

HS Integrated Mathematics: Course 1 Standards and Benchmarks Confirmed

Standard 1: Use a variety of strategies in the problem-solving process

Benchmarks:

- 1.1 Understand that there is no one right way to solve mathematical problems but that different methods have different advantages and disadvantages

Standard 2: Understand and apply basic and advanced properties of the concepts of numbers

Benchmarks:

- 2.1 Understand the relationships among equivalent number representations (e.g., whole numbers, positive and negative integers, fractions, ratios, decimals, percents, scientific notation, exponentials) and the advantages and disadvantages of each type of representation
- 2.2. Understand the characteristics and properties (e.g., order relations, relative magnitude, base-ten place values) of the set of rational numbers and its subsets (e.g., whole numbers, fractions, decimals, integers)

Standard 3: Use basic and advanced procedures while performing the processes of computation

Benchmarks:

- 3.1 Understand how different algorithms work for arithmetic computations and operations
- 3.2 Select and use appropriate computational methods (e.g. mental, paper and pencil, calculator, computer) for a given situation

Standard 4: Understand and apply basic and advanced properties of the concepts of measurement

Benchmarks:

- 4.1 Understand the relationships among linear dimensions, area, surface area, volume and the corresponding use of units, square units, and cubic units of measure

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- 4.2 Understand the concepts of precision and significant digits as they relate to measurement (e.g. how units indicate precision)
- 4.3 Solves problems involving units of measurement and converts answers to a larger or smaller unit within the same system (i.e., metric or U.S.)

Standard 5: Understand and apply basic and advanced properties of the concepts of geometry

Benchmarks:

- 5.1 Understand and apply basic and advanced properties of the concepts of geometry
- 5.2. Understand transformations of geometric figures
- 5.3 Understand the relationships between two and three-dimensional representations of a figure (e.g., scale drawings, and planar cross sections)
- 5.4 Use geometric methods to complete basic geometric comparisons (e.g., angles)
- 5.5 Understand the concepts of line and angle properties
- 5.6 Use geometric methods to complete basic constructions

Standard 6: Understand and apply basic and advanced concepts of statistics and data analysis

Benchmarks:

- 6.1 Understand the importance of data representation
- 6.2 Understand basic characteristics of measures of central tendency (i.e., mean, mode, median)

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Standard 7: Understand and apply basic and advanced concepts of probability

Benchmarks:

- 7.1 Understand the role that probability and statistics play in physical events
- 7.2 Understand how predictions are based on data and probabilities (e.g., the difference between predictions based on theoretical probability and experimental probability)
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Standard 8: Understand and apply basic and advanced properties of functions and algebra

Benchmarks:

- 8.1 Understand and apply basic and advanced properties of functions and algebra