

HS Integrated Mathematics: Course 2 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 properties (e.g., relative magnitude, density, absolute value) of the real number system, its subsystems (e.g., irrational numbers, natural numbers, rational numbers), and complex numbers (e.g., imaginary numbers)
- 2.2 Use discrete structures (e.g., matrices) to represent and solve problems

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

Benchmarks:

- 3.1 Understand the addition/subtraction/ multiplication/division and simplification of radical expressions containing positive rational numbers and complex numbers
- 3.2 Understand basic applications of properties and operations on matrices

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

Benchmarks:

- 4.1 Understand the concept of precision and significant digits as related to scientific notation

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

Benchmarks:

- 5.1 Use synthetic methods to solve problems involving symmetry
- 5.2 Understand the basic concepts of right triangle trigonometry
- 5.3 Use inductive and deductive reasoning to make observations about and to verify properties of and relations among figures
- 5.4 Use inductive and deductive reasoning to make observations about data

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

Benchmarks:

- 6.1 Understand basic characteristics of measures of central tendency (i.e., mean, mode, median)
- 6.2 Understand basic characteristics of measures of dispersion

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

Benchmarks:

- 7.1 Understand the concept of compound events
- 7.2 Use a variety of theoretical methods

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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 linear equations and inequalities
- 8.2 Understand and apply basic and advanced properties of exponents
- 8.3 Understand and apply basic and advanced properties of quadratics
- 8.4 Understand rational expressions and equations
- 8.5 Understand polynomial equations
- 8.6 Understand the concept of parametric equations
- 8.7 Understand and apply basic and advanced properties of function