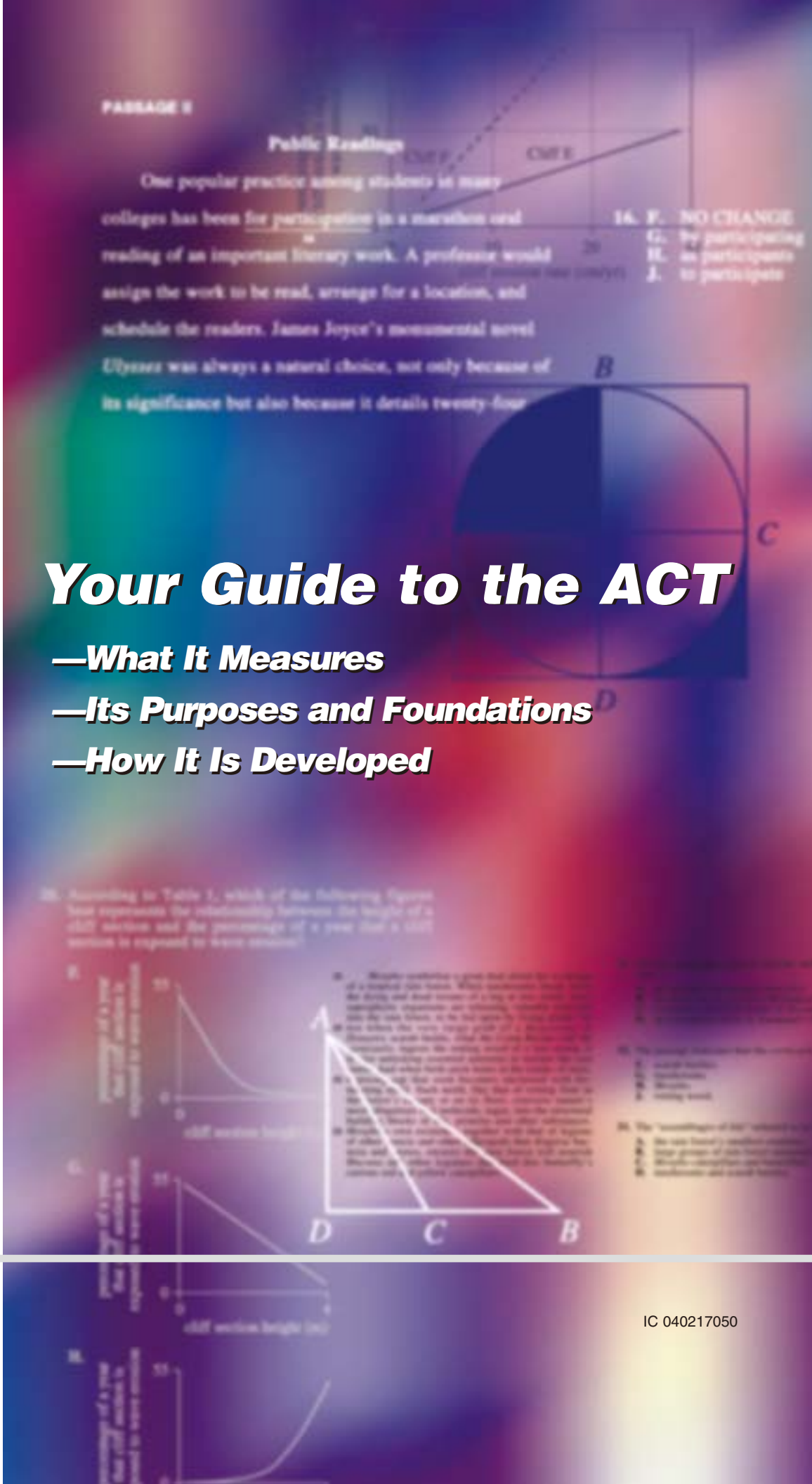

Your Guide to the ACT

—What It Measures
—Its Purposes and Foundations
—How It Is Developed

ACT®

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ACT endorses the *Code of Fair Testing Practices in Education*, a statement of guidelines for those who develop, administer, and use educational tests and data. The *Code* sets forth criteria for fairness in four areas: developing and selecting appropriate tests, administering and scoring tests, reporting and interpreting test results, and informing test takers. ACT is committed to ensuring that each of its testing programs upholds the *Code*'s standards for appropriate test development practices and use.

A copy of the full *Code* may be obtained free of charge from ACT Customer Services (68), P.O. Box 1008, Iowa City, IA 52243-1008, 319/337-1429.

Visit ACT's website at: **www.act.org**

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Introduction

Overview and Purpose

The ACT Program helps more than one million high school students each year develop postsecondary educational plans and helps thousands of colleges and universities meet the needs of their students. One component of the program is the ACT, which contains five curriculum-based tests: the English, Mathematics, Reading, and Science Tests are standardized multiple-choice tests based on the major areas of high school and postsecondary instructional programs; the optional Writing Test is an impromptu essay on a given prompt. Performance on these tests has a direct relationship to a student's educational achievement. The meaning of the test scores can be grasped and interpreted by both students and teachers.

Data from the ACT are used for many purposes. For example, high schools use the data in academic advising and counseling. Colleges use the data for recruitment, admissions, and course placement. And many state and national agencies use the data in their scholarship and special recognition programs.

The ACT Program is part of ACT's EPAS/Educational Planning and Assessment System®, which also includes PLAN® for students in grade 10 and EXPLORE® for students in grades 8 and 9. All these EPAS programs are based on a common content continuum in each of the four areas tested and are, therefore, helpful for measuring students' achievement, for gauging students' readiness for the transition to the next level of learning, and for school program evaluation.

Curriculum Foundations

The ACT is based on the philosophy that the best way to measure students' readiness for postsecondary education is to measure as directly as possible the knowledge and skills students will need to perform college-level work. To select the specific knowledge and skills for assessment, ACT analyzes three sources of information: First, we examine the objectives for instruction for grades 7–12 for all states in the United States that have published such objectives. Second, we review textbooks on state-approved lists for courses in grades 7–12. Third, we conduct an ACT National Curriculum Survey® in which we survey and consult with educators at the secondary and postsecondary levels to determine the knowledge and skills taught in grades 7–12 that are prerequisite to success in postsecondary courses. We then analyze the information from all three sources to define a scope and sequence for each of the areas measured by the ACT.

The material covered on each of the five tests, derived from these ACT National Curriculum Surveys, is drawn from the domain of each content area that educators agree is important to that content area and that is prerequisite to successful performance in entry-level college courses. We routinely conduct an ACT National Curriculum Survey to ensure the continued appropriateness of the content on the ACT.

In 2002–2003, for example, ACT reviewed state educational standards from all 49 states that had published such standards; surveyed 16,363 middle school/junior high and high school teachers and 10,565 entry-level-course postsecondary faculty; and convened expert content panels to discuss the survey results and the curriculum review results. The findings are summarized in *Content Validity Evidence in Support of ACT's Educational Achievement Tests: ACT National Curriculum Survey 2002–2003,* published by ACT in 2003. The study is the only one of its kind in the United States. Its results have a direct and significant impact on the development of the EPAS tests.

Test Development

ACT has developed, and over time has refined, the test specifications for the ACT by studies such as those previously described. The tasks presented in the tests are representative of a broad range of academic skills, comprehensive in scope and educationally significant. There is no penalty for guessing, and the tests are not speeded: generally, 95% of the examinees finish the tests in the time allowed.

The five tests are measures of academic development that rely largely on the students' ability to apply the content knowledge and reasoning skills acquired in their coursework to high-level tasks. These tasks often require the integration of proficiencies and skills from various high school courses. Consequently, the ACT tests contain a large proportion of analytical, problem-solving exercises.

Item and Prompt Writing

The materials for the ACT tests reflect our nation's cultural diversity and are acquired by ACT from item writers and prompt writers who represent a wide variety of backgrounds. In the construction of its tests, ACT conscientiously involves educators, from both secondary and postsecondary levels, located at educational institutions in all regions of the country. These writers reflect a variety of racial and ethnic backgrounds and represent different educational philosophies. They work from detailed guidelines ACT provides that specify the test content, cognitive skill level, and item format. ACT staff correspond with item and prompt writers to offer guidance in test development, and we periodically conduct workshops in test development for item and prompt writers. We encourage these writers to produce materials representing diverse points of view. The guidelines include specifications for nondiscriminatory subject matter and language usage.

Test Editing and Review

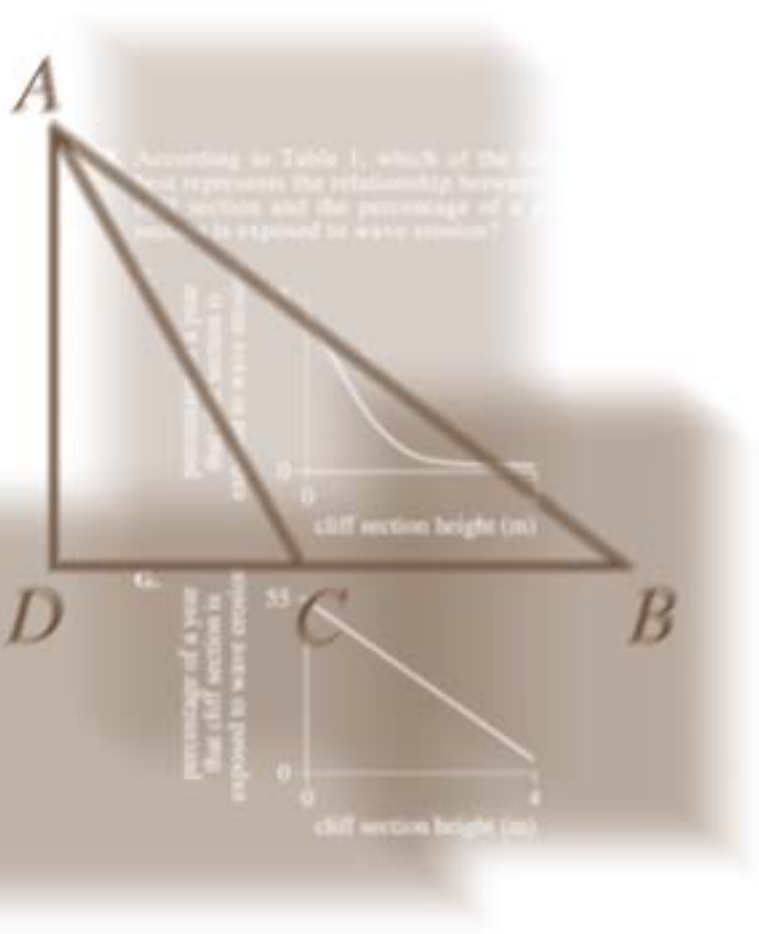
Once the tests are written, they go through several stages of editing and review. During the editing process, all test materials are reviewed by both ACT staff and panels of experts external to ACT for content accuracy, conformity to good testing practices, fair portrayal of groups, avoidance of subject matter that may be unfamiliar to members of a group, and nonsexist use of language. ACT convenes meetings with the expert panelists to discuss each test in detail. The items and prompts that are judged acceptable in the review process are then tried out on a sample of students (selected to be representative of the total examinee population) to determine whether the tests are at appropriate difficulty levels and are functioning properly. Items judged acceptable are placed in an item pool, and prompts judged acceptable are placed in a pool of prompts.

Test Construction

National forms of the multiple-choice ACT tests are constructed by selecting items from the item pool that match both the content and statistical specifications for the tests. The result in each case is a *domain-sampled test;* that is, each form of each ACT test is a *sample* from the larger domain on which the test is based. Each year, multiple forms of the ACT tests are developed, and each form is a carefully selected sample of items from the subject domain. That is why ACT advises students to prepare for the ACT tests by taking rigorous college preparatory courses and obtaining a thorough understanding of the entire domain, rather than trying to "guess" specific topics that might be included on any particular form of the test. After the test forms are constructed, they are subjected to further reviews and panel discussions for content and fairness considerations by ACT staff and outside consultants. These reviews examine not only each content area test separately, but also the complete battery of tests as a whole. Only after the test forms meet ACT's high standards for quality are they administered nationally.

Before the results of an ACT test form's administration can be used, the score scale for each of the four multiple-choice tests and for the Composite score (the average of the four test scores) must be shown to be the same as that for any other form. Although every attempt is made to make the forms of the ACT tests equivalent to one another, there is always some slight variation in the difficulty of various test forms. To compensate for this slight variation, the scores for the various test forms are equated through a statistical process that provides comparable test scores. Once the equating process is completed, the results of the tests can be reported on a score scale, which runs from 1 through 36, that is comparable for all test forms. In this way, a standard score of 18, for instance, will represent the same level of achievement for all test forms. It is important to remember, in interpreting the scores, that they are estimates, within 2 scale score points for each content-area test score and within 1 scale score point for the Composite score. It is also important to recognize that ACT scores, like those of any standardized test, are complementary to other measures of student achievement, such as classroom assessments, teachers' observations, and course grades. ACT scores should always be interpreted in light of such additional sources of information.

Immediately after each national test administration, each form of each ACT test is subjected to final statistical reviews—a review of the item analysis and a review of differential item functioning. The results of the item analysis are carefully scrutinized to determine if the items performed as expected. The differential item functioning review is based on a statistical analysis that is conducted to determine if the items performed differentially for one or more population groups. Any items that are flagged through these statistical analyses are reviewed carefully and evaluated for potential bias. If the final statistical reviews were to reveal any problem, ACT would take appropriate action to ensure that every student received an accurate and fair measurement of her or his academic achievement.



PASSAGE II

Public Readings

One popular practice among students in many colleges has been for participation in a marathon oral reading of an important literary work. A professor would assign the work to be read, arrange for a location, and schedule the readers. James Joyce's monumental novel *Ulysses* was always a natural choice, not only because of its significance but also because it details twenty-four

The ACT English Test

Description of the test

The English Test is a 75-item, 45-minute test that measures the student's understanding of the conventions of standard written English (punctuation, grammar and usage, and sentence structure) and of rhetorical skills (strategy, organization, and style). Spelling, vocabulary, and rote recall of rules of grammar are not tested. The test assumes that students are in the process of taking a core coursework program in high school comprising four years of English courses.

The test consists of five prose passages, each of which is accompanied by a sequence of multiple-choice test items. To ensure a variety of rhetorical situations, a range of essay styles and types is employed, from personal and narrative pieces to persuasive and informative essays. Passages are chosen not only for their appropriateness in assessing writing skills but also to reflect students' interests and experiences. Because the passages used are complete essays, the revising and editing issues posed by the questions offer a certain richness and complexity. While some questions require students to apply their knowledge of standard written English to the task of deciding the best way to write a sentence or sentences, the surrounding context makes the overriding issue that of clear and effective communication of meaning. Other questions call on students to analyze the entire essay before making a decision. In these cases, students must examine the essay in order to determine its focus, style, tone, logical flow, and organizational structure. Some questions, for example, ask students to evaluate the entire essay in terms of a stated goal; to identify the rhetorical effect of a section of the essay; or to make a judgment relative to the essay's coherence or a word's connotative meanings.

The test is formatted so that some items refer to underlined portions of the passage and offer several alternatives to the portion underlined. The student must decide which choice is most appropriate in the context of the passage. Some items ask about an underlined portion, a section of the passage, or the passage as a whole. The student must decide which choice best answers the question posed. Many items offer "NO CHANGE" to the passage as one of the choices. The items are numbered consecutively. Each item number refers to a correspondingly numbered portion underlined in the passage or to a corresponding numeral in a box located at the appropriate point in the passage.

Table 1
ACT English Test
75 items, 45 minutes

Content/Skills	Proportion of Test	Number of Items
Usage/Mechanics	**.53**	**40**
Punctuation	.13	10
Grammar and Usage	.16	12
Sentence Structure	.24	18
Rhetorical Skills	**.47**	**35**
Strategy	.16	12
Organization	.15	11
Style	.16	12
Total	**1.00**	**75**

Scores reported:

- Usage/Mechanics (40 items)
- Rhetorical Skills (35 items)
- Total test score (75 items)

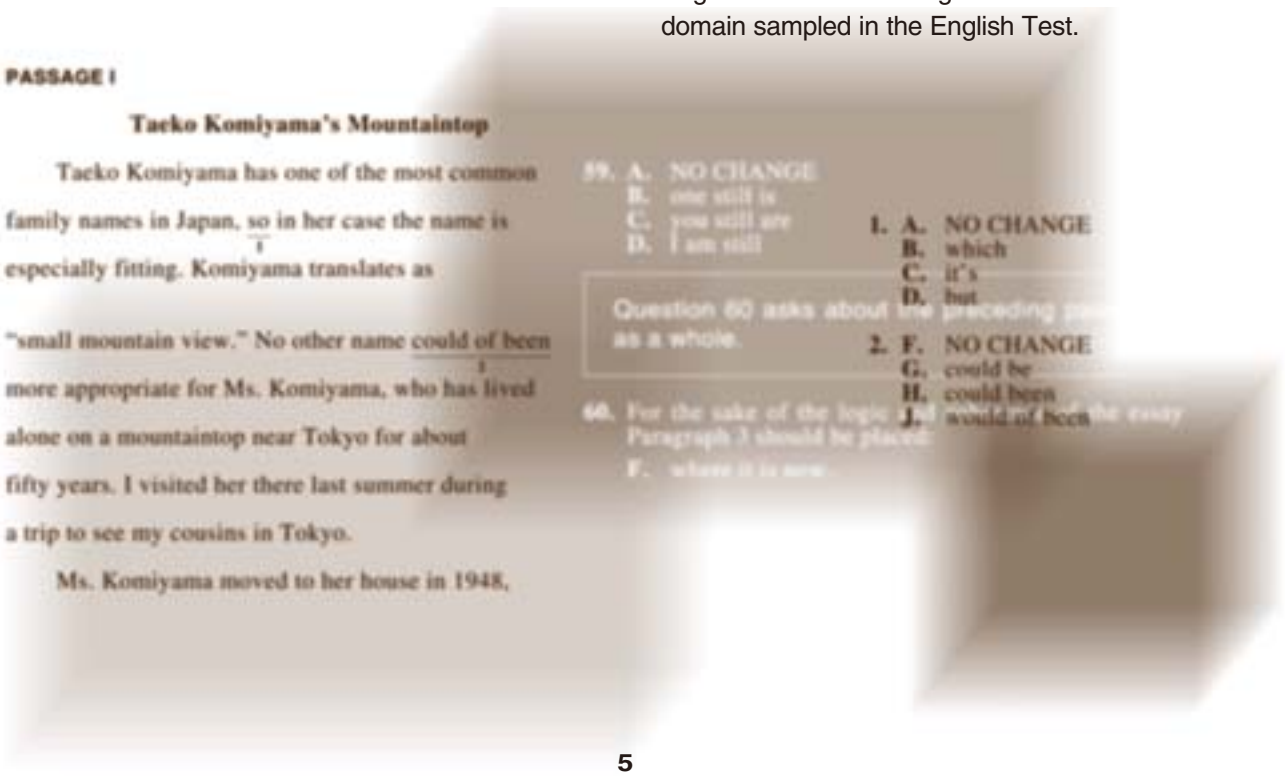
Content of the test

Six elements of effective writing are included in the English Test. These elements and the approximate proportion of the test devoted to each are given in Table 1.

1. **Usage/Mechanics**
   - **a. Punctuation.** The items in this category test the student's knowledge of the conventions of internal and end-of-sentence punctuation, with emphasis on the relationship of punctuation to meaning (e.g., avoiding ambiguity, identifying appositives).
   - **b. Grammar and Usage.** The items in this category test the student's understanding of agreement between subject and verb, between pronoun and antecedent, and between modifier and the words modified; verb formation; pronoun case; formation of comparative and superlative adjectives and adverbs; and idiomatic usage.
   - **c. Sentence Structure.** The items in this category test the student's understanding of relationships between and among clauses, placement of modifiers, and shifts in construction.

2. **Rhetorical Skills**
   - **a. Strategy.** The items in this category test the student's ability to develop a given topic by judging the appropriateness of expression in relation to audience and purpose, the effect of adding, revising, or deleting supporting material, and judging the relevance of statements in context.
   - **b. Organization.** The items in this category test the student's ability to organize ideas and to make decisions about cohesion devices: opening, transitional, and closing statements.
   - **c. Style.** The items in this category test the student's ability to select precise and appropriate words and images, to maintain the level of style and tone in an essay, to manage sentence elements for rhetorical effectiveness, and to avoid ambiguous pronoun references, wordiness, and redundancy.

Table 2 on page 6 gives ACT's College Readiness Standards for English. These are statements that describe what students who score in various score ranges are *likely* to know and to be able to do in English. The Standards give further instances of the domain sampled in the English Test.


PASSAGE I

Taeko Komiyama's Mountaintop

Taeko Komiyama has one of the most common family names in Japan, so in her case the name is especially fitting. Komiyama translates as "small mountain view." No other name could of been more appropriate for Ms. Komiyama, who has lived alone on a mountaintop near Tokyo for about fifty years. I visited her there last summer during a trip to see my cousins in Tokyo.

Ms. Komiyama moved to her house in 1948,

59. A. NO CHANGE
B. one still is
C. you still are
D. I am still

1. A. NO CHANGE
B. which
C. it's
D. but

Question 60 asks about the preceding
as a whole.

2. F. NO CHANGE
G. could be
H. could been
J. would of been

60. For the sake of the logic
Paragraph 3 should be placed
F. where it is now.

Table 2: College Readiness Standards for the ACT English Test

The College Readiness Standards describe what students who score in the specified score ranges are *likely* to know and to be able to do.

Score Range 13–15	• Use conjunctive adverbs or phrases to show time relationships in simple narrative essays (e.g., *then, this time*) • Revise sentences to correct awkward and confusing arrangements of sentence elements • Revise vague nouns and pronouns that create obvious logic problems • Use conjunctions or punctuation to join simple clauses	• Revise shifts in verb tense between simple clauses in a sentence or between simple adjoining sentences • Solve such basic grammatical problems as how to form the past and past participle of irregular but commonly used verbs and how to form comparative and superlative adjectives • Delete commas that create basic sense problems (e.g., between verb and direct object)
Score Range 16–19	• Identify the basic purpose or role of a specified phrase or sentence • Delete a clause or sentence because it is obviously irrelevant to the essay • Select the most logical place to add a sentence in a paragraph • Delete obviously synonymous and wordy material in a sentence • Revise expressions that deviate from the style of an essay • Determine the need for punctuation and conjunctions to avoid awkward-sounding sentence fragments and fused sentences • Decide the appropriate verb tense and voice by considering the meaning of the entire sentence	• Solve such grammatical problems as whether to use an adverb or adjective form, how to ensure straightforward subject-verb and pronoun-antecedent agreement, and which preposition to use in simple contexts • Recognize and use the appropriate word in frequently confused pairs such as *there* and *their, past* and *passed*, and *led* and *lead* • Provide appropriate punctuation in straightforward situations (e.g., items in a series) • Delete commas that disturb the sentence flow (e.g., between modifier and modified element)
Score Range 20–23	• Identify the central idea or main topic of a straightforward piece of writing • Determine relevancy when presented with a variety of sentence-level details • Use conjunctive adverbs or phrases to express straightforward logical relationships (e.g., *first, afterward, in response*) • Decide the most logical place to add a sentence in an essay • Add a sentence that introduces a simple paragraph • Delete redundant material when information is repeated in different parts of speech (e.g., "alarmingly startled") • Use the word or phrase most consistent with the style and tone of a fairly straightforward essay	• Determine the clearest and most logical conjunction to link clauses • Recognize and correct marked disturbances of sentence flow and structure (e.g., participial phrase fragments, missing or incorrect relative pronouns, dangling or misplaced modifiers) • Use idiomatically appropriate prepositions, especially in combination with verbs (e.g., *long for, appeal to*) • Ensure that a verb agrees with its subject when there is some text between the two • Use commas to set off simple parenthetical phrases • Delete unnecessary commas when an incorrect reading of the sentence suggests a pause that should be punctuated (e.g., between verb and direct object clause)
Score Range 24–27	• Identify the focus of a simple essay, applying that knowledge to add a sentence that sharpens that focus or to determine if an essay has met a specified goal • Delete material primarily because it disturbs the flow and development of the paragraph • Add a sentence to accomplish a fairly straightforward purpose such as illustrating a given statement • Determine the need for conjunctive adverbs or phrases to create subtle logical connections between sentences (e.g., *therefore, however, in addition*) • Rearrange the sentences in a fairly uncomplicated paragraph for the sake of logic • Add a sentence to introduce or conclude the essay or to provide a transition between paragraphs when the essay is fairly straightforward • Revise a phrase that is redundant in terms of the meaning and logic of the entire sentence • Identify and correct ambiguous pronoun references	• Use the word or phrase most appropriate in terms of the content of the sentence and tone of the essay • Revise to avoid faulty placement of phrases and faulty coordination and subordination of clauses in sentences with subtle structural problems • Maintain consistent verb tense and pronoun person on the basis of the preceding clause or sentence • Ensure that a pronoun agrees with its antecedent when the two occur in separate clauses or sentences • Identify the correct past and past participle forms of irregular and infrequently used verbs and form present-perfect verbs by using *have* rather than *of* • Use punctuation to set off complex parenthetical phrases • Recognize and delete unnecessary commas based on a careful reading of a complicated sentence (e.g., between the elements of a compound subject or compound verb joined by *and*) • Use apostrophes to indicate simple possessive nouns • Recognize inappropriate uses of colons and semicolons
Score Range 28–32	• Apply an awareness of the focus and purpose of a fairly involved essay to determine the rhetorical effect and suitability of an existing phrase or sentence, or to determine the need to delete plausible but irrelevant material • Add a sentence to accomplish a subtle rhetorical purpose such as to emphasize, to add supporting detail, or to express meaning through connotation • Make sophisticated distinctions concerning the logical use of conjunctive adverbs or phrases, particularly when signaling a shift between paragraphs • Rearrange sentences to improve the logic and coherence of a complex paragraph • Add a sentence to introduce or conclude a fairly complex paragraph • Correct redundant material that involves sophisticated vocabulary and sounds acceptable as conversational English (e.g., "an aesthetic viewpoint" versus "the outlook of an aesthetic viewpoint") • Correct vague and wordy or clumsy and confusing writing containing sophisticated language	• Use sentence-combining techniques, effectively avoiding problematic comma splices, run-on sentences, and sentence fragments, especially in sentences containing compound subjects or verbs • Maintain a consistent and logical use of verb tense and pronoun person on the basis of information in the paragraph or essay as a whole • Correctly use reflexive pronouns, the possessive pronouns *its* and *your*, and the relative pronouns *who* and *whom* • Ensure that a verb agrees with its subject in unusual situations (e.g., when the subject-verb order is inverted or when the subject is an indefinite pronoun) • Use commas to set off a nonessential/nonrestrictive appositive or clause • Deal with multiple punctuation problems (e.g., compound sentences containing unnecessary commas and phrases that may or may not be parenthetical) • Use an apostrophe to show possession, especially with irregular plural nouns • Use a semicolon to indicate a relationship between closely related independent clauses
Score Range 33–36	• Determine whether a complex essay has accomplished a specific purpose • Add a phrase or sentence to accomplish a complex purpose, often expressed in terms of the main focus of the essay • Consider the need for introductory sentences or transitions, basing decisions on a thorough understanding of both the logic and rhetorical effect of the paragraph and essay • Delete redundant material that involves subtle concepts or that is redundant in terms of the paragraph as a whole	• Work comfortably with long sentences and complex clausal relationships within sentences, avoiding weak conjunctions between independent clauses and maintaining parallel structure between clauses • Provide idiomatically and contextually appropriate prepositions following verbs in situations involving sophisticated language or ideas • Ensure that a verb agrees with its subject when a phrase or clause between the two suggests a different number for the verb • Use a colon to introduce an example or an elaboration

The ACT Mathematics Test

Description of the test

The Mathematics Test is a 60-item, 60-minute test designed to assess the mathematical skills that students have typically acquired in courses taken up to the beginning of grade 12. These courses generally include Algebra 1, Geometry, and Algebra 2 (which covers beginning trigonometry concepts). The test presents multiple-choice items that require students to use their reasoning skills to solve practical problems in mathematics. Most items are discrete, but on occasion some may belong to sets composed of several items (e.g., several items based on the same graph or chart). The use of calculators is permitted on the Mathematics Test. Visit ACT's website at **www.act.org** for details.

The problems assume knowledge of basic formulas and computational skills but do not require memorization of complex formulas nor extensive computation. The material covered on the test emphasizes the major content areas that are prerequisite to successful performance in entry-level courses in college mathematics.

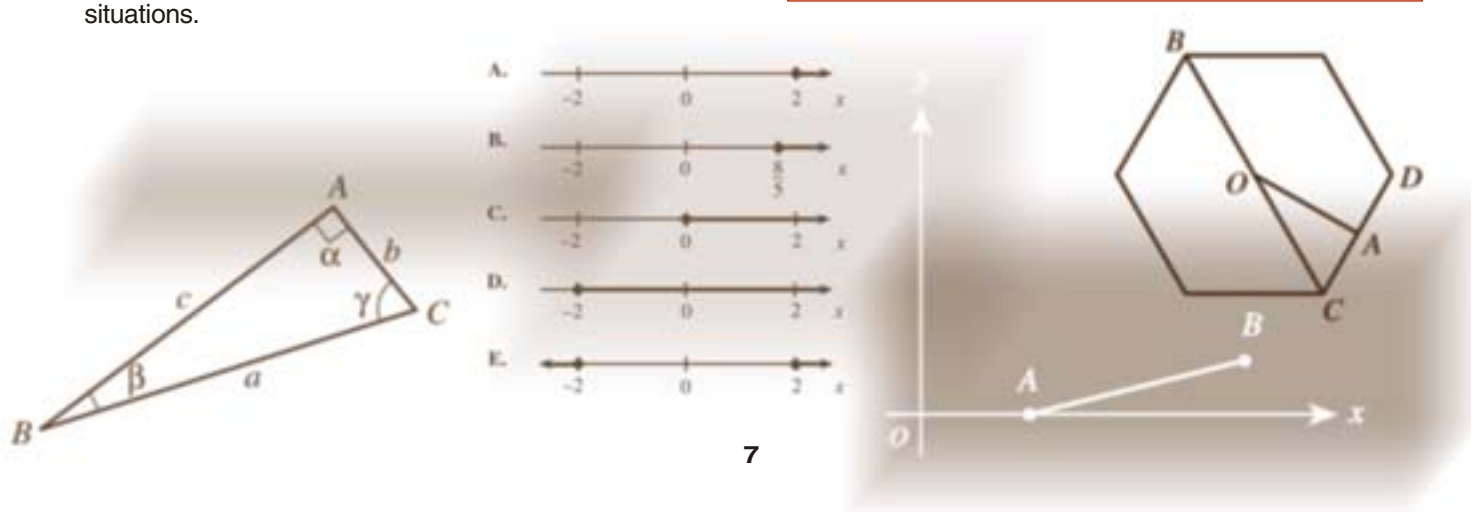
Many items are couched in contexts, some purely mathematical, others imitative of real-world mathematical problems. These give students a real opportunity to work through mathematical issues and to display their skills, from their depth of mathematical understanding to their powers of problem solving. One of the goals of the Mathematics Test is to test students' abilities to transfer quantitative reasoning and problem-solving skills from one context to another. The test therefore offers a wide range of questions to ensure that students continually will be challenged with new situations.

The items included in the Mathematics Test cover four cognitive levels: knowledge and skills, direct application, understanding concepts, and integrating conceptual understanding. Knowledge and skills items require the student to use one or more facts, definitions, formulas, or procedures to solve problems that are presented in purely mathematical terms. Direct application items require the student to use one or more facts, definitions, formulas, or procedures to solve straightforward problems set in real-world situations. Understanding concepts items test the student's depth of understanding of major concepts by requiring reasoning from a concept to reach an inference or a conclusion. Integrating conceptual understanding items test the student's ability to achieve an integrated understanding of two or more major concepts to solve nonroutine problems. The approximate percentage of the test devoted to each cognitive level is given in Table 3. The number of questions in each cognitive level may vary slightly from the number of questions shown in the table.

Table 3

ACT Mathematics Test Cognitive Levels

Cognitive Level	Proportion of Test	Number of Items
Knowledge and Skills	.50	30
Direct Application	.28	17
Understanding Concepts, Integrating Conceptual Understanding	.22	13
Total	**1.00**	**60**



Content of the test

Items are classified according to six content areas. These categories and the approximate proportion of the test devoted to each are given in Table 4.

Table 4

ACT Mathematics Test
60 items, 60 minutes

Content Area	Proportion of Test	Number of Items
Pre-Algebra	.23	14
Elementary Algebra	.17	10
Intermediate Algebra	.15	9
Coordinate Geometry	.15	9
Plane Geometry	.23	14
Trigonometry	.07	4
Total	**1.00**	**60**

Scores reported:

Pre-Algebra/Elementary Algebra (24 items)

Intermediate Algebra/Coordinate Geometry (18 items)

Plane Geometry/Trigonometry (18 items)

Total test score (60 items)

1. **Pre-Algebra.** Items 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.
2. **Elementary Algebra.** Items 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 solving quadratic equations by factoring.
3. **Intermediate Algebra.** Items 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.
4. **Coordinate Geometry.** Items 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.
5. **Plane Geometry.** Items 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.
6. **Trigonometry.** Items 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.

Table 5 gives ACT's College Readiness Standards for Mathematics. These are statements that describe what students who score in various score ranges are *likely* to know and to be able to do in mathematics. The Standards give further instances of the domain sampled in the Mathematics Test.

Table 5: College Readiness Standards for the ACT Mathematics Test

The College Readiness Standards describe what students who score in the specified score ranges are *likely* to know and to be able to do.

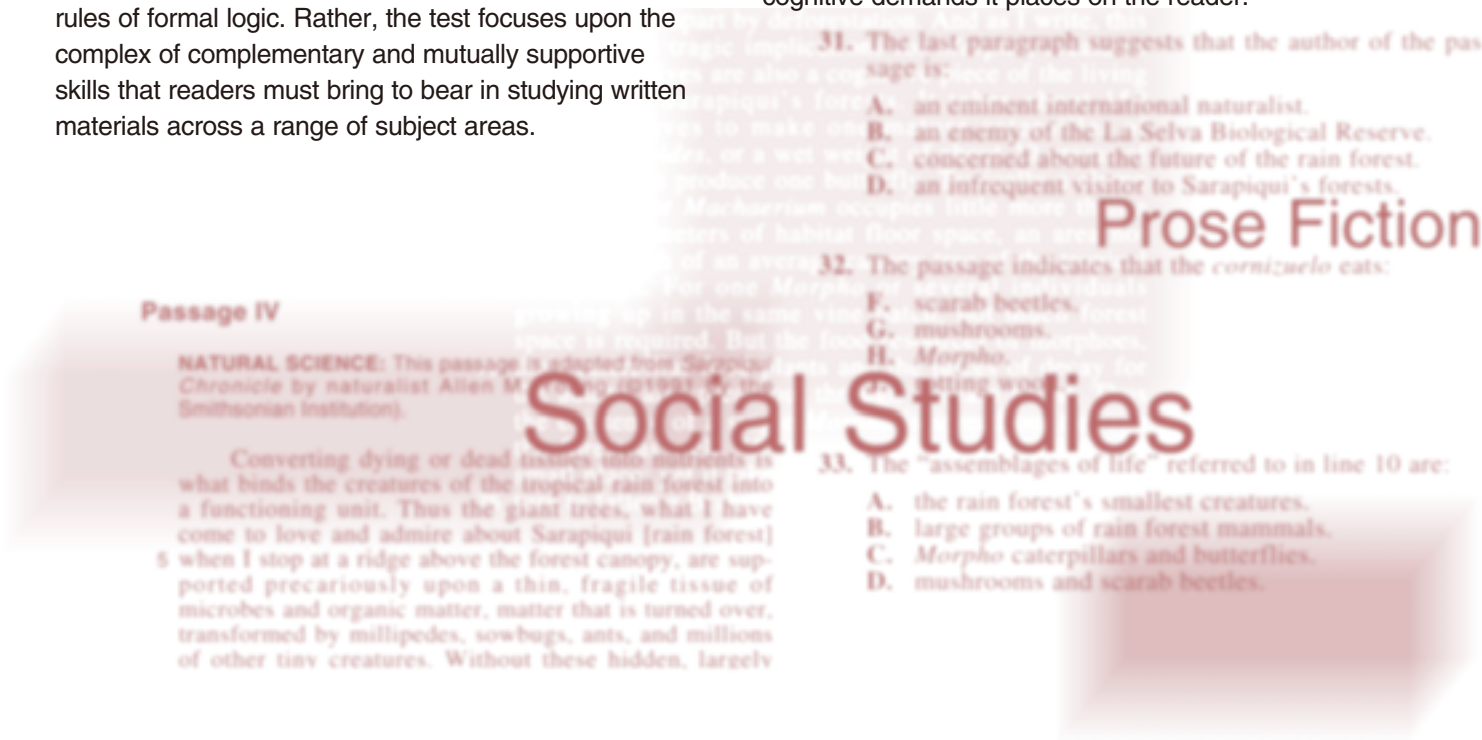
Score Range 13–15	• Perform one-operation computation with whole numbers and decimals • Solve problems in one or two steps using whole numbers • Perform common conversions (e.g., inches to feet or hours to minutes) • Calculate the average of a list of positive whole numbers • Perform a single computation using information from a table or chart • Recognize equivalent fractions and fractions in lowest terms	• Exhibit knowledge of basic expressions (e.g., identify an expression for a total as $b + g$) • Solve equations in the form $x + a = b$, where a and b are whole numbers or decimals • Identify the location of a point with a positive coordinate on the number line • Estimate or calculate the length of a line segment based on other lengths given on a geometric figure
Score Range 16–19	• Solve routine one-step arithmetic problems (using whole numbers, fractions, and decimals) such as single-step percent • Solve some routine two-step arithmetic problems • Calculate the average of a list of numbers • Calculate the average, given the number of data values and the sum of the data values • Read tables and graphs • Perform computations on data from tables and graphs • Use the relationship between the probability of an event and the probability of its complement	• Recognize one-digit factors of a number • Identify a digit's place value • Substitute whole numbers for unknown quantities to evaluate expressions • Solve one-step equations having integer or decimal answers • Combine like terms (e.g., $2x + 5x$) • Locate points on the number line and in the first quadrant • Exhibit some knowledge of the angles associated with parallel lines • Compute the perimeter of polygons when all side lengths are given • Compute the area of rectangles when whole number dimensions are given
Score Range 20–23	• Solve routine two-step or three-step arithmetic problems involving concepts such as rate and proportion, tax added, percentage off, and computing with a given average • Calculate the missing data value, given the average and all data values but one • Translate from one representation of data to another (e.g., a bar graph to a circle graph) • Determine the probability of a simple event • Exhibit knowledge of simple counting techniques • Exhibit knowledge of elementary number concepts including rounding, the ordering of decimals, pattern identification, absolute value, primes, and greatest common factor • Evaluate algebraic expressions by substituting integers for unknown quantities • Add and subtract simple algebraic expressions	• Solve routine first-degree equations • Perform straightforward word-to-symbol translations • Multiply two binomials • Locate points in the coordinate plane • Comprehend the concept of length on the number line • Exhibit knowledge of slope • Find the measure of an angle using properties of parallel lines • Exhibit knowledge of basic angle properties and special sums of angle measures (e.g., 90°, 180°, and 360°) • Compute the area and perimeter of triangles and rectangles in simple problems • Use geometric formulas when all necessary information is given • Evaluate quadratic functions, expressed in function notation, at integer values
Score Range 24–27	• Solve multistep arithmetic problems that involve planning or converting units of measure (e.g., feet per second to miles per hour) • Calculate the average, given the frequency counts of all the data values • Manipulate data from tables and graphs • Compute straightforward probabilities for common situations • Use Venn diagrams in counting • Find and use the least common multiple • Order fractions • Work with numerical factors • Work with scientific notation • Work with squares and square roots of numbers • Work problems involving positive integer exponents • Work with cubes and cube roots of numbers • Determine when an expression is undefined • Exhibit some knowledge of the complex numbers • Solve real-world problems using first-degree equations • Write expressions, equations, or inequalities with a single variable for common pre-algebra settings (e.g., rate and distance problems and problems that can be solved by using proportions) • Identify solutions to simple quadratic equations	• Add, subtract, and multiply polynomials • Factor simple quadratics (e.g., the difference of squares and perfect square trinomials) • Solve first-degree inequalities that do not require reversing the inequality sign • Identify the graph of a linear inequality on the number line • Determine the slope of a line from points or equations • Match linear graphs with their equations • Find the midpoint of a line segment • Use several angle properties to find an unknown angle measure • Recognize Pythagorean triples • Use properties of isosceles triangles • Compute the area of triangles and rectangles when one or more additional simple steps are required • Compute the area and circumference of circles after identifying necessary information • Compute the perimeter of simple composite geometric figures with unknown side lengths • Evaluate polynomial functions, expressed in function notation, at integer values • Express the sine, cosine, and tangent of an angle in a right triangle as a ratio of given side lengths
Score Range 28–32	• Solve word problems containing several rates, proportions, or percentages • Calculate or use a weighted average • Interpret and use information from figures, tables, and graphs • Apply counting techniques • Compute a probability when the event and/or sample space are not given or obvious • Apply number properties involving prime factorization • Apply number properties involving even/odd numbers and factors/multiples • Apply number properties involving positive/negative numbers • Apply rules of exponents • Multiply two complex numbers • Manipulate expressions and equations • Write expressions, equations, and inequalities for common algebra settings • Solve linear inequalities that require reversing the inequality sign • Solve absolute value equations	• Solve quadratic equations • Find solutions to systems of linear equations • Interpret and use information from graphs in the coordinate plane • Match number line graphs with solution sets of linear inequalities • Use the distance formula • Use properties of parallel and perpendicular lines to determine an equation of a line or coordinates of a point • Recognize special characteristics of parabolas and circles (e.g., the vertex of a parabola and the center or radius of a circle) • Apply properties of 30°-60°-90°, 45°-45°-90°, similar, and congruent triangles • Use the Pythagorean theorem • Use relationships involving area, perimeter, and volume of geometric figures to compute another measure • Evaluate composite functions at integer values • Apply basic trigonometric ratios to solve right-triangle problems
Score Range 33–36	• Solve complex arithmetic problems involving percent of increase or decrease and problems requiring integration of several concepts from pre-algebra and/or pre-geometry (e.g., comparing percentages or averages, using several ratios, and finding ratios in geometry settings) • Distinguish between mean, median, and mode for a list of numbers • Analyze and draw conclusions based on information from figures, tables, and graphs • Exhibit knowledge of conditional and joint probability • Draw conclusions based on number concepts, algebraic properties, and/or relationships between expressions and numbers • Exhibit knowledge of logarithms and geometric sequences • Apply properties of complex numbers • Write expressions that require planning and/or manipulating to accurately model a situation • Write equations and inequalities that require planning, manipulating, and/or solving • Solve simple absolute value inequalities	• Match number line graphs with solution sets of simple quadratic inequalities • Identify characteristics of graphs based on a set of conditions or on a general equation such as $y = ax^2 + c$ • Solve problems integrating multiple algebraic and/or geometric concepts • Analyze and draw conclusions based on information from graphs in the coordinate plane • Draw conclusions based on a set of conditions • Solve multistep geometry problems that involve integrating concepts, planning, visualization, and/or making connections with other content areas • Use relationships among angles, arcs, and distances in a circle • Use scale factors to determine the magnitude of a size change • Compute the area of composite geometric figures when planning or visualization is required • Write an expression for the composite of two simple functions • Use trigonometric concepts and basic identities to solve problems • Exhibit knowledge of unit circle trigonometry • Match graphs of basic trigonometric functions with their equations

The ACT Reading Test

Description of the test

The Reading Test is a 40-item, 35-minute test that measures the student's reading comprehension as a product of referring and reasoning skills. That is, the test items require the student to derive meaning from several texts by (1) referring to what is explicitly stated and (2) reasoning to determine implicit meanings and to draw conclusions, comparisons, and generalizations. The test comprises four prose passages that are representative of the level and kinds of writing commonly encountered in college freshman curricula; passages on topics in prose fiction, the humanities, the social studies, and the natural sciences are included to reflect the major kinds of text first-year college students typically will be required to read and understand. These passages are selected from published sources. Each passage is preceded by a heading that identifies what type of passage it is (e.g., "Prose Fiction"), names the author, and may give a brief note that helps in understanding the passage. The lines of the passage are numbered for reference. Each passage is accompanied by a set of multiple-choice test items. These items do not test the rote recall of facts from outside the passage, isolated vocabulary items, or rules of formal logic. Rather, the test focuses upon the complex of complementary and mutually supportive skills that readers must bring to bear in studying written materials across a range of subject areas.

Referring cognitive skills are measured in the Reading Test by items that require the student to (1) recognize the explicitly stated main idea of a passage or of a paragraph; (2) recognize explicitly stated significant details (the who, what, where, when, why, and how information); and (3) recognize explicitly stated relationships, such as sequence, cause-effect, and comparison. Reasoning cognitive skills are measured in the Reading Test by items that require the student to (1) infer main ideas or purposes, sequences, cause-effect relationships, and relationships between details and the main idea; (2) demonstrate critical understanding of the text by drawing conclusions from facts given; making comparisons using information in the passage; making appropriate generalizations; recognizing logical fallacies, rhetorical flaws, or limitations in passages (e.g., details that undermine the main idea); recognizing stereotypes; understanding point of view; and distinguishing between fact and opinion; and (3) determine specific meanings of words or short phrases within the context of a passage. Each passage in the test is accompanied by both referring items and reasoning items. The proportion of each type of item depends on the nature of the passage and the cognitive demands it places on the reader.



Content of the test

The four types of reading selections and the approximate proportion of the test devoted to each are given in Table 6.

Table 6

ACT Reading Test
40 items, 35 minutes

Content Area	Proportion of Test	Number of Items
Prose Fiction	.25	10
Humanities	.25	10
Social Studies	.25	10
Natural Sciences	.25	10
Total	**1.00**	**40**

Scores reported:

Arts/Literature
(Prose Fiction, Humanities: 20 items)

Social Studies/Sciences
(Social Studies, Natural Sciences: 20 items)

Total test score (40 items)

1. **Prose Fiction.** Intact short stories or excerpts from short stories or novels.
2. **Humanities.** 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.
3. **Social Studies.** Anthropology, archaeology, biography, business, economics, education, geography, history, political science, psychology, sociology.
4. **Natural Sciences.** Anatomy, astronomy, biology, botany, chemistry, ecology, geology, medicine, meteorology, microbiology, natural history, physiology, physics, technology, zoology.

Table 7 on page 12 gives ACT's College Readiness Standards for Reading. These are statements that describe what students who score in various score ranges are *likely* to know and to be able to do in reading. The Standards give further instances of the domain sampled in the Reading Test.

Table 7: College Readiness Standards for the ACT Reading Test

The College Readiness Standards describe what students who score in the specified score ranges are *likely* to know and to be able to do.

Score Range 13–15	• Recognize a clear intent of an author or narrator in uncomplicated literary narratives • Locate basic facts (e.g., names, dates, events) clearly stated in a passage • Determine when (e.g., first, last, before, after) or if an event occurred in uncomplicated passages	• Recognize clear cause-effect relationships described within a single sentence in a passage • Understand the implication of a familiar word or phrase and of simple descriptive language • Draw simple generalizations and conclusions about the main characters in uncomplicated literary narratives
Score Range 16–19	• Identify a clear main idea or purpose of straightforward paragraphs in uncomplicated literary narratives • Locate simple details at the sentence and paragraph level in uncomplicated passages • Recognize a clear function of a part of an uncomplicated passage • Identify relationships between main characters in uncomplicated literary narratives	• Recognize clear cause-effect relationships within a single paragraph in uncomplicated literary narratives • Use context to understand basic figurative language • Draw simple generalizations and conclusions about people, ideas, and so on in uncomplicated passages
Score Range 20–23	• Infer the main idea or purpose of straightforward paragraphs in uncomplicated literary narratives • Understand the overall approach taken by an author or narrator (e.g., point of view, kinds of evidence used) in uncomplicated passages • Locate important details in uncomplicated passages • Make simple inferences about how details are used in passages • Order simple sequences of events in uncomplicated literary narratives • Identify clear relationships between people, ideas, and so on in uncomplicated passages	• Identify clear cause-effect relationships in uncomplicated passages • Use context to determine the appropriate meaning of some figurative and nonfigurative words, phrases, and statements in uncomplicated passages • Draw generalizations and conclusions about people, ideas, and so on in uncomplicated passages • Draw simple generalizations and conclusions using details that support the main points of more challenging passages
Score Range 24–27	• Identify a clear main idea or purpose of any paragraph or paragraphs in uncomplicated passages • Infer the main idea or purpose of straightforward paragraphs in more challenging passages • Summarize basic events and ideas in more challenging passages • Understand the overall approach taken by an author or narrator (e.g., point of view, kinds of evidence used) in more challenging passages • Locate important details in more challenging passages • Locate and interpret minor or subtly stated details in uncomplicated passages • Discern which details, though they may appear in different sections throughout a passage, support important points in more challenging passages • Order sequences of events in uncomplicated passages • Understand relationships between people, ideas, and so on in uncomplicated passages	• Identify clear relationships between characters, ideas, and so on in more challenging literary narratives • Understand implied or subtly stated cause-effect relationships in uncomplicated passages • Identify clear cause-effect relationships in more challenging passages • Use context to determine the appropriate meaning of virtually any word, phrase, or statement in uncomplicated passages • Use context to determine the appropriate meaning of some figurative and nonfigurative words, phrases, and statements in more challenging passages • Draw subtle generalizations and conclusions about characters, ideas, and so on in uncomplicated literary narratives • Draw generalizations and conclusions about people, ideas, and so on in more challenging passages
Score Range 28–32	• Infer the main idea or purpose of more challenging passages or their paragraphs • Summarize events and ideas in virtually any passage • Understand the overall approach taken by an author or narrator (e.g., point of view, kinds of evidence used) in virtually any passage • Locate and interpret minor or subtly stated details in more challenging passages • Use details from different sections of some complex informational passages to support a specific point or argument • Order sequences of events in more challenging passages	• Understand the dynamics between people, ideas, and so on in more challenging passages • Understand implied or subtly stated cause-effect relationships in more challenging passages • Determine the appropriate meaning of words, phrases, or statements from figurative or somewhat technical contexts • Use information from one or more sections of a more challenging passage to draw generalizations and conclusions about people, ideas, and so on
Score Range 33–36	• Identify clear main ideas or purposes of complex passages or their paragraphs • Locate and interpret details in complex passages • Understand the function of a part of a passage when the function is subtle or complex • Order sequences of events in complex passages • Understand the subtleties in relationships between people, ideas, and so on in virtually any passage • Understand implied, subtle, or complex cause-effect relationships in virtually any passage	• Determine, even when the language is richly figurative and the vocabulary is difficult, the appropriate meaning of context-dependent words, phrases, or statements in virtually any passage • Draw complex or subtle generalizations and conclusions about people, ideas, and so on, often by synthesizing information from different portions of the passage • Understand and generalize about portions of a complex literary narrative

Descriptions of the ACT Reading Test Passages

Uncomplicated Literary Narratives refers to excerpts from essays, short stories, and novels that tend to use simple language and structure, have a clear purpose and a familiar style, present straightforward interactions between characters, and employ only a limited number of literary devices such as metaphor, simile, or hyperbole.

More Challenging Literary Narratives refers to excerpts from essays, short stories, and novels that tend to make moderate use of figurative language, have a more intricate structure and messages conveyed with some subtlety, and may feature somewhat complex interactions between characters.

Complex Literary Narratives refers to excerpts from essays, short stories, and novels that tend to make generous use of ambiguous language and literary devices, feature complex and subtle interactions between characters, often contain challenging context-dependent vocabulary, and typically contain messages and/or meanings that are not explicit but are embedded in the passage.

Uncomplicated Informational Passages refers to materials that tend to contain a limited amount of data, address basic concepts using familiar language and conventional organizational patterns, have a clear purpose, and are written to be accessible.

More Challenging Informational Passages refers to materials that tend to present concepts that are not always stated explicitly and that are accompanied or illustrated by more—and more detailed—supporting data, include some difficult context-dependent words, and are written in a somewhat more demanding and less accessible style.

Complex Informational Passages refers to materials that tend to include a sizable amount of data, present difficult concepts that are embedded (not explicit) in the text, use demanding words and phrases whose meaning must be determined from context, and are likely to include intricate explanations of processes or events.

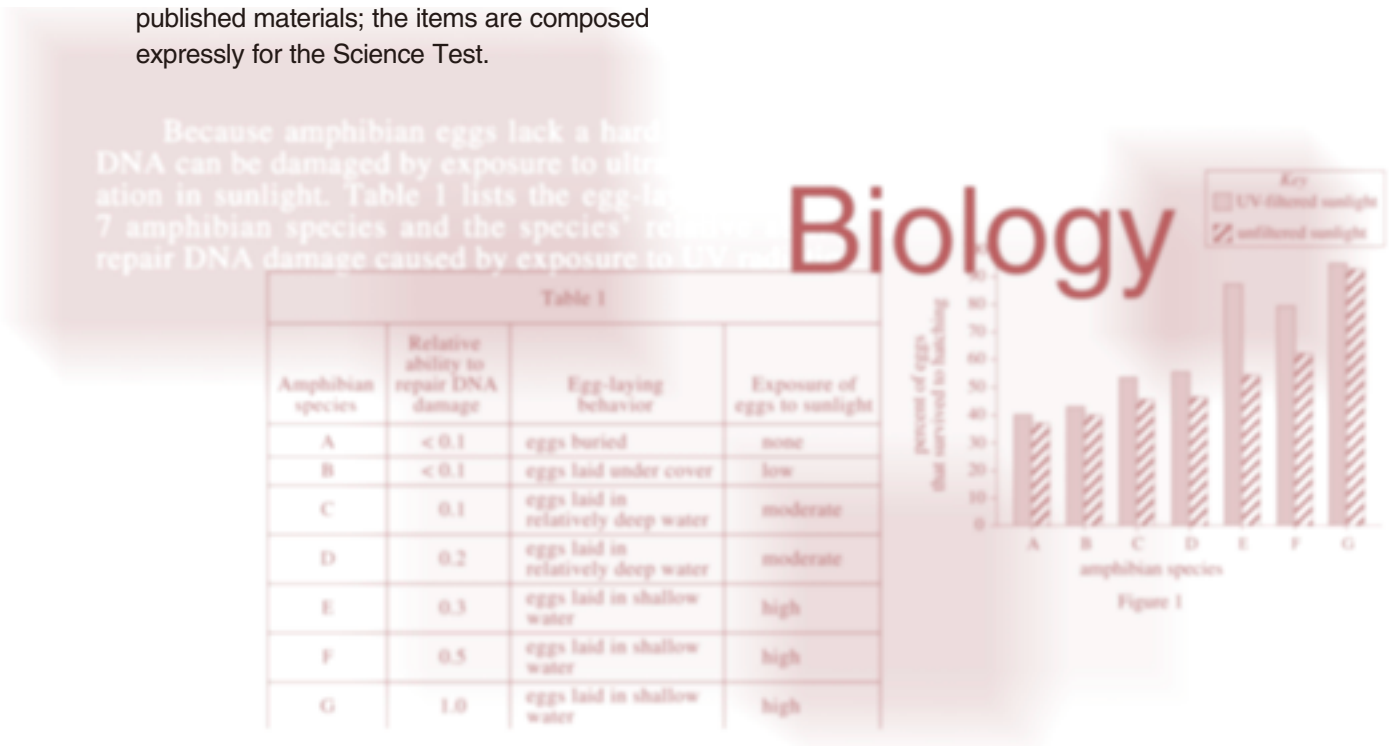
The ACT Science Test

Description of the test

The Science Test is a 40-item, 35-minute test that measures the student's interpretation, analysis, evaluation, reasoning, and problem-solving skills required in the natural sciences. The test assumes that students are in the process of taking the core science course of study (three years or more) that will prepare them for college-level work, and have completed a course in Biology and a course in Physical Science and/or Earth Science. The test is made up of seven test units, each of which consists of some scientific information (the stimulus) and a set of multiple-choice test items. The use of calculators is not permitted on the Science Test. The scientific information is conveyed in one of three different formats:

1. **Data Representation.** This format presents students with graphic and tabular material similar to that found in science journals and texts. The items associated with this format measure skills such as graph reading, interpretation of scatterplots, and interpretation of information presented in tables. The graphic or tabular material may be taken from published materials; the items are composed expressly for the Science Test.
2. **Research Summaries.** This format provides students with descriptions of one or more related experiments. The items focus upon the design of experiments and the interpretation of experimental results. The stimulus and items are written expressly for the Science Test.
3. **Conflicting Viewpoints.** This format presents students with expressions of several hypotheses or views that, being based on differing premises or on incomplete data, are inconsistent with one another. The items focus upon the understanding, analysis, and comparison of alternative viewpoints or hypotheses. Both the stimulus and the items are written expressly for the Science Test.

The test items require students to recognize and understand the basic features of, and concepts related to, the provided information; to examine critically the relationships between the information provided and the conclusions drawn or hypotheses developed; and to generalize from given information to gain new information, draw conclusions, or make predictions.



Content of the test

The content of the Science Test includes biology, chemistry, physics, and Earth/space sciences (e.g., geology, astronomy, and meteorology). Advanced knowledge in these subjects is not required, but background knowledge covered in general, introductory science courses is needed to answer some of the questions. Advanced mathematical skills are not required, but minimal arithmetic computations may be needed for some questions. The reading portion of the test is concise and clear, so that reading comprehension should not present difficulties. Indeed, the test focuses not on reading comprehension—though examinees do need to read and comprehend the information presented—but rather on reasoning in the context of scientific theory and data. The test goes beyond general reading comprehension by posing the kinds of questions that college students of science must answer in planning, carrying out, and evaluating scientific investigations (e.g., What controls are required? How should the data best be displayed to show trends? What alternative hypotheses or explanations are possible?) and in studying scientific theories (e.g., Which of several theories has the best empirical support? Which theory is the most internally consistent? Which elements of a theory are consistent, or inconsistent, with elements of another theory?). Thus, the test emphasizes scientific reasoning skills over recall of scientific content, skill in mathematics, or reading ability. The approximate proportion of the test devoted to each of the three formats is shown in Table 8.

Table 8

ACT Science Test
40 items, 35 minutes

Content Area*	Format	Proportion of Test	Number of Items
Biology Chemistry Earth/Space Sciences Physics	Data Representation	.38	15
	Research Summaries	.45	18
	Conflicting Viewpoints	.17	7
Total		**1.00**	**40**

Score reported: Total test score (40 items)

*Note: All four content areas are represented in the test. The content areas are distributed over the different formats in such a way that at least one unit, and no more than two units, represents each content area.

Table 9 gives ACT's College Readiness Standards for Science. These are statements that describe what students who score in various score ranges are *likely* to know and to be able to do in science reasoning. The Standards give further instances of the domain sampled in the Science Test.

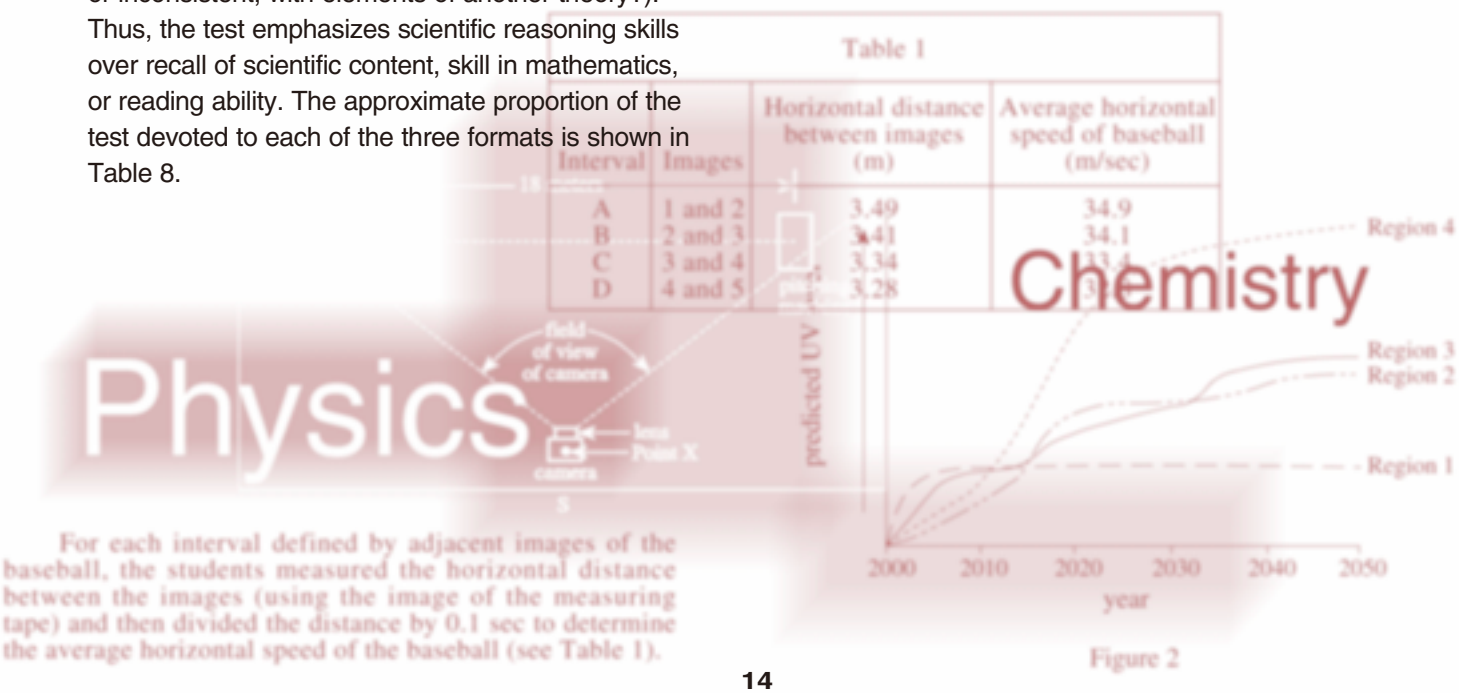


Table 9: College Readiness Standards for the ACT Science Test

The College Readiness Standards describe what students who score in the specified score ranges are *likely* to know and to be able to do.

Score Range 13–15	• Select a single piece of data (numerical or nonnumerical) from a simple data presentation (e.g., a table or graph with two or three variables; a food web diagram)	• Identify basic features of a table, graph, or diagram (e.g., headings, units of measurement, axis labels)
Score Range 16–19	• Select two or more pieces of data from a simple data presentation • Understand basic scientific terminology • Find basic information in a brief body of text	• Determine how the value of one variable changes as the value of another variable changes in a simple data presentation • Understand the methods and tools used in a simple experiment
Score Range 20–23	• Select data from a complex data presentation (e.g., a table or graph with more than three variables; a phase diagram) • Compare or combine data from a simple data presentation (e.g., order or sum data from a table) • Translate information into a table, graph, or diagram • Understand the methods and tools used in a moderately complex experiment	• Understand a simple experimental design • Identify a control in an experiment • Identify similarities and differences between experiments • Select a simple hypothesis, prediction, or conclusion that is supported by a data presentation or a model • Identify key issues or assumptions in a model
Score Range 24–27	• Compare or combine data from two or more simple data presentations (e.g., categorize data from a table using a scale from another table) • Compare or combine data from a complex data presentation • Interpolate between data points in a table or graph • Determine how the value of one variable changes as the value of another variable changes in a complex data presentation • Identify and/or use a simple (e.g., linear) mathematical relationship between data • Analyze given information when presented with new, simple information • Understand the methods and tools used in a complex experiment • Understand a complex experimental design • Predict the results of an additional trial or measurement in an experiment	• Determine the experimental conditions that would produce specified results • Select a simple hypothesis, prediction, or conclusion that is supported by two or more data presentations or models • Determine whether given information supports or contradicts a simple hypothesis or conclusion, and why • Identify strengths and weaknesses in one or more models • Identify similarities and differences between models • Determine which model(s) is(are) supported or weakened by new information • Select a data presentation or a model that supports or contradicts a hypothesis, prediction, or conclusion
Score Range 28–32	• Compare or combine data from a simple data presentation with data from a complex data presentation • Identify and/or use a complex (e.g., nonlinear) mathematical relationship between data • Extrapolate from data points in a table or graph • Determine the hypothesis for an experiment	• Identify an alternate method for testing a hypothesis • Select a complex hypothesis, prediction, or conclusion that is supported by a data presentation or model • Determine whether new information supports or weakens a model, and why • Use new information to make a prediction based on a model
Score Range 33–36	• Compare or combine data from two or more complex data presentations • Analyze given information when presented with new, complex information • Understand precision and accuracy issues • Predict how modifying the design or methods of an experiment will affect results • Identify an additional trial or experiment that could be performed to enhance or evaluate experimental results	• Select a complex hypothesis, prediction, or conclusion that is supported by two or more data presentations or models • Determine whether given information supports or contradicts a complex hypothesis or conclusion, and why

Science College Readiness Standards are measured in the context of science topics students encounter in science courses. These topics may include:

Life Science/Biology	Physical Science/Chemistry, Physics	Earth and Space Science
• Animal behavior • Animal development and growth • Body systems • Cell structure and processes • Ecology • Evolution • Genetics • Homeostasis • Life cycles • Molecular basis of heredity • Origin of life • Photosynthesis • Plant development, growth, structure • Populations • Taxonomy	• Atomic structure • Chemical bonding, equations, nomenclature, reactions • Electrical circuits • Elements, compounds, mixtures • Force and motion • Gravitation • Heat and work • Kinetic and potential energy • Magnetism • Momentum • The Periodic Table • Properties of solutions • Sound and light • States, classes, and properties of matter • Waves	• Earthquakes and volcanoes • Earth's atmosphere • Earth's resources • Fossils and geologic time • Geochemical cycles • Groundwater • Lakes, rivers, oceans • Mass movements • Plate tectonics • Rocks, minerals • Solar system • Stars, galaxies, and the universe • Water cycle • Weather and climate • Weathering and erosion

The ACT Writing Test (optional)

Description of the test

The Writing Test is a 30-minute essay test that measures students' writing skills—specifically those writing skills emphasized in high school English classes and in entry-level college composition courses. The test consists of one writing prompt that defines an issue and describes two points of view on that issue. Students are asked to write, in English, in response to a question about their position on the issue described in the writing prompt. In doing so, students may adopt one or the other of the perspectives described in the prompt, or may present a different point of view on the issue. A student's score is not affected by which point of view the student takes on the issue. Prompts are designed to be appropriate for response in a 30-minute timed test and to reflect students' interests and experiences.

The Writing Test is designed to complement the English Test. Taking the Writing Test does not affect students' scores on the multiple-choice tests or the Composite score for those tests. Rather, students receive two additional scores: a Combined English/Writing score on a scale of 1 through 36 and a Writing subscore on a scale of 2 through 12. Students also receive some comments on their essays. And a student's essay will be available to the student's high school and the colleges to which we report the student's scores from that test date.

Essays are evaluated on the evidence they give of the student's ability to do the following:

- express judgments by taking a position on the issue in the writing prompt;
- maintain a focus on the topic throughout the essay;
- develop a position by using logical reasoning and by supporting ideas;
- organize ideas in a logical way; and
- use language clearly and effectively according to the conventions of standard written English.

Essays are scored holistically—that is, on the basis of the overall impression created by all the elements of the writing. Two trained readers read the essay, each giving it a rating from 1 (low) to 6 (high). The sum of those ratings is the Writing subscore. If the reader's ratings disagree by more than one point, a third reader will evaluate the essay and resolve the discrepancy.

Content of the test

On the Writing Test, we provide the prompt; the student provides the content. The prompt defines the topic and sets the task of focusing on that topic. But the content—the arguments and explanations, the analysis and examples, in all their details—is provided by the student.

That said, what are the areas of "knowledgeableness" about writing that the Writing Test assesses? The domain is broadly defined by the scoring criteria given above. Table 10 offers further detail by giving ACT's College Readiness Standards for Writing. These are statements that describe what students who score in various score ranges on the Writing Test are *likely* to know and to be able to do in writing. The Standards give instances of the writing skills that are measured by the Writing Test and that are important in making the transition from high school to college.

Table 10: College Readiness Standards for the ACT Writing Test

The College Readiness Standards describe what students who score in the specified score ranges are *likely* to know and to be able to do.

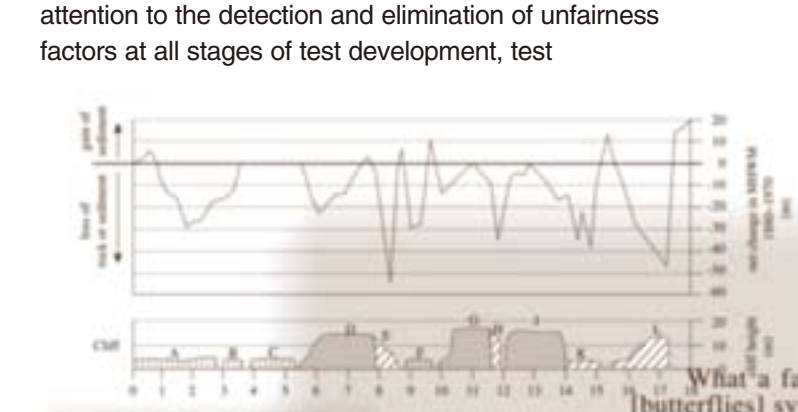
Score Range 3–4	• Show a little understanding of the persuasive purpose of the task but neglect to take or to maintain a position on the issue in the prompt • Show limited recognition of the complexity of the issue in the prompt • Maintain a focus on the general topic in the prompt through most of the essay • Offer a little development, with one or two ideas; if examples are given, they are general and may not be clearly relevant; resort often to merely repeating ideas • Show little or no movement between general and specific ideas and examples • Provide a discernible organization with some logical grouping of ideas in parts of the essay	• Use a few simple and obvious transitions • Present a discernible, though minimally developed, introduction and conclusion • Show limited control of language by — correctly employing some of the conventions of standard English grammar, usage, and mechanics, but with distracting errors that sometimes significantly impede understanding — using simple vocabulary — using simple sentence structure
Score Range 5–6	• Show a basic understanding of the persuasive purpose of the task by taking a position on the issue in the prompt but may not maintain that position • Show a little recognition of the complexity of the issue in the prompt by acknowledging, but only briefly describing, a counterargument to the writer's position • Maintain a focus on the general topic in the prompt throughout the essay • Offer limited development of ideas using a few general examples; resort sometimes to merely repeating ideas • Show little movement between general and specific ideas and examples • Provide a simple organization with logical grouping of ideas in parts of the essay	• Use some simple and obvious transitional words, though they may at times be inappropriate or misleading • Present a discernible, though underdeveloped, introduction and conclusion • Show a basic control of language by — correctly employing some of the conventions of standard English grammar, usage, and mechanics, but with distracting errors that sometimes impede understanding — using simple but appropriate vocabulary — using a little sentence variety, though most sentences are simple in structure
Score Range 7–8	• Show understanding of the persuasive purpose of the task by taking a position on the issue in the prompt • Show some recognition of the complexity of the issue in the prompt by — acknowledging counterarguments to the writer's position — providing some response to counterarguments to the writer's position • Maintain a focus on the general topic in the prompt throughout the essay and attempt a focus on the specific issue in the prompt • Present a thesis that establishes focus on the topic • Develop ideas by using some specific reasons, details, and examples • Show some movement between general and specific ideas and examples • Provide an adequate but simple organization with logical grouping of ideas in parts of the essay but with little evidence of logical progression of ideas	• Use some simple and obvious, but appropriate, transitional words and phrases • Present a discernible introduction and conclusion with a little development • Show adequate use of language to communicate by — correctly employing many of the conventions of standard English grammar, usage, and mechanics, but with some distracting errors that may occasionally impede understanding — using appropriate vocabulary — using some varied kinds of sentence structures to vary pace
Score Range 9–10	• Show clear understanding of the persuasive purpose of the task by taking a position on the specific issue in the prompt and offering a broad context for discussion • Show recognition of the complexity of the issue in the prompt by — partially evaluating implications and/or complications of the issue, and/or — posing and partially responding to counterarguments to the writer's position • Maintain a focus on discussion of the specific topic and issue in the prompt throughout the essay • Present a thesis that establishes a focus on the writer's position on the issue • Develop most ideas fully, using some specific and relevant reasons, details, and examples	• Show clear movement between general and specific ideas and examples • Provide unity and coherence throughout the essay, sometimes with a logical progression of ideas • Use relevant, though at times simple and obvious, transitional words and phrases to convey logical relationships between ideas • Present a somewhat developed introduction and conclusion • Show competent use of language to communicate ideas by — correctly employing most conventions of standard English grammar, usage, and mechanics, with a few distracting errors but none that impede understanding — using some precise and varied vocabulary — using several kinds of sentence structures to vary pace and to support meaning
Score Range 11–12	• Show clear understanding of the persuasive purpose of the task by taking a position on the specific issue in the prompt and offering a critical context for discussion • Show understanding of the complexity of the issue in the prompt by — examining different perspectives, and/or — evaluating implications or complications of the issue, and/or — posing and fully discussing counterarguments to the writer's position • Maintain a clear focus on discussion of the specific topic and issue in the prompt throughout the essay • Present a critical thesis that clearly establishes the focus on the writer's position on the issue • Develop several ideas fully, using specific and relevant reasons, details, and examples	• Show effective movement between general and specific ideas and examples • Provide unity and coherence throughout the essay, often with a logical progression of ideas • Use relevant transitional words, phrases, and sentences to convey logical relationships between ideas • Present a well-developed introduction and conclusion • Show effective use of language to clearly communicate ideas by — correctly employing most conventions of standard English grammar, usage, and mechanics, with just a few, if any, errors — using precise and varied vocabulary — using a variety of kinds of sentence structures to vary pace and to support meaning

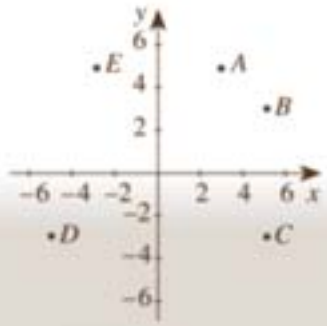
ACT's Commitment to Fairness

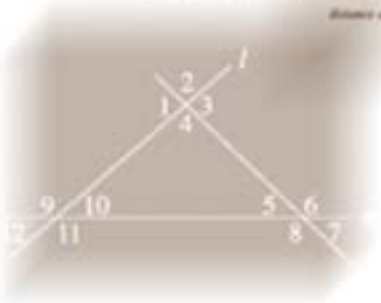
As a testing organization, ACT endorses the *Code of Fair Testing Practices in Education,* a statement of guidelines for those who develop, administer, and use educational tests and data. The *Code* sets forth criteria for fairness in four areas: developing and selecting appropriate tests, administering and scoring tests, reporting and interpreting test results, and informing test takers. According to the *Code,* test developers should provide "tests that are fair to all test takers regardless of age, gender, disability, race, ethnicity, national origin, religion, sexual orientation, linguistic background, or other personal characteristics." Test developers should "avoid potentially insensitive content or language" and "evaluate the evidence to ensure that differences in performance are related to the skills being assessed." ACT is committed to ensuring that each of its testing programs upholds the *Code*'s standards for appropriate test development practice and use.

ACT makes every effort to see that all ACT tests are fair to the populations for which the tests are intended. The assurance of fairness in a test is a critically important goal. To best accomplish this goal requires careful attention to the detection and elimination of unfairness factors at all stages of test development, test administration, and test specifications design. This attention is sustained throughout every stage of the test development process, including writing and review, pretesting, item and prompt selection and form construction, and forms review, by such means as the following:

- All item and prompt writers are provided with criteria on developing fair test materials.
- Fairness reviewers are experts in diverse areas of education and represent both genders and a variety of racial and ethnic backgrounds.
- All reviews on preliminary forms include a review for fairness concerns.
- After the initial reviews, the test forms are submitted to panels of content experts and fairness reviewers for final review.
- After administrations of the ACT items, statistical procedures are performed to ensure that items are not functioning differentially for different subgroups of the population.







What a fascinating, elegant circle of life *Morpho* [butterflies] symbolizes in this regard. Plants die in the rain forest, including the woody vines *Morpho* caterpillars feed upon and are evolutionarily specialized to exploit, and saprophytic fungi and bacteria attack the dead plant material. In the process of breaking down dead plant material to feed themselves, the fungi metabolize substances that become attractive to *Morpho*. The eventual breakdown of the dead plant material provides the rain forest with the fertilizer it needs in order to survive, including the woody vines and other legumes fed upon by *Morpho* caterpillars. *Morpho* also gets nutrients from the decay organisms as well.

Related Resources

ACT provides materials to help students prepare for the ACT tests and use the results. Some of these materials are provided to all students, thus ensuring equal access to meaningful test preparation information. Most are available at little or no cost through high schools or directly from ACT:

- *EXPLORE®*
  This testing program helps students in grades 8 and 9 consider what they want to do both during and after high school.
- *PLAN®*
  This testing program helps high school sophomores plan for the transition from secondary to postsecondary study and prepare for the ACT.
- *College Readiness Standards*
  To add to the information provided with test scores, ACT has developed College Readiness Standards for the EXPLORE, PLAN, and ACT programs. ACT developed these Standards, in collaboration with content experts in each subject area, by analyzing the skills and knowledge students need in order to successfully respond to the test questions in various score ranges. The ACT College Readiness Standards describe the types of skills and understandings that students will need to make a successful transition from high school to college. These Standards help students, teachers, counselors, and others to more fully understand what students who score in various score ranges are *likely* to know and to be able to do in each academic area assessed in the ACT. The Standards are complemented by suggestions for learning experiences that students might benefit from if they wish to progress to higher levels of achievement. The ACT College Readiness Standards can be found at ACT's website.
- *College Readiness Standards Information Services*
  ACT provides reporting services based on the College Readiness Standards for the EXPLORE, PLAN, and ACT programs. For each program, these services include a series of five reports and interpretive guides, and a set of curriculum review worksheets.
- *Preparing for the ACT*
  This booklet describes the content of the ACT tests and includes test preparation suggestions and a practice test. It is available free of charge to students through high schools.
- *Using Your ACT Assessment Results*
  This booklet explains the ACT score report and offers suggestions for using the results. It is provided free of charge to students with their ACT score reports.
- *The ACT User Handbook*
  This manual is intended to help high school and college counselors effectively use and interpret ACT results. It is provided free of charge to high school and college counselors.
- *ACT OnlinePrep™*
  ACT Online Prep is the only online test preparation program designed by ACT test development professionals. It has practice test questions, a practice essay with real-time scoring, a diagnostic test, and a personalized Study Path. ACT Online Prep can be accessed anywhere and anytime on the Internet.
- *The ACT Website*
  The ACT website (**www.act.org**) provides such resources as sample ACT test questions and explanations of the correct answers, the College Readiness Standards, test registration information, and the current list of calculators prohibited for use on the Mathematics Test. Students may visit **www.actstudent.org** for help with their educational planning.
- *Sample Test Booklets*
  Retired ACT test forms may be purchased for student or institutional use. Order forms are shipped annually to all high schools or may be requested from ACT Customer Services at 319/337-1429.

Sample tests can also be found in *The Real ACT Prep Guide.* This book-length guide to the ACT was written by ACT and contains three complete ACT test forms (including Writing Tests), as well as analyses and explanations. The book is available at bookstores and at the ACT website.

To help schools derive maximum benefit from their participation in ACT programs and services, ACT maintains a staff of consultants in regional offices. If you need additional ACT information or assistance, please contact the ACT office that serves your state.

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