

# **HS Mathematical Studies 1 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 efficient solution methods or problem extensions
- 1.2 Understand the components of mathematical modeling
- 1.3 Illustrate and solve problems with diagrams

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

### **Benchmarks:**

- 2.1 Understand the properties of the real number system, its subsystems and different ways to express them

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

### **Benchmarks:**

- 3.1 Know how to round an answer and understand the errors resulting from rounding

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

### **Benchmarks:**

- 4.1 Recognize and use SI (Systeme Internationale) units and other basic units of measurement

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

### Benchmarks:

- 5.1 Use synthetic representations and analytic methods to solve problems in two and three dimensions

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

### Benchmarks:

- 6.1 Know techniques to represent sets of data
- 6.2 Understand measures of central tendency and variability and their applications to specific situations
- 6.3 Understand the concept of correlation

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

### Benchmarks:

- 7.1 Understand the concepts of a random variable
- 7.2 Understand the concepts of independent and dependent events and how they are related to compound events and conditional probability
- 7.3 Use a variety of methods to determine probabilities

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

### Benchmarks:

- 8.1 Understand appropriate terminology and notation used to define functions and their properties

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- 8.2 Understand the general properties and characteristics of many types of functions and their graphs
- 8.3 Use a variety of methods to solve systems of equations and inequalities
- 8.4 Understand formal notation and various applications of sequences and series