

# College and Career Readiness Standards (CCRS): Mathematics

## Major Work of the CCR Adult Education Levels

Color key: Black = Number Sense, Blue = Geometry, Orange = Algebra,  
Green = Data, Statistics, and Probability

### Level A (CCSS Grades K-1 / Beginning ABE):

Developing understanding of addition and subtraction

Developing understanding of whole number place value, tens and ones

Describing shapes and space

Reasoning about attributes, composition, and decomposition of geometric shapes

Developing understanding of linear measurement

### Level B (CCSS Grades 2-3 / ABE I):

Extending understanding of base-10 notation

Adding and subtracting to 1,000; fluency to 100

Understanding multiplication of whole numbers to 100

Understanding division as inverse of multiplication; single-digit divisors

Developing understanding of fractions, especially unit fractions

Using standard units of measure for linear measure

Developing understanding of area

Describing and analyzing 2-D shapes

### Level C (CCSS Grades 4-5 + 6 / ABE II)

Attaining fluency with multi-digit multiplication

Developing understanding of division with multi-digit dividends

Developing understanding of fraction equivalence

Developing fluency with all operations with fractions

Extending place value understanding to decimals to 0.001

Attaining fluency with decimal operations to 0.01

Extending the number system to positive rational numbers

Connecting ratio and rate to whole number multiplication and division

Writing and interpreting expressions and equations

Developing understanding of the coordinate plane

Developing an understanding of volume and surface area

Developing understanding of statistical thinking

**Level D (CCSS Grades 6 + 7-8 / ABE III):**

Extending number systems to all rational numbers, including negatives

Completing understanding of division of fractions, including with negative numbers

Solving ratio and rate problems

Applying proportional relationships

Working with expressions and linear equations

Solving linear equations and systems of linear equations

Developing the concept of function

Graphing in the coordinate plane

Classifying geometric figures based on properties

Solving problems involving scale drawings

Measuring 2- and 3-D figures: area, surface area, and volume

Analyzing 2- and 3-D space using distance, angle, similarity, and congruence

Applying the Pythagorean theorem

Modeling bivariate data with a linear equation

Summarizing data using frequency and measures of center and spread

Drawing inference about populations based on samples (probability distributions)

**Level E (CCSS Grades 9-12 / ASE I and II):**

Extending understanding of number systems to the set of real numbers

Operating with rational numbers using all four operations

Recognizing irrational numbers

Using radicals and integer exponents

Reasoning quantitatively through using units and appropriate levels of precision

Reasoning with ratios and proportions in problems

Developing understanding of functions by defining, evaluating, comparing, and modeling with them

Using expressions and equations to solve problems, including linear, quadratic, and exponential

Solving linear inequalities

Interpreting and applying the structure of expressions to problem solving

Performing operations with algebraic expressions, including polynomials and rational expressions

Reasoning with, modeling, and solving equations, inequalities

Building, interpreting, and analyzing functions using correct notation

Understanding, interpreting, and using linear, quadratic, and exponential functions as models

Applying similarity and congruence concepts to geometric figures, including right triangles

Using geometric models to solve measurement problems involving volume

Using random sampling to summarize, describe, display, interpret, and draw inferences about populations

Developing an understanding of probability concepts

Summarizing, representing, and interpreting one- and two-variable data, including using frequency tables