2023-24 Competitive Events Guidelines
Introduction to Financial Math

Introduction to Financial Math provides members with the opportunity to demonstrate knowledge around introductory competencies in the area of math relating to business. This competitive event consists of an objective test. It aims to inspire members to learn about various math concepts used in business and industry.

Event Overview

Division: High School (9th & 10th graders only)
Event Type: Individual
Event Category: Objective Test, 100-multiple choice questions (breakdown of question by competencies below)
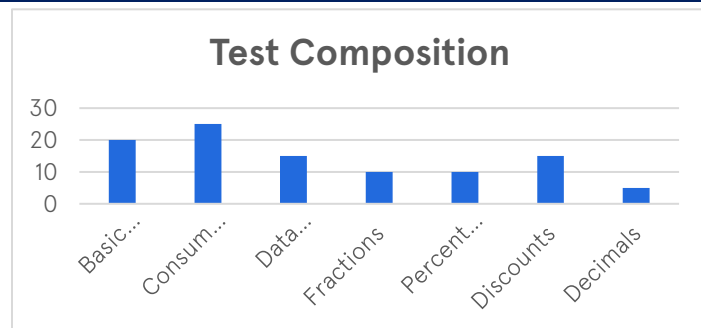*Objective Test Time:* 50 minutes
NACE Connections: Career & Self-Development

Equipment Competitor Must Provide: Pencil
Equipment FBLA Provides: One piece of scratch paper per competitor

Objective Test Competencies

- Basic Math Concepts
- Consumer Credit
- Data Analysis and Probability
- Decimals
- Discounts
- Fractions
- Percentages

Test Composition

District/Region/Section

Check with your District/Region/Section leadership for District/Region/Section-specific competition information.

State

Check with your State Leader for state-specific competition information.

National

Policy and Procedures Manual
- Competitors should be familiar with the Competitive Events Policy & Procedures Manual, found on the Competitive Events page on www.fbla.org.

Eligibility
- FBLA membership dues are paid by 11:59 pm Eastern Time on March 1 of the current program year.
- Members may compete in an event at the National Leadership Conference (NLC) more than once if they have not previously placed in the top 10 of that event at the NLC. If a member places in the top 10 of an event at the NLC, they are no longer eligible to compete in that event.

- Members must be registered for the NLC and pay the national conference registration fee in order to participate in competitive events.
- Members must stay in an official FBLA hotel to be eligible to compete.
- Each state may submit four entries per event.
- Each member can only compete in one individual/team event and one chapter event (American Enterprise Project, Community Service Project, Local Chapter Annual Business Report, Partnership with Business Project).
- Picture identification (physical or digital driver's license, passport, state-issued identification, or school-issued identification) is required when checking in for competitive events.
- If competitors are late for an objective test, they will be allowed to compete until such time that results are finalized, or the accommodation would impact the fairness and integrity of the event. Competitive event schedules cannot be changed. Competitive events start in the morning before the Opening Session of the NLC.

Recognition
- The number of competitors will determine the number of winners. The maximum number of winners for each competitive event is 10.

Event Administration
- This event is an objective test administered online at the NLC.
- No reference or study materials may be brought to the testing site.
- No calculators may be brought into the testing site; online calculators will be provided through the testing software.

Tie Breaker
- Ties are broken by comparing the correct number of answers to 10 pre-determined questions on the test. If a tie remains, answers to 20 pre-determined questions on the test will be reviewed to determine the winner. If a tie remains, the competitor who completed the test in a shorter amount of time will place higher.

Americans with Disabilities Act (ADA)
- FBLA meets the criteria specified in the Americans with Disabilities Act for all competitors with accommodations submitted through the conference registration system by the registration deadline.

Penalty Points
- Competitors may be disqualified if they violate the Competitive Event Guidelines or the Honor Code.
- Five points are deducted if competitors do not follow the Dress Code or are late to the testing site.

Electronic Devices
- All electronic devices such as cell phones and smart watches must be turned off before competition begins.

Study Guide: Competencies and Tasks

A. Basic Math Concepts
   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.
   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.
   16. Interpret scale drawings and models using maps and blueprints.
   17. Use touch method on calculator to solve math problems that relate to business and industry.
B. Consumer Credit
   1. Define credit and credit terms.
   2. Identify the costs and benefits of various types of credit.
   3. Calculate sales tax.
   4. Compute total purchase price with interest added.
   5. Compute the costs involved in owning and buying an item such as an automobile.
   6. Compute finance charges for single payment loans.
   7. Compare installment and revolving credit costs.
   8. Calculate installment loan costs such as amount financed the installment price, finance charge, and installment payment.
   9. Find the estimated annual percentage rate (APR) using a table.
   10. Find the finance charge and new balance using the average daily balance method.
C. Data Analysis and Probability

1. Using a data set, determine mean, median, and mode.
2. Determine the type of average that best represents the measure of central tendency.
3. Distinguish between a simple average and a weighted average and calculate each.
4. Identify and construct various types of graphs and charts.
5. Compile and arrange facts in an organized manner for a table, chart, or figure.
6. Explain or prepare written summary of findings expressed in tables, charts, graphs, and figures.
7. Make predictions and decisions based on data and communicate their reasoning.

D. Decimals
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.

E. Discounts
1. Identify the various types of discounts.
2. Calculate the percentage of a discount of an item.
3. Calculate a chain discount and net selling price.
4. Calculate trade discounts and net selling price.
5. Calculate cash discounts and net selling price.

F. Fractions
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.

G. Percentages
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.
8. Calculate simple interest.