare/contrast the cost of living and standard of living in the United States with other countries.	SC8, 4.3
3.	Measure weight in standard (English) and metric units.	MA1, 1.10
4.	Measure distance in standard (English) and metric units.	MA1, 1.10
5.	Measure volume in standard (English) and metric units.	MA1, 1.10