



COLLEGE BASE

College Basic Academic Subjects Examination

Students' Guide to *College BASE* National Edition



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This booklet will acquaint you with *College BASE* (College Basic Academic Subjects Examination)—its design and administration procedures, the kinds of questions you will encounter, and how you can prepare for the examination. The introduction describes the structure of the exam, how the test is administered, and the kinds of score reports you will receive.

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A Special Note to Students

Dear Student,

Tests are an inevitable part of education—you’ve been taking classroom and standardized tests since you began school at the age of five or six. In high school, you probably took the ACT or the SAT as part of the college admissions process. Nevertheless, a new test may be unsettling, especially if you have to achieve a particular score to be admitted into a specific program.

You may be wondering if there’s a good reason for you to take *College BASE*. The answer is “Yes.” Your state or your particular college may want to know that you and other students on your campus have a solid grounding in academic basics (reading and writing, math, science, social studies). In addition, you should want anyone who might hire you after college to be assured that you are well prepared in those basics. Remember, *College BASE* does not measure your “intelligence.” Instead, *College BASE* tests your skills and knowledge in several areas that people generally believe a college-educated individual should be able to show competence.

This guide to *College BASE* is divided into three main sections: an introduction; a description of test content, with sample questions; and appendices, most of which are forms that may be useful to you. This guide is designed to show you very specifically what is on the test and how you can prepare for the kinds of questions it includes.

Pay particular attention to the description of test content. Each of the four main parts of the test (English, mathematics, science, social studies) is divided into “clusters” and “skills” that are defined in the following pages. Each skill is covered by 8–9 questions, and each question has been written for a particular skill. Work the sample questions (including the sample essay) and read the analyses that accompany them. The analyses will give you an idea of strategies to use in responding to similar questions when you actually take the *College BASE* exam.

Preparing for standardized tests is a good idea, but most of what you need for success on *College BASE* is either in your experience or right in this booklet! Tests, both classroom and standardized, can produce anxiety—they’re timed and they’re required—but try to think instead of how far you’ve already come in your academic career. Think about the courses you’ve successfully taken and all the knowledge and skills you’ve learned and developed.

Compare the outline of what *College BASE* covers to all the courses you’ve taken (in high school as well as in college) and the material those courses covered. Then consider your strengths and weaknesses. For example, are there particular skills or clusters of skills in which you feel underprepared? How long has it been since you took algebra? Have you had at least one college-level writing course? The point is that you need not fly blindly into this examination. You can prepare for *College BASE* (but you can’t “cram”). You may even wish to go over notes from classes you’ve taken or review textbooks. Between what you already know and are able to do and what is offered in this guide, you have a lot going for you.

Here are some final steps to sound preparation for taking *College BASE*: Read each question on the test carefully, and read the answers carefully as well—some answers differ from others only slightly. Eliminate clearly wrong answers so that if you must guess you can narrow your options and increase your chances of getting the right answer. There’s no “guessing penalty” on *College BASE*.

If you are unsure about some aspect of your preparation, talk to your advisor or someone at your college’s student learning center. Take this guide with you to help you in describing what part of the test most concerns you.

If you or your advisor has questions, please call the Assessment Resource Center at the University of Missouri. We want you to succeed, and we believe that with proper preparation, you can succeed.

Best wishes.

Description of *College BASE*

College BASE, a test of general education, assesses knowledge and skills in four subject areas: English, mathematics, science, and social studies. *College BASE* also measures three cross-disciplinary competencies: interpretive reasoning, strategic reasoning, and adaptive reasoning.

Questions on *College BASE* reflect the broad range of knowledge that most universities and colleges, including junior and community colleges, expect their students to acquire by the end of the sophomore year. Because of the breadth of this examination, you should not study for *College BASE* the way you do for a test in a specific course. If you have successfully completed a general education course of study, you should be well prepared for this examination.

Understanding the kind of test *College BASE* is will help you to understand the purpose for which it is best suited and the kinds of information it can provide. You have no doubt taken different kinds of examinations, including aptitude and achievement tests. Because each test is designed differently, each is best suited for a particular purpose. Aptitude tests predict what students are theoretically capable of learning or doing in the future. Achievement tests, such as *College BASE*, reflect what a student already knows or can do at the time of testing. Tests also differ in the way in which they report scores. Norm-referenced tests (e.g., ACT or SAT) report scores in terms of how each student ranks against other students who take the same test. By contrast, criterion-referenced tests (e.g., *College BASE*) report how well each student has mastered a specific set of skills, or criteria—not how a student compares with other students.

College BASE links each question to a specific learning objective and evaluates what you know and are able to do at one moment in your college career. Each of the four academic subjects assessed by *College BASE*—English, mathematics, science, and social studies—is organized into levels of increasing specificity: from subjects, to clusters, to skills, to enabling subskills. Each skill is defined by two to six enabling subskills deemed by content experts to be instrumental in a student's ability to master that skill. In addition to content questions unique to a particular subject, *College BASE* also asks questions designed to assess student performance in three cross-disciplinary competencies: interpretive, strategic, and adaptive reasoning.

Testing Procedures

College BASE takes approximately four hours to complete (including time for instructions, the writing exercise, a break, and the multiple-choice questions). You should arrive at the test site 20–30 minutes prior

to the testing time. Late arrivals are not admitted. At the test site, the proctor asks all students to sign in and to present a current picture identification (e.g., college ID, driver's license, passport) for verification. Food and beverages are not allowed in the test site.

After initial administrative tasks, you have forty minutes to write an essay in response to a specific prompt. Following a short break, you have two hours and forty minutes to complete the multiple-choice component of *College BASE* consisting of 180 questions divided approximately equally among the four subjects.

Depending on the needs of your institution students may be assigned to take only one, two, or three subjects of the *College BASE* test, with or without the writing exercise. Students taking less than all four subjects will be advised by their institution of the amount of time required for testing. Generally, each subject takes forty-five minutes to complete, plus an additional 15 minutes is allowed for administration instructions. Students are allowed forty minutes to complete the optional essay.

Calculators are not provided, but you may use your own hand-held, non-printing, 4- (+, −, ×, ÷) or 6-function (+, −, ×, ÷, %, √) calculator during the examination. Allowable calculators may include a limited memory function which will store one to three numbers after it is turned off. Scientific and graphing calculators, which have extended memories and perform multiple functions, are **not** allowed. (See Appendix E for a generalized diagram showing the appearance of allowable calculators.) Any student who wishes to use a calculator should bring one, but students not using calculators will not be disadvantaged. Students are not allowed to share calculators or use any other material (e.g., dictionaries, textbooks, notes) not provided with the exam.

The *College BASE* exam is designed to provide a fair assessment of your skills and knowledge. Test takers may not engage in any behavior that provides an unfair advantage over other test takers. The *College BASE* staff reserves the right to cancel the scores of any individual who engages in misconduct or plagiarism during testing. If test center or *College BASE* staff finds that there is misconduct in connection with a test, the test taker may be dismissed from the test center, or the individual's test scores may be voided. Misconduct may include, but is not limited to, taking the test for another individual; failing to provide adequate identification; using a cell phone, beeper, computer, or other electronic device; using a prohibited calculator; creating a disturbance; attempting to give or receive assistance from another test taker; removing test material from the test center; working beyond the allotted time; and failing to follow any instructions provided by test center staff.

You must turn off all cell phones, beepers, and other electronic devices during testing. You are not allowed to respond to pages or calls, and you may not eat or drink during testing.

Introduction

Questions are arranged by subject in the following order: English, mathematics, science, and social studies. You may answer questions in any order you choose, and you may return to any section in the multiple-choice part of the exam during the testing period. However, try to proceed methodically so you decrease the possibility of recording an answer in the wrong place in your answer booklet.

College BASE does not penalize you for guessing. Every correct answer counts toward your scores, so you should try to answer every question. An informed guess is better than no answer. In each case, read the question and all of the options carefully before selecting your response, but try not to spend too much time on any one question. During the test, the examiner will periodically notify you of the time remaining.

Procedures for Students with Disabilities: Public Law 101-336, the Americans with Disabilities Act of 1990, mandates that examiners make every effort to accommodate the special testing needs of students with disabilities. Students with special testing needs must complete a Special Services Request Form (Appendix A) at the time of registration. This form is also available from the campus test coordinator. On the form you must specify and document the nature of your disability, and you may request alternative testing procedures. If documentation of your disability is not on file at your school, you must provide documentation from a professional (e.g., physician, psychologist, or learning disability specialist) stating the nature of your disability and the type of special testing arrangements needed. Check with your school counselor for assistance in completing the form and answering questions about eligibility or documentation.

Possible arrangements include a large-type edition of *College BASE*, a complete disc version, extended time, readers, signers, scribes, and magnifying equipment. If you have questions concerning these procedures, contact your campus testing coordinator.

Score Reports

Approximately four weeks after your test date, you and your enrollment institution will receive a summary of your scores and a guide to score interpretation. **Note:** Scores and passing status are not released by the Assessment Resource Center over the phone.

Your scores reflect the degree to which you have already mastered the specific skills described in the second part of this booklet. Thus, your score report can provide you with a specific diagnosis of your relative strengths and weaknesses in each of the subjects—information that you, your advisor, and your college can use to plan your college career.

Your score report includes both numerical scores (on a scale of 40 to 560) and descriptive scores (Low,

Medium, or High) and is organized into the following categories:

Subject Scores, numerical scores representing your performance in each subject (English, mathematics, science, and social studies);

Cluster Scores, numerical scores representing your performance on closely related skills within a given subject;

Skill Scores, descriptive scores representing your degree of mastery of each of the twenty-three individual skills tested;

Composite Score, a numerical score representing your overall performance on the exam; and

Competency Scores, descriptive scores representing your abilities in the three reasoning competencies.

The composite score and the competency scores are computed only for students who take the entire test.

Confidentiality

Your test scores are confidential and score reports are released only to the institution administering the test, or as required by state or federal law. Student test scores and summaries of test scores may be released for research purposes, but only after all individual identification data has been removed. Your personal privacy is maintained at all times.

Additional Score Reports

You may request that an additional score report be sent to you, and/or that score reports be sent to institutions other than the one at which you took *College BASE*. Your request must be in writing. A Score Release Consent Form (Appendix B) appears on page 29 of this *Students' Guide*. Please complete the form and send it to the Assessment Resource Center (ARC), 2800 Maguire Boulevard, Columbia, Missouri 65201. For each additional score report requested, include a check or money order for \$10.00 made payable to the Assessment Resource Center. ARC does not accept telephone requests or credit card payments for additional score reports.

Correction of Score Reports

Changes in score reports (e.g., corrections in social security number, name, etc.) require database changes. If you wish to make a correction to your score report, complete a Correction of Score Report Form (see Appendix C). There is a \$15.00 fee for this service, which includes sending a corrected copy of your score report to one institution. Make check payable to the Assessment Resource Center and send to the Assessment Resource Center, 2800 Maguire Blvd., Columbia, Missouri 65201. Neither cash nor credit cards are accepted for payment.

Test Content

This section provides detailed descriptions of the subject areas and the reasoning competencies assessed by *College BASE*, as well as selected sample questions. Each of the four subjects—English, mathematics, science, and social studies—is organized into levels of increasing specificity. Each subject is divided into two or more clusters; each cluster is made up of several closely related skills; and each skill is defined by two to six highly specific subskills.

English

College BASE divides English into two clusters: reading and literature, and writing. The reading and literature cluster evaluates your reading comprehension skills and your knowledge of major literary terms, genres, figures, and works, with emphasis on British and American literature. The writing cluster evaluates your pre-writing, composing, and revising skills through a combination of multiple-choice questions and an essay.

Cluster: Reading and Literature

The reading and literature cluster consists of three skills: reading critically, reading analytically, and understanding literature.

Skill 101

Read accurately and critically by asking pertinent questions about a text, by recognizing assumptions and implications, and by evaluating ideas.

Enabling Subskills

Ascertain the meaning of a passage, identifying main ideas, supporting details, and logical or narrative sequences.

Recognize the implicit assumptions and values underlying a written work.

Evaluate the ideas presented in a text by determining their logical validity, their implications, and their relationships to ideas beyond the text.

This skill focuses on interpretation and evaluation of relatively short reading passages selected from many fields of study and from many forms and styles of writing typical of that required in college courses. To demonstrate mastery of this skill, you must be able to identify main ideas and distinguish them from subordinate ideas and supporting details, to recognize

assumptions and values that are unstated but clearly implied, and to evaluate the logic or the underlying meaning of a passage. The following sample question illustrates one type of question that may be used to assess the first enabling subskill (i.e., identify main ideas).

Sample Question

Our crew employed themselves catching cod and hauled up a great number. Till then I had stuck to my resolution to eat nothing that had had life; and on this occasion I considered . . . the taking of every fish as a kind of unprovoked murder, since none of them had or ever could do us any injury that might justify this massacre. All this seemed very reasonable. But I had formerly been a great lover of fish, and when this came hot out of the frying pan, it smelled so admirably well. I balanced some time between principle and inclination till I recollected that when the fish were opened, I saw smaller fish taken out of their stomachs. “Then,” thought I, “if you eat one another, I don’t see why I mayn’t eat you.” So I dined upon cod very heartily. . . . So convenient a thing it is to be a reasonable creature, since it enables one to find or make a reason for everything one has a mind to do.

What is the main idea of this passage?

- A. Humans possess a limited capacity for compassion.
- * B. Humans possess an enormous capacity for self-justification.
- C. Because fish are carnivorous, humans are justified in eating them.
- D. Reason is the intellectual power separating humans from animals.

Like other questions assessing this skill, questions asking you to identify the main idea require you to go beyond information directly stated in the passage. In order to identify the main idea, for example, you must be able to separate other, less important ideas and supporting details. The correct answer will be the sentence that accurately describes the most important idea expressed by the author, regardless of whether that sentence appears in the passage itself. It will be neither too general nor too specific and will not introduce ideas that have not been discussed by the author.

For example, in the above passage, the narrator describes how he used his reasoning abilities in order to justify eating fish, although he had originally determined not to eat any living thing. The main idea, then, is best expressed in option B. Although the other options also present plausible statements, they do not accurately describe the most important idea of this passage.

Option A brings to the passage something not discussed by the author (i.e., that taking life is a sign of a lack of compassion). Option C gives too much emphasis to a subordinate idea (i.e., that fish are carnivorous). Option D is too general, since the passage is not about the characteristics that distinguish humans from animals.

Skill 102

Read a literary text analytically, seeing relationships between form and content.

Enabling Subskills

Identify and analyze common semantic features such as connotation and figures of speech.

Identify conventional literary genres, elements, and devices and relate such formal elements to the content of the passage in which they are found.

Identify the tone, mood, and voice of a literary text through an analysis of its linguistic features and literary devices.

Identify the theme of a literary text and the ways it is embodied by formal elements.

This skill focuses on your ability to analyze relatively short literary passages, including poetry, short stories, and essays typical of required reading in college literature courses. To demonstrate mastery of this skill, you must recognize relationships between what is said (content) and how it is expressed (form). You should be familiar with the basic language of literary study and recognize certain formal elements used in various types of literature. Questions may take a number of different forms. For example, you may be asked to find an example of a metaphor or pun in a given passage, to identify the connotation of a word or phrase, or to select the literary term that best describes a given example. The sample question below illustrates one type of question that may be used to assess the third enabling subskill (i.e., identify the tone of a literary passage).

Sample Question

Our crew employed themselves catching cod and hauled up a great number. Till then I had stuck to my resolution to eat nothing that had had life; and on this occasion I considered . . . the taking of every fish as a kind of unprovoked murder, since none of them had or ever could do us any injury that might justify this massacre. All this seemed very reasonable. But I had formerly been a great lover of fish, and when this came hot out of the frying pan, it smelled so admirably well. I balanced some time between principle and inclination till I recol-

lected that when the fish were opened, I saw smaller fish taken out of their stomachs. "Then," thought I, "if you eat one another, I don't see why I mayn't eat you." So I dined upon cod very heartily. . . . So convenient a thing it is to be a reasonable creature, since it enables one to find or make a reason for everything one has a mind to do.

What is the tone of the last sentence?

- A. bitter
- B. proud
- * C. ironic
- D. hopeful

You will notice that this question is based on the same reading passage as the first sample question. Frequently, two or more questions are based on a single passage.

Like other questions assessing this skill, questions asking you to identify tone require that you analyze how the author's choice of words and their arrangement into sentences determines the meaning or effect of a passage. For example, to identify the author's attitude toward the subject (i.e., tone), you could compare the author's choice of words to the subject as a whole. In this passage, you will notice that the words in the last sentence are impersonal and abstract. You will also notice that the passage contains few contractions or concrete nouns. This rather dramatic contrast between the formal level of diction and the subject of the passage (i.e., eating fish) indicates an ironic tone. Thus, C is the correct answer. Although the other options also describe possible attitudes toward the subject, they do not describe attitudes supported by this particular passage.

Skill 103

Understand a range of literature, rich in quality and representative of different literary forms and historical contexts.

Enabling Subskills

Identify major authors of British and American literature and describe distinctive features of their works.

Recognize the historical sequence of major literary figures, works, movements, and periods of world literature (including British and American) and relate them to their literary and cultural contexts.

ENGLISH: Writing

This skill covers the major figures and concepts of literary history. The questions presume a level of knowledge generally achieved through a combination of high school English courses and a college-level survey of literature. Examples of British and American authors with whom undergraduates should be familiar include: Geoffrey Chaucer, William Shakespeare, Francis Bacon, John Milton, Jonathan Swift, William Wordsworth, Lord Byron, Samuel Taylor Coleridge, Percy Bysshe Shelley, Mary Wollstonecraft Shelley, Jane Austen, Charlotte Bronte, Emily Bronte, Charles Dickens, Thomas Hardy, Joseph Conrad, James Joyce, Virginia Woolf, Washington Irving, Edgar Allan Poe, Nathaniel Hawthorne, Ralph Waldo Emerson, Henry David Thoreau, Walt Whitman, Mark Twain, Emily Dickinson, Henry James, Stephen Crane, T.S. Eliot, William Faulkner, Robert Frost, Flannery O'Connor, Tennessee Williams, Richard Wright, Sylvia Plath, and Toni Morrison.

Examples of world authors may include but are not limited to: Homer, Confucius, Aristotle, Plato, Sophocles, Horace, Virgil, Augustine, Dante Alighieri, Miguel de Cervantes, Jean-Baptiste Molière, Jean-Jacques Rousseau, Johann von Goethe, Gustave Flaubert, Fyodor Dostoevsky, Henrik Ibsen, Marcel Proust, Thomas Mann, Franz Kafka, Bertolt Brecht, and Jorge Luis Borges. In addition, you should be familiar with major literary periods, such as Classical, Medieval, Renaissance, Neo-Classical, Romantic, Realistic, Naturalistic, Modern, and Contemporary.

Sample Question

Which literary movement most frequently produced works that “objectively” examined the psychology and conduct of middle-class society?

- A. Classical
 - B. Medieval
 - C. Romantic
 - * D. Realistic
-

This question assesses your ability to identify a particular literary period, given a brief description of the subject matter and style generally associated with works of that period. Other questions assessing this skill may ask you to identify the author who wrote a particular title, or to identify a work based on information about its authorship, plot, theme, style, or characters. You might also be asked to identify the correct sequence of major literary figures, or to place a literary work into historical context.

Cluster: Writing

The writing cluster includes three skills. Two of these skills are assessed through multiple-choice questions covering the writing process and conventions of standard written English. The other skill is assessed through a written essay.

Skill 104

Understand the various elements of the writing process, including collecting information and formulating ideas, determining relationships, arranging sentences and paragraphs, establishing transitions, and revising what has been written.

Enabling Subskills

Identify and apply appropriate prewriting strategies, organizational methods, and research techniques.

Improve the clarity, coherence, organization, and style of a text through revision.

This skill involves the various stages of the writing process, from gathering and organizing information to revising the rough draft. Typical questions may require you to identify an appropriate strategy for prewriting or to analyze an outline for flaws in organization. You might also be asked to select the best source of information for a particular purpose or to revise an awkward sentence. The sample question below illustrates a type of question that might be used to assess the second enabling subskill (i.e., revision).

Sample Question

Which is the best revision of this sentence?

Bubonic plague has threatened the population of the whole, entire world for millennia.

- * A. Bubonic plague has threatened the world’s population for millennia.
- B. Bubonic plague has threatened the world for millennia.
- C. Bubonic plague has threatened worldwide population and the safety of the world for millennia.
- D. Bubonic plague has threatened the population and safety of the world for millennia.

Questions assessing skill 104 do not require you to correct errors in grammar, punctuation, capitalization, or spelling. (See skill 105.) Rather, you will be asked to identify the revision that improves the organization, clarity, or conciseness of the original sentence. Although the original sentence contains no errors, the wordiness reduces its effectiveness. For example, “whole” and “entire” mean nearly the same thing in the phrase “population of the whole, entire world.” Options C and D introduce further problems of wordiness. Option B, although shorter, leaves out important information from the original sentence. Thus, A is the correct answer to this question.

Skill 105

Use the conventions of standard written English.

Enabling Subskills

Identify the parts of speech and grammatical elements of a sentence.

Recognize and correct common flaws in diction, grammar, mechanics, and punctuation.

This skill involves the correction of nonstandard diction, grammar, mechanics, and punctuation. Although you will not be asked to define grammatical terms, you should be familiar with such terms as subject, verb, object, noun, pronoun, adjective, misplaced modifier, tense, agreement, and parallelism. Typical questions assessing this skill might present a sentence or a paragraph containing errors or examples of nonstandard English and direct you either to identify the flaws or to identify a corrected version. Other questions might ask you to identify the term that best describes a given error. The sample question below illustrates one type of question that could be used to assess the second enabling subskill.

Sample Question

What correction, if any, should be made in this sentence?

As an educator, good writing is important to me.

- * A. As an educator, I know that good writing is important.
- B. As an educator, the importance of good writing is obvious to me.
- C. As an educator, which I am, good writing is important.
- D. No correction is required.

This question assesses your ability to identify a correction of a common grammatical error. Of course, in order to identify the correction, you must first be able to identify the error. In this case, the original sentence contains a dangling modifier. In English, when modifiers occur at the beginning of a sentence, they usually describe the subject. “Writing” is the subject of the sentence, “As an educator, good writing is important to me.” Since the modifier, “As an educator,” does not describe the subject, “writing,” the modifier is said to be dangling. Option A, which introduces a person (“I”) into the subject position, corrects the problem.

Skill 106

Write an organized, coherent, and effective essay.

Enabling Subskills

Formulate a central idea suitable to the occasion for writing, focusing it as required by the work’s format and the expectations of the audience.

Select a rhetorical strategy and pattern of development that effectively organize ideas.

Develop ideas logically and coherently with adequate supporting detail.

Employ unified paragraphs, varied syntax, and precise diction to present ideas clearly and efficiently.

Create a voice and tone appropriate to the audience and purpose.

Observe the conventions of standard written English.

This is the only skill in *College BASE* that is not evaluated through multiple-choice questions. Instead, you will be asked to write an essay in response to a specific prompt. You will only be required to write one essay during any given administration of *College BASE*. There is no choice among prompts. *College BASE* essay prompts focus on issues and concerns common to college campuses rather than on course-specific knowledge or current events. The prompt will provide you with a specific situation and an equally specific audience to which you should direct your response.

In order to demonstrate mastery of this skill, you must analyze a specific situation and compose a thoughtful, well-supported essay directed to the particular audience specified in the prompt. You will have forty minutes in which to compose your essay. You are encouraged to use a portion of that time to make notes or to do any other prewriting activities that you find helpful. However, you should not plan to revise extensively or to recopy your essay.

ENGLISH: Writing

The sample writing prompt below is typical of the kind of question you may encounter in the essay portion of *College BASE*. Following the sample question, you will find a competently written student essay. With the exception of being typed, the essay is reproduced just as the student wrote it. Beginning on

page 11 you will find a description of the scoring procedure used to evaluate the *College BASE* writing exercise, detailed commentary on this particular essay, and the score it received. Reading the sample essay and the scoring criteria will help you appreciate what is expected of your own essay.

Sample Prompt

Imagine that you are attending a college that is contemplating a change in its curriculum. The current curriculum is called a “core curriculum.” All students who attend the school are required to take the same set of courses during the freshman and sophomore years. This requirement, supporters argue, assures that students have many experiences in common, and it gives them the information they need to select a major during their junior year. The proposed curriculum, called an “open curriculum,” would not go into effect for at least three years and thus would not affect you. It would, though, completely do away with requirements for all students entering after it is adopted. Supporters of the open curriculum argue that it will encourage students to make their own choices and thus better prepare them for life after college.

The College Policy Committee, composed of faculty members and administrators, has asked students to submit statements expressing their attitudes toward the current and proposed curricula, and you have decided to submit such a statement.

In an organized, coherent, and supported essay directed to the Committee, explain what you believe the Committee should do and why it should do so, as well as your general attitudes toward the priorities your school must set.

I realize that the decision about whether to retain the core curriculum or to adopt an open curriculum is very difficult. Nonetheless, I urge the Committee to adopt the open curriculum because this enables students to make their own choices as to what curriculum they want to follow.

Many Freshmen and Sophomores are undecided about what area to follow because they haven't experienced a varied high school curriculum. A big part of figuring out what interests one is by taking a lot of different courses which are varied. But some students have a general idea about their interests. Thus it would be a waste to take Art classes if one was interested in the sciences.

Generally every major requires classes that pertain to different subject matters. This will certainly guarantee the student a well rounded education. But with a declared major students are also able to concentrate on their area of interests. With the closed core system many students are stuck in classes with which they have no interest. But an open system would allow them to take their preferred classes along with the required classes.

Forcing students to stick to a closed core system may also be detrimental to the students study habits as well as grades. If students are forced to take classes they don't like then they are less likely to work for the top grade. When students are forced into a curriculum a negative feedback is likely to occur. But if students are able to chose their own set of classes then they obviously know what is required. When entering a class that's interesting to a student, he/she is much more likely to put time and energy into it.

A closed core curriculum also puts limits on the students variety of friends. If Freshmen and Sophomores are all thrown into the curriculum then obviously these will be the majority of the people they meet. It is important to become acquainted with students the same age, older, and younger. Older students have gone through a lot and have much good advice to offer younger students. It would be unfortunate to put limits on the age of ones friends.

I've argued strongly against the closed core curriculum mainly because I enjoy the freedom of choosing my own classes. I would strongly oppose being forced into certain classes with which I have no interest. True the closed curriculum exposes a student to a variety of subjects. But I feel that the requirements of one's major does a good enough job of giving a student a well rounded education.

Scoring Procedures

Your essay will be read by at least two professional evaluators familiar with college-level writing. *College BASE* essay readers are trained to evaluate your work as a whole. While the mechanics of composition (e.g., punctuation, spelling, grammar) certainly affect their

reading, they understand the time constraints you are under. They will score your essay based on its overall success in satisfying the demands of the question and in meeting the standards described below. Your essay is evaluated on the following 6-point scale, with 6 being the highest score possible.

Score Points

Score of 6: Essays assigned a “6” will be excellent in nearly all respects, although the circumstances under which the essays were written allow for some imperfections. The “6” essay should employ a sound organizational strategy with clearly developed paragraphs proceeding from a sharply focused and clearly identifiable main idea or thesis. Assertions should be sufficiently developed and directed to engage the specified audience and should be supported through appropriate examples, details, and/or other fully integrated rhetorical techniques (e.g., analogy, narration). Again, considering the writing situation, there should be few, if any, distracting grammatical and mechanical errors.

Score of 5: Essays assigned a “5” will be good, but not excellent, in almost all respects. Specifically, look for a thesis or main idea that is clearly discernible and for sophisticated reasoning and/or support, going well beyond the information provided by the prompt. The writer will engage the opposition, beyond a passing reference, and may even redefine the problem while not evading it. A “5” may be marred by some stylistic and/or organizational problems, or it may be well-organized and fairly sophisticated at the sentence level but fail to use or fully integrate a variety of rhetorical devices. There should be few distracting grammatical and mechanical errors.

Score of 4: Essays assigned a “4” will present a competent thesis and adequate organization and will acknowledge the opposition, even if that acknowledgment takes the form of an indictment. A “4” may rely heavily on the prompt for ideas but supply sophisticated examples, or it may present ideas beyond the prompt but offer scant or predictable support. An essay which shows some insights but fails to unite them may also receive a “4.” Generally, a “4” may contain a few distracting grammatical and mechanical errors, although essays appreciably damaged by major errors should not receive a “4.”

Score of 3: Essays assigned a “3” will contain some virtues, although they may contain an unengaging or poorly focused main idea or thesis or be marred by inadequate development. A “3” might, for example, express some ideas that reflect a thoughtful consideration of the problem, but at the same time be obscured by unclear or “incorrect” writing. On the other hand, it might represent clear and competent writing but convey superficial ideas, or ideas which fail to account for information provided in the prompt. A “3” may be primarily a list of responses to the prompt, but with some development of the listed ideas, or it may show an organizational strategy which goes beyond listing, but offers support only in list form. As an argumentative essay, it may exhibit specious or circular reasoning or lack the coherence necessary to foster a complete understanding of the writer’s meaning. A number of major and distracting grammatical and mechanical errors may place an otherwise thoughtful and well-written essay in this category.

Score of 2: Essays assigned a “2” are weak because they are poorly written throughout (with consistent errors in grammar or mechanics), or because they fail to support major points, or because they are exceedingly superficial. A “2” may be flawed by a lack of unity or discernible organizational pattern, or it may rely upon a clearly organized list with little or no development or simple development which presents personal examples as proof.

Score of 1: Essays assigned a “1” will be clearly unacceptable as college-level writing or will demonstrate an only momentary engagement with the topic, concentrating instead upon some tangential concern(s). A “1” will be riddled with major grammatical and mechanical errors and/or will consist of a collection of random thoughts or undeveloped ideas. In short, essays that appear to have been written in careless haste or without effort should receive a “1.”

Score of 0: Essays that for any reason cannot be read should be assigned this score.

MATHEMATICS: General Mathematics Proficiency

Discussion of Sample Essay

The preceding sample essay opens with a clearly stated thesis, and the writer acknowledges, although sparingly, that the opposing view has its merits. In addition, the writer provides basic support for the thesis with ideas and examples.

Some of the examples tend toward generalities rather than specifics, however, and their relevance is not always readily apparent. In fact, without a great deal of support, an overtly opinionated generalization—such as the statement that concludes the second paragraph—could easily alienate a reader. Many scientists deeply appreciate the arts, and members of the committee debating the curriculum probably include faculty from the arts and humanities—faculty who may be so put off by the comment as to dismiss the writer’s arguments altogether.

Nonetheless, the writer demonstrates basic competence in organization and development as well as grammar and mechanics. While the essay has a few errors in grammar and mechanics, none is so distracting or confusing as to prevent the reader from understanding the writer’s intended meaning. Taking all aspects of the discussion into consideration, readers determined that the essay should receive a score of “4,” in accordance with the scoring criteria.

Mathematics

College BASE divides mathematics into three clusters: general mathematics, algebra, and geometry. The general mathematics cluster assesses computational skills, knowledge of basic mathematical concepts and notational systems, and the ability to use techniques of statistical reasoning. The algebra cluster assesses ability to solve linear equations, inequalities, and quadratic equations and to reduce numerical expressions to their lowest terms. The geometry cluster assesses knowledge of basic geometrical concepts and ability to use those concepts in calculations. You are allowed to bring your own hand-held, non-printing calculator and to use it for any of the mathematics problems, but you may not share a calculator or use any instructional material. A *College BASE Study Guide for Mathematics* is available (see Appendix D).

Cluster: General Mathematics Proficiency

The general mathematics cluster consists of three skills: practical applications, properties and notations, and using statistics.

Skill 201

Use mathematical techniques in the solution of real-life problems.

Enabling Subskills

Solve word problems requiring computation of base, rate, or percentage, including problems related to interest, discount, taxes, and paycheck deductions.

Solve word problems involving time, distance, and velocity.

Solve word problems involving ratio and proportion.

This skill involves the solution of realistic word problems. In order to demonstrate mastery of this skill, you must be able to screen out irrelevant data, apply correct formulas, and perform calculations or determine ratios. Formulas are not provided for problems assessing this skill. The sample question below illustrates one type of word problem that could be used to assess the second enabling subskill.

Sample Question

Susan left Georgetown for Mt. Vernon at 1:00 in the afternoon. She traveled at 50 miles per hour for the first 62.5 miles. She stopped for 20 minutes and then drove at 60 miles per hour for 150 miles. At what time in the afternoon did Susan arrive in Mt. Vernon?

- A. 2:32
 - B. 4:05
 - * C. 5:05
 - D. 5:35
-

This question asks you to solve the problem using the formula: $\text{time} = \text{distance} \div \text{rate}$. However, like other questions assessing this skill, this problem requires you to perform a number of steps in order to arrive at the correct solution. Susan’s trip involves three stages: the first 62.5 miles, traveled at 50 mph; the 20-minute stop; and the last 150 miles, traveled at 60 mph. To determine Susan’s arrival time, you must first calculate the time required for each part of Susan’s journey. Substituting the distance and the rate into the formula $t = d \div r$ reveals that one portion of the journey required 1 hour and 15 minutes ($62.50 \div 50$) and the other portion of the journey took 2 hours and 30 minutes ($150 \div 60$). After dividing the distance by the rate, you must convert the resulting decimal into hours and minutes (e.g., 1.25 hours equals 1:15). Finally, to determine Susan’s arrival time, you must add the times required for each stage of Susan’s trip (1:15 + 2:30 + :20) to her departure time of 1:00 P.M. The correct answer is 5:05 P.M.

Skill 202

Use the language, notation, and deductive nature of mathematics to express quantitative ideas with precision.

Enabling Subskills

Use and interpret such set concepts as union and intersection, and identify finite, infinite, and empty sets.

Convert a verbal description of a mathematical relationship to a symbolic mathematical statement.

Identify integers, real numbers, rational numbers, and irrational numbers.

Identify applications of the identity, inverse, associative, commutative, distributive, and transitive properties of real numbers.

Identify patterns in numerical progressions and predict further sequential elements.

This skill covers the basic concepts and vocabulary of mathematics. In order to demonstrate mastery of this skill, you must be able to identify and define mathematical terms and to apply fundamental concepts. Typical questions assessing this skill may require you to identify unions and intersections of sets, select a specified set, translate verbal descriptions into mathematical symbols, identify valid mathematical statements, or predict elements in a sequence. Some questions will be expressed using appropriate mathematical symbols, while others will rely on verbal descriptions of mathematical concepts. The sample question below illustrates a type of question that may be used to assess the first enabling subskill.

Sample Question

Which set is infinite?

- * A. the set of all integers
- B. the set of positive whole numbers less than 10
- C. {0}
- D. {2, 4, 6, 8}

This question requires you to select which of the four options represents an infinite set. In order to correctly answer this question, you must first recall and comprehend the definition of an infinite set. Next, you must analyze the four options to determine which set fits that definition. The correct answer is A.

Skill 203

Use the techniques of statistical reasoning and recognize common misuses of statistics.

Enabling Subskills

Calculate and interpret probability, including that of independent and mutually exclusive events.

Recognize inappropriate statistical reasoning and incorrect or misleading displays of statistical data.

Calculate and interpret mean, median, mode, and range.

This skill covers fundamental statistical concepts and terminology, and common applications of statistical reasoning in daily life. Typical questions assessing this skill may direct you to compute probability; identify accurate interpretations of statistical information; recognize flaws in statistical reasoning; or calculate the mean, median, mode, or range of a specified set of values. The sample question below illustrates one type of question that could be used to assess the first enabling subskill (i.e., probability).

Sample Question

The probability of having a male child is 50 percent. A couple now has two children, both of whom are male. What is the probability that the couple's third child will be male?

- A. 0.125
- * B. 0.50
- C. 1.00
- D. 1.25

This question assesses your understanding of fundamentals of probability theory. The question focuses on determining the likelihood that a specified event will occur and the dependence or independence of probability on other events or circumstances. In the situation described above, each time a couple has a child, the probability of its being male is 50 percent (0.50), regardless of the number of children the couple has. Thus, the correct answer is B.

MATHEMATICS: Algebra

Cluster: Algebra

The algebra cluster consists of two skills: evaluating expressions, and equations and inequalities.

Skill 204

Evaluate algebraic and numerical expressions.

Enabling Subskills

Simplify algebraic expressions by substituting given values.

Simplify numerical and algebraic expressions, using the hierarchy of operations and grouping symbols.

This skill encompasses the fundamentals of algebraic and numerical expressions. In order to demonstrate mastery of this skill, you must be able to identify numerical equivalents of algebraic expressions and to reduce numerical expressions to their simplest terms. You should be familiar with symbols used in this branch of mathematics as well as with conventions governing the manipulation of signs and the hierarchy of operations. The sample question below illustrates a type of question that may be used to assess the second enabling subskill.

Sample Question

Simplify:

$$3 - [4 - (3^2 - 2 \cdot 5)]$$

- A. 0
 - * B. -2
 - C. 18
 - D. 34
-

This question assesses your ability to simplify a numerical expression. In order to arrive at the correct answer, you must perform the operations in the proper order and follow rules governing the manipulation of positive and negative signs. In order to reduce the above numerical expression, you should begin with the operations within the parentheses. First, determine the square of 3; then multiply 2 times 5. The expression at this point will be: $3 - [4 - (9 - 10)]$. Continuing with the expression within the parentheses, subtract 10 from 9. The expression has now been reduced to $3 - [4 - (-1)]$. The next step is to subtract -1 from 4, resulting in 5. Finally, subtract 5 from 3, and the expression has been reduced to -2.

Skill 205

Solve equations and inequalities.

Enabling Subskills

Solve linear equations.

Solve linear inequalities.

Use the quadratic formula to solve quadratic equations.

This skill covers linear equations and linear inequalities that have one variable. In order to demonstrate mastery of this skill, you must be able to solve linear equations and inequalities involving at least two operations. Questions for this skill may require you to apply the quadratic formula to identify possible values of the variable in a quadratic equation. The sample question below illustrates a type of question that may be used to assess the second enabling subskill (i.e., linear inequalities).

Sample Question

Solve for x :

$$2x - 8 \geq 5x - 2$$

- * A. $x \leq -2$
 - B. $x \geq -2$
 - C. $x \geq 2$
 - D. $x \geq \frac{10}{7}$
-

This question assesses your ability to solve linear inequalities that have one variable. In order to solve the above inequality, begin by adding 8 to each side of the inequality sign ($2x \geq 5x + 6$). Next, subtract $5x$ from each side ($-3x \geq 6$). Finally, divide each side by -3 , remembering that when you divide by a negative number when dealing with inequalities, you must reverse the inequality sign. The correct answer to the above question is A, $x \leq -2$.

Cluster: Geometry

The geometry cluster consists of two skills, knowledge of two- and three-dimensional figures, and geometrical calculations.

Skill 206

Recognize two- and three-dimensional figures and their properties.

Enabling Subskills

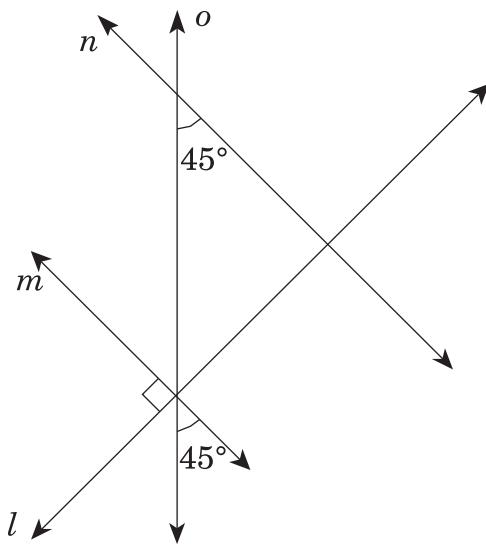
Identify parallel, perpendicular, and intersecting lines and determine the angle relationships they create by recognizing acute, obtuse, vertical, right, adjacent, supplementary, and complementary angles.

Identify two- and three-dimensional geometrical figures.

Identify similar and congruent polygons.

This skill involves understanding the basic terminology, concepts, and symbols of geometry. To demonstrate mastery of this skill, you must identify the relationships among lines and angles depicted on diagrams, provide the names for diagrams of basic two- and three-dimensional figures, and recognize similar and congruent figures. The sample question below illustrates one type of question that may be used to assess the first enabling subskill.

Sample Question



Which lines are perpendicular?

- * A. l and n
- B. l and o
- C. m and n
- D. m and o

This question assesses your ability to identify which of several lines depicted in a diagram are perpendicular. Diagrams often will include angle measures or relationships that provide evidence of the relationship among the lines. Questions themselves may occasionally use symbols for relationships such as parallel and perpendicular lines and right angles. Often, however, you will need to go beyond information presented in the diagram and apply basic theorems of geometry. For example, to determine whether the intersection of lines l and n forms a right angle, you must use knowledge of vertical and supplementary angles.

Skill 207

Use the properties of two- and three-dimensional figures to perform geometrical calculations.

Enabling Subskills

Calculate the perimeter and area of two-dimensional geometrical figures.

Calculate the area and volume of three-dimensional geometrical figures.

Use the Pythagorean Theorem to solve problems involving right triangles.

This skill covers calculations and practical applications of geometry. Questions assessing this skill present situations that require you to exercise knowledge of geometry in the solution of everyday problems. You will also confront straightforward problems which require you to compute the perimeter, area, or volume of a variety of geometrical figures. Formulas will be provided for all three-dimensional figures except rectangular solids. Formulas will not be provided for two-dimensional figures. The sample question below illustrates one type of question that may be used to assess the second enabling subskill.

Sample Question

What is the surface area in square centimeters of a cube with edges measuring 3 centimeters?

- A. 9
- B. 27
- C. 36
- * D. 54

SCIENCE: Laboratory and Field Work

This question assesses your ability to calculate the surface area of a cube based on a verbal description of the measurements of the figure. Other questions assessing this skill may use a diagram to depict the figure. To calculate the surface area in square centimeters of this cube, you must determine the area of one of the six sides of the cube and then multiply that area by the total number of sides. The formula for the area of a square is length \times width. Thus, each side of the cube has an area of 9 square centimeters, and the surface area of the cube is 9 times 6 sides, or 54 square centimeters.

Science

College BASE divides science into two clusters of skills: laboratory/field work and fundamental concepts. The laboratory/field work cluster assesses knowledge and understanding of scientific methodology, including design and implementation of experiments and interpretation of results. The fundamental concepts cluster assesses knowledge of the basic principles of the life, earth, and physical sciences.

Cluster: Laboratory and Field Work

This cluster consists of three skills: observation/experimental design, laboratory/field work techniques, and interpreting results.

Skill 301

Recognize the role of observation and experimentation in the development of scientific theories.

Enabling Subskills

Isolate and define a scientific problem or area for scientific study.

Recognize the principal elements in an experimental design, including the hypothesis, independent and dependent variables, and controls.

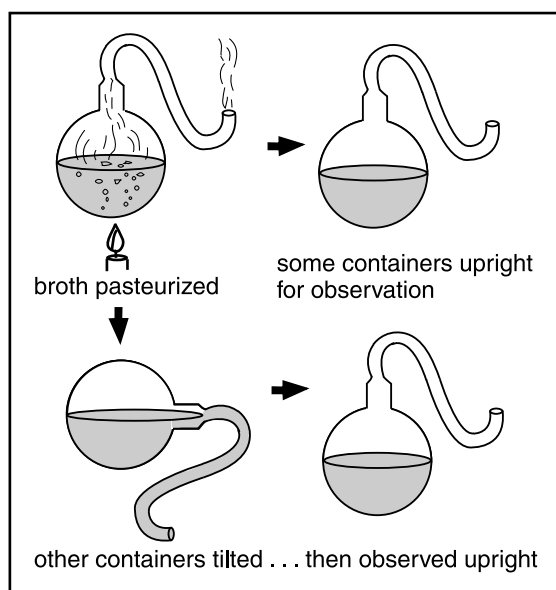
Evaluate an experimental design by analyzing its ability to test the hypothesis, identifying weaknesses and improvements, and discerning inherent limitations and assumptions.

This skill covers scientific methods of observation and experimentation. To demonstrate mastery of this skill, you must have a working knowledge of basic scientific vocabulary. In addition, you must analyze experimental designs in order to identify the particular problem under investigation, the principle elements of the experiment, and any flaws or limitations in experimental design. The sample question

below illustrates one type of question that may be used to assess the second enabling subskill (i.e., recognize hypothesis).

Sample Question

In the nineteenth century, Louis Pasteur performed an experiment in which he bent the necks of flasks into "S" shapes, leaving their ends opened. Then he boiled broth in the flasks to force air out and kill any microbes inside. After the flasks cooled, he left some of them upright for observation. Before setting aside others to observe, he tilted them so that the broth moved up into the bent necks and then back into the flasks. After the flasks had been prepared, he watched them for signs of microbial growth.



Which hypothesis was Pasteur testing in this experiment?

- A. Flasks with bent necks would cause microbes to grow in the broth.
- B. Cooling broth in the flasks would cause microbes to grow in the broth.
- C. Heating broth in the flasks and then cooling it would cause microbes to grow in the broth.
- * D. Contact of the broth with something in the necks of the flasks would cause microbes to grow in the broth.

This question requires you to recognize the principal elements in an experimental design. To deduce the hypothesis, you must also identify the independent variable. In this case, the independent variable (the variable the experimenter manipulates) is the tilting of

some of the flasks and the subsequent contact of the broth with the necks of the flasks. Option D is the only one that includes the independent variable in its description and is thus the correct answer.

Skill 302

Recognize appropriate procedures for gathering scientific information through laboratory and field work.

Enabling Subskills

Identify effective laboratory and field techniques for observation, measurement, and other information-gathering procedures.

Select the scientific apparatus or instrument appropriate to a specified laboratory or field task and identify proper operation of such equipment.

Use the metric system of measurement, recognizing equivalents within that system and selecting units appropriate to a given laboratory or field task.

Convert between scientific notation and conventional numerals and use scientific notation to perform calculations.

Questions for this skill assess your understanding of data gathering. To demonstrate mastery of this skill, you must identify accurate and effective methods or equipment most appropriate to particular scientific investigations. You must also convert measurement from one metric unit to another and perform calculations in scientific notation. The sample question below illustrates one type of question that may be used to assess the first enabling subskill.

Sample Question

Which method might be used to determine the relative depths of two wells without using a tape measure?

- A. Drop a pebble down each well and measure the time it takes the pebbles to strike bottom. The deeper well will have the shorter elapsed time.
- * B. Drop a pebble down each well and measure the time it takes the pebbles to strike bottom. The deeper well will have the longer elapsed time.
- C. Drop one large rock and one pebble down each well. The deeper well will have a greater elapsed time for the large rock than for the pebble.
- D. It is not possible to find out which well is deeper without using a tape measure.

This question assesses your ability to identify a practical method of gathering data in the field. Option C is incorrect because the pebble and rock would fall at the same rate. Option D is also incorrect because it is possible to measure relative depth without a tape measure. Options A and B both present the same plausible method of measurement, except that A states an incorrect conclusion. Option B is thus correct.

Skill 303

Interpret and express the results of observation and experimentation.

Enabling Subskills

Identify accurate verbal, graphic, and tabular expressions of data derived from observation and experimentation.

Draw conclusions and make inferences from observations or experimental results presented in verbal, graphic, or tabular form.

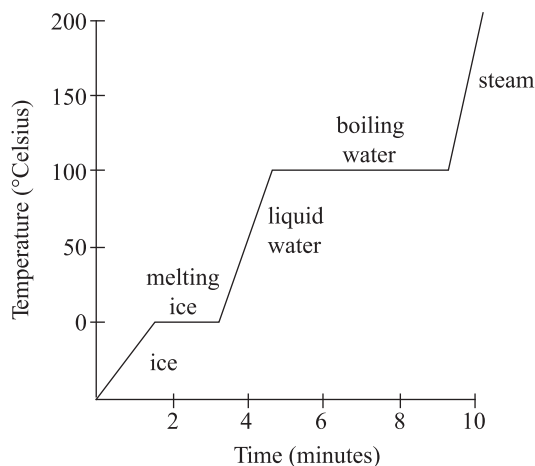
Describe a scientific relationship in symbolic mathematical terms.

This skill encompasses graphic, tabular, and pictorial presentations of data. Some questions will ask you to translate information from one form of expression to another; for example, a question might provide you with a verbal expression and ask you to select the best graphic presentation of the information, or the question might ask you to translate the verbal expression into a mathematical expression or formula. Other questions will ask you to interpret graphs, tables, or figures. Still other questions will present you with a graph, table, or figure and ask you to describe a flaw in the presentation of the data. Finally, some questions will ask you to extrapolate information from a graph, table, or figure. The sample question below illustrates one type of question that may be used to assess the second enabling subskill.

SCIENCE: Fundamental Concepts

Sample Question

The graph below shows the relationship of temperature and time as constant heat is applied to an ice cube.



Which statement is consistent with the graph?

- * A. The temperature of melting ice remains constant until all of the ice is melted.
- B. The rate of water boiling equals the rate of ice melting.
- C. The same amount of heat is required to melt ice as to boil water.
- D. More heat is required to melt ice than is required to boil water.

This question assesses your ability to identify a reasonable conclusion based upon experimental results presented in graphical form. Since the amount of heat applied to the ice cube is constant, C and D cannot be true since it takes an appreciably longer time to change all the water into steam than to melt the ice cube. B is also incorrect because the time required to boil all the water is longer than the time needed to melt the ice cube. According to the graph, A is the correct answer because the water stays at a constant temperature while undergoing a change of state.

Cluster: Fundamental Concepts

The fundamental concepts cluster consists of two skills that assess your knowledge of scientific content. One skill encompasses the life sciences, while the other skill covers the physical sciences.

Skill 304

Understand the fundamental concepts, principles, and theories of the life sciences.

Enabling Subskills

Describe the elements of fundamental concepts in the life sciences.

Describe the basic processes of matter, energy, and information in the life sciences.

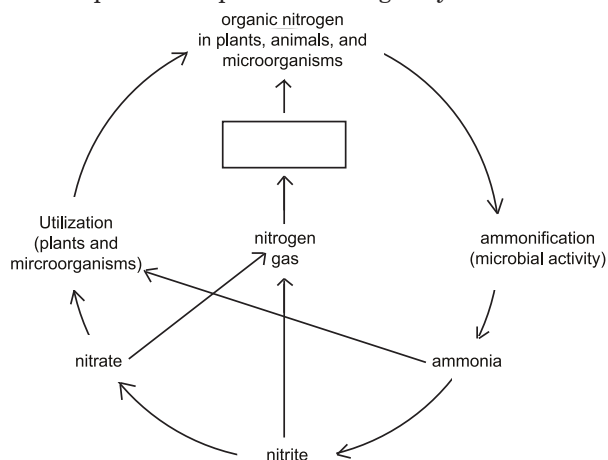
Describe significant relationships among natural phenomena in the life sciences.

Describe the products or effects of fundamental processes in the life sciences.

This skill includes biology, botany, zoology, and ecology. To demonstrate mastery of this skill, you must be familiar with basic scientific terminology and concepts of the life sciences. Typical questions may ask you to identify a particular unit (e.g., cell) based on a verbal description of its components. Other questions may ask you to identify the effects of a basic process (e.g., photosynthesis) or to identify the relationships among participants in a given system (e.g., food chain). The sample question below illustrates one type of question that may be used to assess the second enabling subskill.

Sample Question

Which process must be inserted in the box to complete the important steps in the nitrogen cycle?



- A. nitrogen irradiation
- * B. nitrogen fixation
- C. nitrogen fusion
- D. nitrogen induction

This question is designed to test your knowledge of the nitrogen cycle. All the options, with the exception of B, are invented processes. It is not necessary to be able to diagram the nitrogen cycle to know that nitrogen fixation is the process by which nitrogen gas is converted to a form usable by plants and animals.

Skill 305

Understand the fundamental concepts, principles, and theories of the physical sciences.

Enabling Subskills

Describe the elements of fundamental concepts in the physical sciences.

Describe the basic processes of matter, energy, and information in the physical sciences.

Describe significant relationships among natural phenomena in the physical sciences.

Describe the products or effects of fundamental processes in the physical sciences.

This skill includes chemistry, physics, astronomy, geology, and meteorology. To demonstrate mastery of this skill, you must be familiar with basic scientific terminology and concepts of the physical sciences. Typical questions may ask you to identify a particular unit (e.g., atom) or structure (e.g., molecule) based on a verbal description of its components. Other questions may ask you to identify the operation or effects of a given process (e.g., chemical bonding). The sample question below illustrates one type of question that may be used to assess the first enabling subskill.

Sample Question

Which statement describes covalent bonding?

- * A. Electrons are shared by atoms.
 - B. Electrons are transferred between atoms.
 - C. The nucleus of one atom is split, and energy is released.
 - D. The nuclei of the atoms are fused together.
-

This question asks you to identify a fundamental concept in the physical sciences, covalent bonding. The correct answer to the above question is A. Option B describes ionic bonding. Option C describes nuclear fission, and option D describes nuclear fusion.

Social Studies

College BASE divides social studies into two areas of study: history and the social sciences. The history cluster assesses your knowledge of chronology, historical movements, significant figures and institutions, and the causal relationships that connect events in United States and world history. The social science cluster assesses your knowledge of the principles and concepts of geography, economics, and political science, as well as the research tools and methodologies available to the social scientist.

Cluster: History

The history cluster consists of two skills: significance of world events and significance of United States events.

Skill 401

Recognize the chronology and significance of major events and movements in world history.

Enabling Subskills

Identify and compare key institutions or participants in major events and movements of world history.

Identify the sequence of major events and movements in world history.

Describe the significance of major events and movements in world history, including their causes and effects as well as their relationships to broader historical trends.

This skill encompasses the key events, movements, institutions, and figures that compose humanity's collective past. Questions will be drawn from all world history, not just European history. America's involvement is also considered a component of world history.

Major historical institutions and individuals may include but are not limited to the following: Roman Catholic Church, Russian Orthodox Church, Sorbonne, Oxford, British Parliament, League of Nations, United Nations, European Economic Community; Lao Tsu, Joan of Arc, Martin Luther, Henry VIII, Peter the Great, Vladimir Lenin, Josef Stalin, Winston Churchill, and Chiang Kai-shek. In addition, you should be familiar with such major events and movements as the Norman Conquest, feudalism, Great Schism, Reformation, rationalism, empiricism, French Revolution, Darwinism, Marxism, World War I, Russian Revolution, and World War II.

SOCIAL STUDIES: History

Questions assessing this skill may take several forms. Some questions may ask you to identify institutions or individuals associated with specified historical events or to identify historical events associated with a specific person or institution. Other questions may ask you to identify the correct order for a series of major events. Still others may ask you to identify the relationships among specified historical events or movements. The sample question below illustrates one type that may be used to assess the second enabling subskill (i.e., chronology).

Sample Question

Which list is in chronological order?

- * A. Roman Empire, Byzantine Empire, Ottoman Empire
 - B. Roman Empire, Ottoman Empire, Byzantine Empire
 - C. Byzantine Empire, Ottoman Empire, Roman Empire
 - D. Ottoman Empire, Roman Empire, Byzantine Empire
-

This question assesses your ability to identify the sequence of major events. Because questions assessing this skill focus on major events, often separated by a century or more, it is not necessary to know the exact dates of the events listed in order to answer correctly. The correct answer to this question is A, which places the three given empires in chronological order: the Roman, from classical times; the Byzantine, following Rome during the Middle Ages; and the Ottoman, which flourished during the European Renaissance and early Modern era.

Skill 402

Recognize the chronology and significance of major events and movements in United States history.

Enabling Subskills

Identify and compare key institutions or participants in major events and movements in United States history.

Identify the sequence and the significance of major events and movements in United States history, including their causes and effects as well as their relationships to broader historical trends.

Identify technological developments and environmental changes in United States history and relate them to historical events and movements.

Describe the principles and development of American Constitutional democracy and the significance of major Supreme Court decisions.

Describe the interaction among peoples of different national origins, races, and cultures and how such interaction has shaped American history.

This skill assesses your knowledge of major institutions, events, movements, and figures in United States history, as well as your knowledge of the principles and development of American Constitutional democracy. On the rationale that students will know their own country's history more comprehensively than they know the history of other countries, this skill is more detailed than the world history skill. This skill includes the contributions of the many racial and cultural groups that compose the American people—their origins, their contributions to the culture, and their interactions with the dominant culture. You should also be able to identify technological and environmental developments, such as the telephone, automobile, airplane, satellite communications, and acid rain, and their relationships to the development of the United States.

Major historical events and movements may include but are not limited to the following: Revolutionary War, Louisiana Purchase, Lincoln-Douglas debates, Civil War, populist movement, woman suffrage, Prohibition, Great Depression, civil rights movement, first moon landing. In addition, you should be familiar with the significance of such institutions and individuals as the public school systems, day-care industry, New York Stock Exchange, Congress; Thomas Jefferson, Susan B. Anthony, Carrie Nation, Franklin Roosevelt, and Martin Luther King, Jr.

Questions assessing your knowledge of United States history may take a number of different forms. For example, some questions may direct you to identify a key person or institution associated with a specified historical event. Other questions may ask you to identify a chronological list of events, movements, or individuals. Still others may require you to identify causes or effects of specified events or technological developments. In addition, you can expect some questions about the operation of American government and about the significance of key decisions of the Supreme Court. The sample question below illustrates one type of question that may be used to assess the second enabling subskill.

Sample Question

What prevented Texas from becoming a state immediately after winning its independence from Mexico?

- A. Texas had amassed huge war debts.
 - * B. The balance of slave and free states would have been upset.
 - C. Mexico threatened to retake southern California and Arizona.
 - D. Most Texans were actually of Mexican descent.
-

This question assesses ability to identify relationships among specified events or movements in United States history. While you do not need to know specific dates of events or movements to answer questions on *College BASE*, you will need to place events within their historical context. To answer this question, for example, you need to link events in Texas during the 1830s with what may at first appear to be disconnected events—such as the Missouri Compromise—in the United States. An understanding of the politics of slavery, then, proves to be instrumental in arriving at the correct conclusion, B.

Cluster: Social Sciences

The social sciences cluster consists of three skills: geography; political/economic structures; and social science procedures.

Skill 403

Recognize basic features and concepts of world geography.

Enabling Subskills

Identify the location and explain the geographical significance of cultural regions, political units, and physical features of the world, including nations, cities, land masses, bodies of water and waterways, mountain ranges, deserts, and climatic zones.

Describe central features of the cultural and social life within nations, including aspects of daily life, customs, religious belief, and the arts.

Analyze geographical relationships, including the effects of geographical factors upon human life.

This skill assesses your knowledge of the topography of the world. Places may include but are not limited to Argentina, Brazil, Cuba, Democratic Republic

of Congo, Egypt, France, India, Iran, Israel, Mexico, Poland, South Africa, the former Soviet Union, Vietnam; Berlin, Chicago, Detroit, Hong Kong, London, Mecca, Miami, Nairobi, New York, Rome; the continents; Arctic, Atlantic, Indian, Pacific oceans; Caribbean, Mediterranean, Red seas; Great Lakes; Amazon, Congo, Mississippi, Ohio, Rhine, St. Lawrence rivers; Panama, Suez canals; Alps, Andes, Himalayan, Rocky mountains; Gobi, Sahara deserts; and arctic, temperate, and tropical zones.

Questions assessing this skill may take one of several forms. Some questions will ask you to identify regions, climate zones, topographic features, countries, or cities on a map. Other questions may ask you to identify a geographic element or a specified aspect of a culture based on a verbal description of its characteristics. You may also be asked to identify ways in which geography can affect or be affected by inhabitants of a specified region. The sample question below illustrates one type of question that may be used to assess the first enabling subskill.

Sample Question

Which body of water lies between Africa and Australia?

- A. Atlantic Ocean
 - B. Pacific Ocean
 - C. Coral Sea
 - * D. Indian Ocean
-

This question assesses your ability to identify a geographic feature specified by a verbal description of its location. In order to answer this question—or others of its type—you must possess a comprehensive “mental map” of the world. This “map” should allow you to locate specified places or to show that you understand basic geographic relationships, including the positions of bodies of water in relation to land masses. If you have this understanding, then you will know that the correct response is D.

Skill 404

Recognize basic features and concepts of the world’s political and economic structures.

Enabling Subskills

Identify and apply basic principles of economics and international trade, as well as describe their operation between and within the economic systems of particular countries.

SOCIAL STUDIES: Social Sciences

Identify and apply basic principles of political science, as well as describe their operation between and within the governments of particular countries.

Questions for this skill assess your ability to recognize major economic and political systems and to apply the concepts defined or implied by those systems to real or hypothetical situations. The sample question below illustrates one type of question that you may encounter.

Sample Question

Which economic/political system is in theory characterized by a classless society, government control of wages and prices, and national resources owned collectively by the people?

- A. anarchism
 - B. fascism
 - C. capitalism
 - * D. communism
-

This question requires you to identify an economic/political system based on a description of its basic principles. Governmental controls eliminate anarchism and capitalism as possibilities, leaving fascism and communism. In practice, fascism and communism may appear to be quite similar. A basic theoretical distinction, however, is that fascism exalts the state above the individual, while communism emphasizes an equitable sharing of resources among the people. Thus, the correct response is D.

Skill 405

Recognize appropriate investigative and interpretive procedures in the social sciences.

Enabling Subskills

Identify appropriate sources and methods for the investigation of a social problem or institution.

Interpret and express the results of social science research in verbal, tabular, and graphic form.

This skill differs from others in social studies in that it addresses research skills and methods rather than particular content. The questions are designed to assess your knowledge of the research tools available to social scientists and your ability to analyze the kinds of data presentations found most frequently in social science research literature.

You can expect to encounter two types of questions designed to assess this skill. One type will pose hypothetical research scenarios and ask you to evaluate which of the options is most likely to yield the best data. The other type will ask you to identify correct or faulty interpretations or conclusions based on verbal, tabular, or graphic presentations of data. The sample question below illustrates one type of question that may be used to assess the first enabling subskill.

Sample Question

A graduate student wants to collect data for his study on divorce. He has hypothesized that divorce is less likely to occur among families with over three children than among families with one or two children. Which method would be most helpful in the study?

- * A. conducting a mail survey in several counties about divorce
 - B. attending several meetings of the local Divorced Parent's Club
 - C. talking with single parents in his neighborhood
 - D. reading a library book on coping with divorce
-

This question assesses your ability to identify an appropriate source of information for a specified research project. Although all of the options would theoretically yield information, only one of them qualifies as the "best" source. Your task, then, is to evaluate each of the options, keeping in mind what the graduate student is studying and what method best meets the study's goals and the restrictions of scientific investigation.

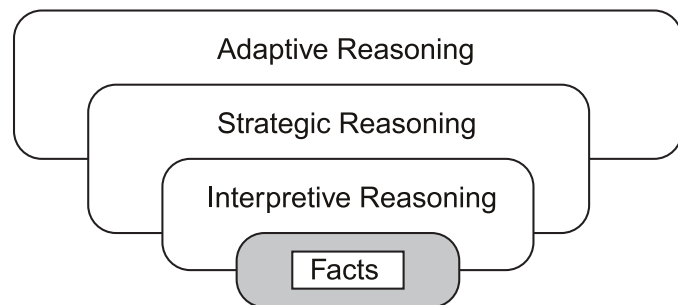
Option A, "conducting a mail survey in several counties," is the best method of those listed. A questionnaire affords the researcher more direct control over the information. Moreover, this option should provide a sufficiently broad sampling to allow the researcher to make the generalizations demanded by the study, whereas the other options would be too narrow in scope.

Competencies

In addition to assessing subject area knowledge, *College BASE* assesses three reasoning competencies applied to all subjects. These competencies (i.e., interpretive, strategic, and adaptive reasoning) represent levels of cognitive skills developed as a result of education and practice, beyond mere observation or recall of facts. They indicate an understanding of the significance of and the ability to manipulate

information, as evidenced by formulating hypotheses or evaluating the logical validity of an argument. This model of intellectual processing assumes that a basic core of factual information is a fundamental step that must precede any higher-level processing skills.

Approximately three-fourths of *College BASE* test questions represent the three levels of reasoning skills—interpretive, strategic, and adaptive. Because *College BASE* is designed as a sophomore-level examination, it assumes a level of recall knowledge reflecting what you have likely acquired through secondary school and your early college experience. Consequently, approximately one-fourth of the questions on the exam are designed to assess your mastery of a representative sampling of recall knowledge. These recall questions will contribute to your subject, cluster, and skill scores, but they will not contribute to your competency scores. The figure below illustrates the relationship among the levels of reasoning assessed by *College BASE*.



The basic distinctions among the three types of reasoning and their relationship to factual recall or observation can be seen in the following simplified summary of the development of penicillin as the first antibiotic drug:

Observation: In 1928, a British scientist saw mold growing in a laboratory dish that contained bacteria and noticed that there were no bacteria growing near the mold clusters.

Interpretive reasoning: He concluded that the mold had the capacity to kill bacteria.

Strategic reasoning: He devised an experiment to test his interpretation. He grew the mold in a broth but discovered that bacteria would not grow in the broth.

Adaptive reasoning: Someone conceived a plan for treating human bacterial infections with the penicillin mold.

Interpretive Reasoning

Interpretive reasoning is the first level of cognitive processing beyond mere recall of facts. It is the cognitive process by which we begin to understand information that has been remembered or observed. As such, it is primarily a translating activity; that is, in order to make knowledge our own, we first translate information into personally meaningful terms through such activities as paraphrasing, summarizing, or explaining particular information. We also reason interpretively when we translate information from one form to another.

Sample Question

What is the surface area in square centimeters of a cube with edges measuring 3 centimeters?

- A. 9
 - B. 27
 - C. 36
 - * D. 54
-

This question from the geometry cluster of mathematics illustrates one type of question that could be used to assess your ability to apply interpretive reasoning skills. The first step in solving this problem is to translate the words into numbers that can be manipulated (e.g., compared or analyzed) to arrive at a solution. To identify the correct response, you must go beyond merely recalling the formula for calculating the area of a square; you must use interpretive reasoning skills to apply those concepts to a new situation, calculating the surface area of a cube.

Strategic Reasoning

Strategic reasoning is the second level of cognitive processing. At this intermediate stage, we establish boundaries for information through definition, comparison, classification, and analysis that lead to inferences or deductions. Questions designed to assess strategic reasoning abilities typically require you to compare, categorize, or analyze information.

COMPETENCIES: Adaptive Reasoning

Sample Question

All animals which man has reason to believe are more than usually intelligent . . . the great apes, the elephant, the raccoon, the wolverine . . . are problem solvers, and in at least a small way manipulators of their environment. Save for the instinctive calls of their species, however, they cannot communicate except by direct imitation. They cannot invent words for new situations nor get their fellows to use such words. No matter how high the individual intelligence, its private world remains a private possession locked forever within a single, perishable brain. It is this fact that finally balks our hunger to communicate even with the sensitive dog who shares our fireside.

(Loren Eiseley, "The Long Loneliness," in *The Star Thrower*. © 1978, Random House.)

Which is an implication of this passage?

- A. Animals are inferior to human beings because they do not solve problems or manipulate their environment.
- * B. Language gives human beings the advantages of a stable, collective consciousness.
- C. Dogs are only capable of communicating that they are hungry or need warmth.
- D. Individual intelligence is exclusively the product of instinct and direct imitation.

This question from the reading and literature cluster assesses your ability to apply strategic reasoning. The correct answer, B, is not directly stated in the passage, but is a logical extension of it. In order to arrive at option B, you must infer from the passage that language is necessary for the establishment of a collective consciousness. Since individual animals cannot communicate their thoughts to others through language, animals are incapable of creating a collective consciousness. Therefore, human beings, who can invent words to describe new situations and who can get other human beings to use those words, have an advantage over other intelligent animals.

Adaptive Reasoning

Adaptive reasoning is the cognitive process by which we extend our knowledge beyond the boundaries established by strategic reasoning. This highest level of cognitive processing is revealed in the ability to synthesize new rules or theories, to hypothesize a means of testing a proposition, to predict

causal relationships, or to express judgments of value, merit, or worth. Consequently, questions designed to assess adaptive reasoning skills may require you to express a synthesis of opposing positions, to predict or project a new hypothesis based on the experiences of a prior experiment, or to evaluate the effectiveness or applicability of a situation.

Sample Question

A nutritionist is studying the use of radiation to slow down the spoilage of fruits and vegetables. In one experiment, she harvested four dozen tomatoes of a variety that had been grown under identical conditions and were approximately the same size and weight. After randomly selecting them for placement in sterile racks containing a dozen each, she subjected two racks to a fixed amount of radiation. Then she placed one irradiated rack and one that had not been irradiated in refrigerators which maintained the same temperature. She stored the other two racks, one of which had been irradiated, at room temperature. She checked all four racks every six hours for signs of spoilage. When she found signs of spoilage in at least three of the tomatoes in a rack, she recorded the time and disposed of that rack of tomatoes. The research found that the irradiated tomatoes spoiled at the same rate as those that were not irradiated. Repetition of the experiment gave the same results.

Which variable would it be best for the researcher to alter in her next experiment?

- * A. amount of radiation
- B. storage temperature
- C. number of tomatoes
- D. size of tomatoes

This question from the laboratory and field work cluster of science assesses adaptive reasoning skills. In order to arrive at the correct answer, you must go beyond identifying a hypothesis or interpreting results. To predict a new hypothesis, you must first perceive a "problem." Based on the results of the original experiment, you must determine the problem to be investigated—and then design an appropriate experiment to test the hypothesis. The correct option is A.

Section Two: To be filled out by the test coordinator

Based on current documentation, I certify that this student has the following disability(ies):

- Hearing Physical
 - Visual Learning
 - Other (*Please explain*) _____
-

Special Services approved:

- Extended time Large-print text Audio version on CD
 - Reader Scribe Tactile graphics
 - Other (*Please explain*) _____
-

Current documentation of this student's disability(ies) is on file at our institution and has been provided by:
(*please check all that apply*)

- Physician(s)
 - Psychologist(s)
 - Learning disability specialist(s)
 - Other (*Please explain*) _____
-

Signature _____ Date _____

Coordinator's Name Printed _____ School name _____

Mailing address _____ Phone # (_____) _____

City _____ State _____ ZIP Code _____

(*Please Photocopy*)

Appendix B

College BASE Score Release Consent

An individual Student Score Report, reflecting the student's most recent passing scores, is sent to each student, at the address entered on the *College BASE* answer booklet, approximately 4 weeks after test administration. A second copy is sent to the institution where the student is currently enrolled. If a student has taken *College BASE* more than once, each report indicates the results of the current exam, and passing score(s) from previous attempts. To order an additional copy of the Student Score Report, complete this Score Release Consent and send it with a check or money order for \$10.00 to the Assessment Resource Center, Attn: *College BASE* Score Release Consent, 2800 Maguire Boulevard, Columbia, MO 65201. **Do not send cash.**

For multiple orders, include \$10.00 per report. **Checks or money orders should be made payable to the Assessment Resource Center.** Credit card orders and orders by telephone are not accepted. Reports may be sent to an institution, or to a student's address for personal use.

Please print or type.

Student name (at the time you took *College BASE*): _____

Federal ID No. (Social Security #): _____

Current address: _____
(Street or P.O. Box) (City) (State) (ZIP Code)

Phone No.: _____ Approx. date (month & year) when you took *College BASE*: _____

Indicate mailing address if report should be sent to an institution.

Policies at most institutions require the sealed scores be sent directly to institution officials. To ensure proper delivery, include the name of the department or faculty/staff member to receive the report.

Institution name: _____

Department or Faculty/Staff name: _____

Current address: _____
(Street or P.O. Box) (City) (State) (ZIP Code)

Indicate mailing address if report should be sent to a student.

Current name: _____

Current address: _____
(Street or P.O. Box) (City) (State) (ZIP Code)

Authorization and payment

_____ Number of score reports ordered
@ \$10.00 each

\$_____ Amount Enclosed

For Office Use ONLY

Amt: _____ Check #: _____ Date Rec'd: _____

I hereby authorize the Assessment Resource Center to release my *College BASE* scores to the institution listed above, and/or to send my *College BASE* scores to the address indicated.

Signature: _____ **Date:** _____

Appendix C

College BASE Correction of Score Report Form

Changes in the information on *College BASE* score reports require computer file changes. If you wish to make a correction in the information on your *College BASE* score report, complete this Correction of Score Report Form and mail it along with a check for the correct amount to the Assessment Resource Center, 2800 Maguire Blvd., Columbia MO 65201. Checks should be made out to the Assessment Resource Center. **There is a \$15.00 fee for this service**, which includes sending a corrected copy of your score report to one institution. If you wish to have a corrected copy of your score report sent to you, there will be an additional charge of \$10.00.

Please print or type.

Information as it was at the time you took College BASE. *Corrected information.*

Name:

Name:

Federal Identification No. (Social Security No.):

Federal Identification No. (Social Security No.):

Institution of Enrollment:

Institution of Enrollment:

Please fill out this information:

Current address:

Current telephone number: _____

Date (month and year) you took *College BASE*: _____

Institution to which you would like a corrected score report sent:

Name: _____

Department: _____

Address: _____

Do you want a corrected *College BASE* score report sent to you? Yes ___ No ___
(If yes, have you enclosed a check for the correct amount, \$25.00?)

I hereby authorize the Assessment Resource Center to release my corrected *College BASE* score report to the institution indicated above.

Signature: _____ Date: _____

Appendix D

College BASE Study Guide for Mathematics

This *Study Guide* is a useful tool for students who have had a limited exposure to math courses in high school or college, or for non-traditional students returning to college after several years absence. This book explains in detail each math skill and subskill tested by *College BASE*, and provides sample problems that illustrate those skills. Written in clear, easy-to-understand language, the *Study Guide* also includes:

- glossaries of terms used in mathematics, statistics, algebra, and geometry
- diagrams illustrating geometrical concepts
- step-by-step procedures for performing calculations

A practice test at the end of the *Study Guide* has 22 items, one item from each math subskill. The practice test will familiarize the student with a range of math problems similar to those appearing on the actual test.

Note: *College BASE* study guides are not available for other subjects. Please see page 2 of this *Student Guide* for suggestions on how to study other subjects.

The cost of one *College BASE Study Guide for Mathematics* is \$9.00 plus 7.35% sales tax for Missouri residents and \$3.00 for shipping & handling. **Please make check or money order payable to the Assessment Resource Center.** Orders received without payment or with incorrect payment will be returned. Do not send cash. Telephone orders or credit card orders are not accepted. **Call the Assessment Resource Center at 1-800-366-8232 for prices on institutional orders.**

Order Form

Name: _____

(Street or P.O. Box)

(City)

(State)

(Zip code)

Phone #: _____

For Office Use ONLY

Amt. : _____

Check #: _____

Date: _____

	Quantity Ordered	Price per Copy	Total Price
Shipping and Handling Charges			
One copy of <i>Study Guide</i>	X	\$9.00	
Two copies of <i>Study Guide</i>			
Add \$1.00 for each additional <i>Study Guide</i>			
	<small>Tax (Missouri residents add 7.35% or \$.66 per copy)</small>		
	<small>Plus shipping and handling (charges are shown at left)</small>		
	Total Amount Due		\$

Appendix E

Sample Acceptable Calculator Diagram

Examiners may find this diagram useful in determining acceptability of calculators used during *College BASE*. The signs and abbreviations of functions may vary by calculator. The most commonly used acceptable signs and abbreviations are noted.

