

HS AP Statistics Standards and Benchmarks Confirmed

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

Benchmarks:

- 1.1 Use a variety of strategies to understand new mathematical content and to develop more 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 statistics

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

Benchmarks:

- 3.1 Compute summaries of univariate data both by hand and by calculator
- 3.2 Compute probabilities both by hand and by calculator

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

Benchmarks:

- 4.1 Understand units of measurement in statistics

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

Benchmarks:

- 5.1 Understand histograms

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5.2 Understand density curves

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

Benchmarks:

- 6.1 Select and use the best method of representing and describing a set of data (e.g. scatter plot, line graph, two-way table)
- 6.2 Understand measures of central tendency and variability and their applications to specific situations
- 6.3 Understand the concept of correlation
- 6.4 Understand different methods of curve-fitting and various applications
- 6.5 Understand how outliers may affect various representations of data
- 6.6 Understand how the reader's bias, measurement error, and display distortion can affect the interpretation of data
- 6.7 Understand sampling distributions, the central limit theorem, and confidence intervals
- 6.8 Understand how concepts of representativeness, randomness, and bias in sampling can affect experimental outcomes and statistical interpretations
- 6.9 Understand that making an inference about a population from a sample involves uncertainty and can estimate the size of that uncertainty

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

Benchmarks:

- 7.1 Understand the concept of probability as relative frequency
- 7.2 Understand combining independent random variables
- 7.3 Understand the normal distribution

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

Benchmarks:

- 8.1 Apply algebra skills of graphing data and linear functions to fit data
- 8.2 Understand that a probability distribution function is similar to other functions in algebra

Standard 9: Understand the general nature and use of mathematics

Benchmarks:

- 9.1 Understand and use formal mathematical language