

# Content Covered on the ACT

## Content Covered by the ACT English Test

Six elements of effective writing are included in the English Test: punctuation, grammar and usage, sentence structure, strategy, organization, and style. The questions covering punctuation, grammar, and sentence structure make up the Usage/Mechanics subscore. The questions covering strategy, organization, and style make up the Rhetorical Skills subscore.

### Usage/Mechanics

- **Punctuation (13%).** Questions in this category test your knowledge of the conventions of internal and end-of-sentence punctuation, with emphasis on the relationship of punctuation to meaning (for example, avoiding ambiguity, indicating appositives).
- **Grammar and Usage (16%).** Questions in this category test your understanding of agreement between subject and verb, between pronoun and antecedent, and between modifiers and the word modified; verb formation; pronoun case; formation of comparative and superlative adjectives and adverbs; and idiomatic usage.
- **Sentence Structure (24%).** Questions in this category test your understanding of relationships between and among clauses, placement of modifiers, and shifts in construction.

### Rhetorical Skills

- **Strategy (16%).** Questions in this category test how well you develop a given topic by choosing expressions appropriate to an essay's audience and purpose; judging the effect of adding, revising, or deleting supporting material; and judging the relevance of statements in context.
- **Organization (15%).** Questions in this category test how well you organize ideas and choose effective opening, transitional, and closing sentences.
- **Style (16%).** Questions in this category test how well you select precise and appropriate words and images, maintain the level of style and tone in an essay, manage sentence elements for rhetorical effectiveness, and avoid ambiguous pronoun references, wordiness, and redundancy.

# Content Covered by the ACT Mathematics Test

In the Mathematics Test, three subscores are based on six content areas: pre-algebra, elementary algebra, intermediate algebra, coordinate geometry, plane geometry, and trigonometry.

## Pre-Algebra/Elementary Algebra

- **Pre-Algebra (23%).** Questions in this content area are based on basic operations using whole numbers, decimals, fractions, and integers; place value; square roots and approximations; the concept of exponents; scientific notation; factors; ratio, proportion, and percent; linear equations in one variable; absolute value and ordering numbers by value; elementary counting techniques and simple probability; data collection, representation, and interpretation; and understanding simple descriptive statistics.
- **Elementary Algebra (17%).** Questions in this content area are based on properties of exponents and square roots, evaluation of algebraic expressions through substitution, using variables to express functional relationships, understanding algebraic operations, and the solution of quadratic equations by factoring.

## Intermediate Algebra/Coordinate Geometry

- **Intermediate Algebra (15%).** Questions in this content area are based on an understanding of the quadratic formula, rational and radical expressions, absolute value equations and inequalities, sequences and patterns, systems of equations, quadratic inequalities, functions, modeling, matrices, roots of polynomials, and complex numbers.
- **Coordinate Geometry (15%).** Questions in this content area are based on graphing and the relations between equations and graphs, including points, lines, polynomials, circles, and other curves; graphing inequalities; slope; parallel and perpendicular lines; distance; midpoints; and conics.

## Plane Geometry/Trigonometry

- **Plane Geometry (23%).** Questions in this content area are based on the properties and relations of plane figures, including angles and relations among perpendicular and parallel lines; properties of circles, triangles, rectangles, parallelograms, and trapezoids; transformations; the concept of proof and proof techniques; volume; and applications of geometry to three dimensions.
- **Trigonometry (7%).** Questions in this content area are based on understanding trigonometric relations in right triangles; values and properties of trigonometric functions; graphing trigonometric functions; modeling using trigonometric functions; use of trigonometric identities; and solving trigonometric equations.

## Content Covered by the ACT Reading Test

The Reading Test is based on four types of reading selections: social studies, natural sciences, prose fiction, and humanities. The Social Studies/Sciences subscore is based on the questions on the social studies and natural sciences passages, and the Arts/Literature subscore is based on the questions on the prose fiction and humanities passages.

- **Social Studies (25%).** Questions in this category are based on passages in the content areas of anthropology, archaeology, biography, business, economics, education, geography, history, political science, psychology, and sociology.
- **Natural Sciences (25%).** Questions in this category are based on passages in the content areas of anatomy, astronomy, biology, botany, chemistry, ecology, geology, medicine, meteorology, microbiology, natural history, physiology, physics, technology, and zoology.
- **Prose Fiction (25%).** Questions in this category are based on intact short stories or excerpts from short stories or novels.
- **Humanities (25%).** Questions in this category are based on passages from memoirs and personal essays and in the content areas of architecture, art, dance, ethics, film, language, literary criticism, music, philosophy, radio, television, and theater.

## Content Covered by the ACT Science Test

The content of the Science Test includes biology, chemistry, physics, and the Earth/space sciences (for example, geology, astronomy, and meteorology). Advanced knowledge in these subjects is not required, but background knowledge acquired in general, introductory science courses is needed to answer some of the questions. The test emphasizes scientific reasoning skills over recall of scientific content, skill in mathematics, or reading ability.

The scientific information is conveyed in one of three different formats:

- **Data Representation (38%).** This format presents graphic and tabular material similar to that found in science journals and texts. The questions associated with this format measure skills such as graph reading, interpretation of scatterplots, and interpretation of information presented in tables, diagrams, and figures.
- **Research Summaries (45%).** This format provides descriptions of one or more related experiments. The questions focus on the design of experiments and the interpretation of experimental results.
- **Conflicting Viewpoints (17%).** This format presents expressions of several hypotheses or views that, being based on differing premises or on incomplete data, are inconsistent with one another. The questions focus on the understanding, analysis, and comparison of alternative viewpoints or hypotheses.