

IKM-Manning Curriculum
Mathematics Standards / Benchmarks / Indicators
January 2004

Standards:

The students will demonstrate understanding of number and operations

The students will demonstrate understanding of algebra

The students will demonstrate understanding of geometry and measurement

The students will demonstrate understanding of data analysis and probability

Course Benchmarks:

5.1.1 Understand numbers, ways of representing numbers, relationships among numbers, and number systems

5.1.2 Compute with whole numbers, fractions, and decimals

5.1.3 Understand and apply estimation strategies

5.1.4 Apply appropriate computational techniques in a problem solving situation

5.2.1 Understands and analyzes mathematical situations using algebraic symbols

5.2.2 Apply concepts of algebra in a problem solving situation

5.3.1 Understands characteristics of geometric shapes and geometric relationships

5.3.2 Demonstrate appropriate techniques, tools, and formulas to determine measurements

5.3.3 Demonstrate the ability to make simple unit conversions within a system of measurement

5.4.1 Understand and use data sets

5.4.2 Apply concepts of data analysis and probability in a problem solving situation

5th Grade

5.1 Numbers and Operations

5.1.1 Understand numbers, ways of representing numbers, relationships among numbers, and number systems

5.1.1.A Recognize, write, and compare numbers to the hundred billions place

5.1.1.B Recognize, write, and identify decimals to the thousandths

5.1.1.C Understand the relationship between fractions, decimals, and percent

5.1.2 Compute with whole numbers, fractions, and decimals

5.1.2.A Compute fluently and accurately (see CBM guidelines) in multiplication and division of whole numbers

5.1.2.B Add, subtract, multiply and divide with decimals and mixed decimals

5.1.2.C Add and subtract fractions with unlike denominators

5.1.2.D Understand the concept of multiplication of fractions

5.1.2.E Multiply a whole number and a fraction

5.1.3 Understand and apply estimation strategies

5.1.3.A Estimate products and quotients

5.1.3.B Estimate and round whole numbers (billions)

5.1.3.C Indicate the relative advantages of exact and approximate solutions

5.1.4 Apply appropriate computational techniques in a problem solving situation

5.1.4.A Use appropriate operations (add, subtract, multiply, divide) when solving problems

5.2 Algebra

5.2.1 Understands and analyzes mathematical situations using algebraic symbols

5.2.1.A Use information taken from an equation to answer questions

5.2.1.B Solve simple algebraic expressions with one variable

5.2.1.C Know how to write ordered pairs correctly (x, y)

5.2.1.D Identify and graph ordered pairs (positive numbers only)

5.2.2 Apply concepts of algebra in a problem solving situation

5.2.2.A Uses algebraic methods to solve problems

5.3 Geometry and Measurement

5.3.1 Understands characteristics of geometric shapes and geometric relationships

5.3.1.A Identify and draw plane and solid figures

5.3.1.B Draw angles

5.3.1.C Identify radius and diameter

5.3.1.D Define circumference

5.3.1.E Measure right, obtuse, acute angles

5.3.2 Demonstrate appropriate techniques, tools, and formulas to determine measurements

5.3.2.A Estimate length, capacity, and mass

5.3.2.B Choose appropriate units of length, capacity, and mass

5.3.3 Demonstrate the ability to make simple unit conversions within a system of measurement

5.3.3.A Converts units of length, mass, and volume within the standard system and within the metric system

5.4 Data Analysis and Probability

5.4.1 Understand and use data sets

5.4.1.A Define range, mean, median, and mode

5.4.1.B Compute mean, median, and mode

5.4.2 Apply concepts of data analysis and probability in a problem solving situation

5.4.2.A Solves problems using mean, median, and mode

*Coding for Infusion Topics covered in curriculum:

Higher Order Thinking Skills (H), Vocational/Career Education (V), Global Education (G), Multi-Cultural/Gender Fair (MCGF), Learning Skills (L), Communication Skills (C), Technology (T)