

ACT Mathematics Test Content

Pre-Algebra

- Operations using whole numbers, fractions, decimals, and integers
- Numbers raised to positive integer powers and square roots of numbers
- Ratio, proportion, and percent
- Multiples and factors of integers
- Absolute Value
- Ordering numbers from least to greatest or greatest to least
- Linear equations with one variable
- Simple probability and counting the number of ways something can happen
- Representation and interpretation of data in charts, tables, and graphs
- Simple descriptive statistics like mean, median, and mode

Elementary Algebra

- Using variables to express functional relationships
- Substitution
- Operations on polynomials
- Factoring and solving simple quadratic equations (The kind that can be solved by factoring)
- Linear inequalities with one variable
- Properties of integer exponents and square roots

Intermediate Algebra

- Quadratic Formula
- Radical and rational expressions
- Inequalities and absolute value equations
- Sequences
- Systems of equations
- Quadratic inequalities
- Functions
- Matrices
- Roots of polynomials
- Complex Numbers

Coordinate Geometry

- Number line graphs
- Graphs of points, lines, planes and other curves in the (x, y) coordinate plane
- Relationships between equations and graphs
- Slope
- Parallel and perpendicular lines
- Distance and Midpoints
- Conics

Plane Geometry

- Properties and relations of plane figures (triangles, rectangles, parallelograms, trapezoids, and circles)
- Angles
- Parallel and perpendicular lines
- Translations, rotations, and reflections
- Proof techniques
- Simple three-dimensional geometry
- Measurement concepts like perimeter, area, and volume

Trigonometry

- Trigonometric ratios defined for right triangles
- The values, properties, and graphs of trigonometric functions
- Trigonometric identities
- Trigonometric equations