

Rationale

The need to understand and be able to use mathematics in everyday life and in the workplace has never been greater and will continue to increase. The underpinnings of everyday life are increasingly mathematical and technological. Just as the level of mathematics needed for intelligent citizenship has increased, so too has the level of mathematical thinking and problem solving needed in the workplace. Those who understand and can do mathematics will have significantly enhanced the opportunities and options for shaping their futures. Mathematical competence opens doors to productive futures.

Course Description

This course is designed to prepare the student for further mathematical study by enhancing some previously learned mathematical processes and developing new processes. The student will learn to apply these processes using mathematical reasoning and technology to solve everyday problems that have meaning beyond the classroom. This course gives the student the opportunity to strengthen skills using the basic operations of addition, subtraction, multiplication and division of whole numbers, decimals and fractions. In this support model, the student's IEP goals are addressed in the classroom while following the Mehlville curriculum. Lectures, presentations, assignments, and materials are adapted to create opportunities for student success.

Prerequisites

Prerequisite: IEP team recommendation

Open to: 9, 10, 11, 12

Credit: 1 Unit - Two Semesters (Mathematics)

Course Objectives

1. The student will understand meanings of operations and how they relate to one another with 80% accuracy as assessed by classroom assignments, homework, projects and tests. Locally assessed. (GLE: MA 9-12, MA-1; MA 5; 3.3) (A+: Reading)

A. Read, write and compare whole numbers up to one million and decimals to the hundredth place

- Use fractions and decimals to solve problems
- Recognize equivalent representations for the same number and generate them by decomposing and composing numbers including scientific notation
- Describe numbers according to their characteristics, including whole numbers, common factors and multiples, prime or composite and square numbers

2. The student will understand meanings of operations and how they relate to one another with 80% accuracy as assessed by classroom assignments, homework, projects and tests. Locally assessed. (GLE: MA 9-12, MA-1; MA5; 3.3, 3.4, 3.6)

A. Apply properties of operations (including order of operations) to positive rational numbers

3. The student will compute fluently and make reasonable estimates with 80% accuracy as assessed by classroom assignments, homework, projects and tests. Locally assessed. (GLE: MA 9-12, MA-1; MA5; 3.3, 3.4, 3.6) (A+: Speaking)

A. Apply all operations on rational numbers

B. Judge the reasonableness of numerical computations and their results

4. The student will understand patterns, relations and functions with 80% accuracy as assessed by classroom assignments, homework, projects and test. Locally assessed. (GLE: MA 9-12, MA-1; M 4; 1.6)

A. Analyze patterns represented numerically with words or symbolic rules

5. The student will use visualization, spatial reasoning and geometric modeling to solve problems with 80% accuracy as assessed by classroom assignments, homework, projects, and tests. Locally assessed. (GLE: MA 9-12, MA-1; MA1, 3.4; 1.8, 1.10, 2.6, 3.1, 3.2, 3.3, 4.1, 4.8)

A. Draw and use visual models to represent and solve problems

6. The student will demonstrate the ability to use technology with 80% accuracy as assessed by classroom assignments and tests. Locally assessed. (GLE: MA 9-12, MA3; 1.4, 2.7) (A+: Research)

Math I Foundations

Mehlville School District
Special Education
Grades 9 - 12, Duration 1 Year, 1 Credit

A. Apply operations to real numbers using mental computation or paper and pencil calculations for simple cases and technology for more complicated cases

7. The student will communicate using appropriate mathematical notations and terminology with 80% accuracy as assessed by classroom assignments, homework, projects and tests. Locally assessed. (GLE: MA 9-12, MA1, 4, 5; 1.6, 1.7, 3.1, 3.5, 3.7) (A+: Writing)

A. Using all operations, represent a mathematical situation as an expression or number sentence.

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