

HS AP Calculus Standards and Benchmarks Confirmed

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

Benchmarks:

- 1.1 The student will use a variety of strategies to understand new mathematical content and to develop efficient solution methods or problem extensions

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

Benchmarks:

- 2.1 Understand the real number system and its subsystems
- 2.2 Understand the notation associated with calculus
- 2.3 Understand continuity

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

Benchmarks:

- 3.1 Use Riemann sums to compute integrals
- 3.2 Estimate limits

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

Benchmarks:

- 4.1 Understand units of measurement in calculus

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

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Benchmarks:

- 5.1 Understand graphs of continuous functions
- 5.2 Understand the complex characteristics of the graphs of functions
- 5.3 Understand the concept of derivative graphically

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

Benchmarks:

- 6.1 Use data analysis to make inferences and convincing arguments

Standard 8: Understand and apply basic and advanced properties of functions and algebra

Benchmarks:

- 8.1 Use algebra to calculate limits
- 8.2 Understand the concept of the derivative of a function and differentiate functions
- 8.3 Understand the concept of the integral of a function and integrate functions

Standard 9: Understand the general nature and use of mathematics

Benchmarks:

- 9.1 Understand and use formal mathematical language
- 9.2 Understand the practical use of the concept of infinity to explain phenomena that occur in theoretical mathematics
- 9.3 Explore mathematics at a philosophical level