CLEP®

College Algebra

2016 Examination Guide

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for the most up-to-date information.

CollegeBoard

Introduction

This is an examination guide to prepare for the College-Level Examination Program® (CLEP®) exam. CLEP exams are administered on computers at test centers across the country.

This *Guide* has been written mainly for adults who are making plans to enroll in college, but it contains information of interest to others as well. College-bound high school students, current college students, military personnel, professionals seeking certification and persons of all ages who have learned or wish to learn college-level material outside the college classroom will find the *Guide* helpful as they strive to accomplish their goals.

CLEP is based on the premise that some individuals enrolling in college have already learned part of what is taught in college courses through job training, independent reading and study, noncredit adult courses and advanced high school courses. Often, their jobs and life experiences have enhanced and reinforced their learning. CLEP provides these individuals with the opportunity to demonstrate their mastery of college-level material by taking exams that assess the knowledge and skills taught in college courses.

The first few sections of this guide explain how CLEP can help you earn credit for the college-level learning you have acquired and provide suggestions for preparing for the exams. The guide also includes test descriptions, sample questions, and tips for preparing to take the exams.

CLEP has also made available a demonstration video (CLEP Tutorial) that walks test-takers through the Internet-based testing experience. You may also refer to the CLEP Tutorial to access sample questions and a demonstration on how to use the online calculators. You can access the CLEP Tutorial video by visiting http://clep.collegeboard.org/test-preparation. Then, use this *Examination Guide* or the *CLEP Official Study Guide* to become familiar with the description and content of the CLEP exam that you are interested in taking. The *Examination Guides* and the *CLEP Official Study Guide* contain sample questions and an answer key for each exam, as well as in-depth information about how to decide which exams to take, how to prepare to take those exams, and how to interpret your scores.

CLEP Study Materials: A Word of Warning

There are many free or inexpensive sources for CLEP preparation materials, including public or college libraries, bookstores, and educational websites. CLEP exams reflect the material taught in introductory college courses; check with local colleges to see what texts are being used in the subject in which you hope to study for a CLEP exam.

The College Board provides the *CLEP Official Study Guide* and individual exam guides (available for download at clep.collegeboard.org/test-preparation) to familiarize you with the types of questions on the exams and to provide important tips to help you prepare for the tests. They are not meant to help you learn all the subject matter that CLEP exams cover. We recommend that you study a textbook for the relevant course at your college or one of the suggested resources listed on the CLEP website to learn or review the content of the exam in which you're interested.

Many private companies offer preparation services for CLEP exams. Some companies are legitimate, but others make promises they cannot keep and sell services and products you don't need.

We have received complaints from CLEP candidates regarding the following practices (practices which we consider to be unfair or inappropriate).

- Attempts to sell preparation services for many CLEP exams at once, with sizable payment up front or on credit
- Credit agreements with companies other than the one selling the preparation material
- Contacts from salespeople to you or your family at home
- Promises that you can get college credit without enrolling in college
- Efforts to sell dictionaries or encyclopedias as part of a test preparation package

If you feel you have been cheated, we recommend that you seek the assistance of an organization such as the Better Business Bureau (www.bbb.org) or the Federal Trade Commission (www.ftc.gov).

American Council on Education (ACE)

If you still have general questions about continuing or adult education after reading this book, ACE can provide advice and information:

American Council on Education
One Dupont Circle, NW
Washington, DC 20036
202-939-9300
www.acenet.edu

I. The College-Level Examination Program

How the Program Works

CLEP exams are administered at over 1,900 institutions nationwide, and 2,900 colleges and universities award college credit to those who perform well on them. This rigorous program allows many self-directed students of a wide range of ages and backgrounds to demonstrate their mastery of introductory college-level material and pursue greater academic success. Students can earn credit for what they already know by getting qualifying scores on any of the 33 examinations.

The CLEP exams cover material that is taught in introductory-level courses at many colleges and universities. Faculty at individual colleges review the exams to ensure that they cover the important material currently taught in their courses.

Although CLEP is sponsored by the College Board, only colleges may grant credit toward a degree. To learn about a particular college's CLEP policy, contact the college directly. When you take a CLEP exam, you can request that a copy of your score report be sent to the college you are attending or planning to attend. After evaluating your score, the college will decide whether or not to award you credit for a certain course or courses, or to exempt you from them.

If the college decides to give you credit, it will record the number of credits on your permanent record, thereby indicating that you have completed work equivalent to a course in that subject. If the college decides to grant exemption without giving you credit for a course, you will be permitted to omit a course that would normally be required of you and to take a course of your choice instead.

The CLEP program has a long-standing policy that an exam may not be taken within the specified wait period. This waiting period provides you with an opportunity to spend additional time preparing for the exam or the option of taking a classroom course. If you violate the CLEP retest policy, the administration will be considered invalid, the score canceled, and any test fees will be forfeited. If you are a military service member, please note that DANTES will not fund retesting on a previously funded CLEP exam. However, you may personally fund a retest after the specified wait period.

The CLEP Examinations

CLEP exams cover material directly related to specific undergraduate courses taught during a student's first two years in college. The courses may be offered for three, four, six, or eight semester hours in general areas such as mathematics, history, social sciences, English composition, natural sciences, and humanities. Institutions will either grant credit for a specific course based on a satisfactory score on the related exam, or in the general area in which a satisfactory score is earned. The credit is equal to the credit awarded to students who successfully complete the course.

What the Examinations Are Like

CLEP exams are administered on computer and are approximately 90 minutes long, with the exception of College Composition, which is approximately 120 minutes long. Most questions are multiple choice; other types of questions require you to fill in a numeric answer, to shade areas of an object, or to put items in the correct order. Questions using these kinds of skills are called zone, shade, grid, scale, fraction, numeric entry, histogram, and order match questions.

CLEP College Composition includes a mandatory essay section, responses to which must be typed into the computer.

Some of the examinations have optional essays. You should check with the individual college or university where you are sending your score to see whether an optional essay is required for those exams. These essays are administered on paper and are scored by faculty at the institution that receives your score.

Where to Take the Examinations and How to Register

CLEP exams are administered throughout the year at over 1,900 test centers in the United States and select international sites. Once you have decided to take a CLEP examination, you can log into My Account at https://clepportal.collegeboard.org/myaccount to create and manage your own personal accounts, pay for CLEP exams and purchase study materials. You can self-register at any time by completing the online registration form.

Through My Account you can also access a list of institutions that administer CLEP and locate a test center in your area. **After paying for your exam through My Account, you must still contact the test center to schedule your CLEP exam.**

If you are unable to locate a test center near you, call 800-257-9558 for more information.

College Credit Recommendation of the American Council on Education (ACE)

For many years, the American Council on Education's College Credit Recommendation Service (ACE CREDIT) has periodically evaluated CLEP processes and procedures for developing, administering, and scoring the exams. Effective July 2001, ACE recommended a uniform credit-granting score of 50 across all subjects (with additional Level-2 recommendations for the world language examinations), representing the performance of students who earn a grade of C in the corresponding course. The score scale for each CLEP exam is derived from the judgment of a panel of experts (college faculty who teach the course) who provide information on the level of student performance that would be necessary to receive college credit in the course.

The American Council on Education, the major coordinating body for all the nation's higher education institutions, seeks to provide leadership and a unifying voice on key higher education issues and to influence public policy through advocacy, research, and program initiatives. For more information, visit the ACE CREDIT website at www.acenet.edu/acecredit.

How Your Score Is Reported

You have the option of seeing your CLEP score immediately after you complete the exam, except in the case of College Composition, for which scores are available four to six weeks after the exam date. Once you choose to see your score, it will be sent automatically to the institution you have designated as a score recipient; it cannot be canceled. You will receive a candidate copy of your score before you leave the test center. If you have tested at the institution that you have designated as a score recipient, it will have immediate access to your test results.

If you do not want your score reported, you may select that as an option at the end of the examination *before the exam is scored*. Once you have selected the option to *not* view your score, the score is canceled. The score will not be reported to the institution you have designated, and you will not receive a candidate copy of your score report. You will have to wait the specified wait period before you can take the exam again.

CLEP scores are kept on file for 20 years. During this period, for a small fee, you may have your transcript sent to another college or to anyone else you specify. Your score(s) will never be sent to anyone without your approval.

II. Approaching a College About CLEP

The following sections provide a step-by-step guide to learning about the CLEP policy at a particular college or university. The person or office that can best assist you may have a different title at each institution, but the following guidelines will lead you to information about CLEP at any institution.

Adults and other nontraditional students returning to college often benefit from special assistance when they approach a college. Opportunities for adults to return to formal learning in the classroom are now widespread, and colleges and universities have worked hard to make this a smooth process for older students. Many colleges have established special offices that are staffed with trained professionals who understand the kinds of problems facing adults returning to college. If you think you might benefit from such assistance, be sure to find out whether these services are available at your college.

How to Apply for College Credit

Step 1. *Obtain, or access online, the general information catalog and a copy of the CLEP policy from each college you are considering.*

Information about admission and CLEP policies can be obtained on the college's website at clep.collegeboard.org/search/colleges, or by contacting or visiting the admission office. Ask for a copy of the publication in which the college's complete CLEP policy is explained. Also, get the name and the telephone number of the person to contact in case you have further questions about CLEP.

Step 2. *If you have not already been admitted to a college that you are considering, look at its admission requirements for undergraduate students to see whether you qualify.*

Whether you're applying for college admission as a high school student, transfer student or as an adult resuming a college career or going to college for the first time, you should be familiar with the requirements for admission at the schools you are considering. If you are a nontraditional student, be sure to check whether the school has separate admission requirements that might apply to you. Some schools are very selective, while others are "open admission."

It might be helpful for you to contact the admission office for an interview with a counselor. State why you want the interview and ask what documents you should bring with you or send in advance. (These materials may include a high school transcript, transcript of previous college work, or completed application for admission.) Make an extra effort to have all the information requested in time for the interview.

During the interview, relax and be yourself. Be prepared to state honestly why you think you are ready and able to do college work. If you have already taken CLEP exams and scored high enough to earn credit, you have shown that you are able to do college work. Mention this achievement to the admission counselor because it may increase your chances of being accepted. If you have not taken a CLEP exam, you can still improve your chances of being accepted by describing how your job training or independent study has helped prepare you for college-level work. Discuss with the counselor what you have learned from your work and personal experiences.

Step 3. *Evaluate the college's CLEP policy.*

Typically, a college lists all its academic policies, including CLEP policies, in its general catalog or on its website. You will probably find the CLEP policy statement under a heading such as Credit-by-Examination, Advanced Standing, Advanced Placement, or External Degree Program. These sections can usually be found in the front of the catalog. You can also check out the institution's CLEP Policy by visiting clep.collegeboard.org/search/colleges.

Many colleges publish their credit-by-examination policies in separate brochures, which are distributed through the campus testing office, counseling center, admission office or registrar's office. If you find a very general policy statement in the college catalog, seek clarification from one of these offices.

Review the material in the section of this chapter entitled "Questions to Ask About a College's CLEP Policy." Use these guidelines to evaluate the college's CLEP policy. If you have not yet taken a CLEP exam, this evaluation will help you decide which exams to take. Because individual colleges have different CLEP policies, a review of several policies may help you decide which college to attend.

Step 4. *If you have not yet applied for admission, do so as early as possible.*

Most colleges expect you to apply for admission several months before you enroll, and it is essential that you meet the published application deadlines. It takes time to process your application for admission. If you have yet to take a CLEP exam, you may want to take one or more CLEP exams while you are waiting for your application to be processed. Be sure to check the college's CLEP policy beforehand so that you are taking exams your college will accept for credit. You should also find out from the college when to submit your CLEP score(s).

Complete all forms and include all documents requested with your application(s) for admission. Normally, an admission decision cannot be reached until all documents have been submitted and evaluated. Unless told to do so, do not send your CLEP score(s) until you have been officially admitted.

Step 5. *Arrange to take CLEP exam(s) or to submit your CLEP score(s).*

CLEP exams can be taken at any of the 1,900 test centers worldwide. To locate a test center near you, visit clep.collegeboard.org/search/test-centers.

If you have already taken a CLEP exam, but did not have your score sent to your college, you can have an official transcript sent at any time for a small fee. Fill out the Transcript Request Form included on the same page as your exam score. If you do not have the form, visit clep.collegeboard.org/about/score to download a copy, or call 800-257-9558 to order a transcript using a major credit card. Completed forms should be faxed to 610-628-3726 or sent to the following address, along with a check or money order made payable to CLEP for $20 (this fee is subject to change).

> CLEP Transcript Service
> P.O. Box 6600
> Princeton, NJ 08541-6600

Transcripts will only include CLEP scores for the past 20 years; scores more than 20 years old are not kept on file.

Your CLEP scores will be evaluated, probably by someone in the admission office, and sent to the registrar's office to be posted on your permanent record once you are enrolled. Procedures vary from college to college, but the process usually begins in the admission office.

Step 6. *Ask to receive a written notice of the credit you receive for your CLEP score(s).*

A written notice may save you problems later, when you submit your degree plan or file for graduation. In the event that there is a question about whether or not you earned CLEP credit, you will have an official record of what credit was awarded. You may also need this verification of course credit if you meet with an academic adviser before the credit is posted on your permanent record.

Step 7. *Before you register for courses, seek academic advising.*

A discussion with your academic adviser can help you to avoid taking unnecessary courses and can tell you specifically what your CLEP credit will mean to you. This step may be accomplished at the time you enroll. Most colleges have orientation sessions for new students prior to each enrollment period. During orientation, students are usually assigned academic advisers who then give them individual help in developing long-range plans and course schedules for the next semester. In conjunction with this counseling, you may be asked to take some additional tests so that you can be placed at the proper course level.

Questions to Ask About a College's CLEP Policy

Before taking CLEP exams for the purpose of earning college credit, try to find the answers to these questions:

1. *Which CLEP exams are accepted by the college?*

   A college may accept some CLEP exams for credit and not others — possibly not the exams you are considering. For this reason, it is important that you know the specific CLEP exams for which you can receive credit.

2. *Does the college require the optional free-response (essay) section for exams in composition and literature as well as the multiple-choice portion of the CLEP exam you are considering? Will you be required to pass a departmental test such as an essay, laboratory, or oral exam in addition to the CLEP multiple-choice exam?*

   Knowing the answers to these questions ahead of time will permit you to schedule the optional free-response or departmental exam when you register to take your CLEP exam.

3. *Is CLEP credit granted for specific courses at the college? If so, which ones?*

   You are likely to find that credit is granted for specific courses and that the course titles are designated in the college's CLEP policy. It is not necessary, however, that credit be granted for a specific course for you to benefit from your CLEP credit. For instance, at many liberal arts colleges, all students must take certain types of courses; these courses may be labeled the core curriculum, general education requirements, distribution requirements, or liberal arts requirements. The requirements are often expressed in terms of credit hours. For example, all students may be required to take at least six hours of humanities, six hours of English, three hours of mathematics, six hours of natural science, and six hours of social science, with no particular courses in these disciplines specified. In these instances, CLEP credit may be given as "6 hrs. English Credit" or "3 hrs. Math Credit" without specifying for which English or mathematics courses credit has been awarded. To avoid possible disappointment, you should know before taking a CLEP exam what type of credit you can receive or whether you will be exempted from a required course but receive no credit.

4. *How much credit is granted for each exam you are considering, and does the college place a limit on the total amount of CLEP credit you can earn toward your degree?*

   Not all colleges that grant CLEP credit award the same amount for individual exams. Furthermore, some colleges place a limit on the total amount of credit you can earn through CLEP or other exams. Other colleges may grant you exemption but no credit toward your degree. Knowing several colleges' policies concerning these issues may help you decide which college to attend. If you think you are capable of passing a number of CLEP exams, you may want to attend a college that will allow you to earn credit for all or most of them. Check whether your institution grants CLEP policy by visiting clep.collegeboard.org/search/colleges.

5. *What is the required score for earning CLEP credit for each exam you are considering?*

Most colleges publish the required scores for earning CLEP credit in their general catalogs or in brochures. The required score may vary from exam to exam, so find out the required score for each exam you are considering.

6. *What is the college's policy regarding prior course work in the subject in which you are considering taking a CLEP exam?*

Some colleges will not grant credit for a CLEP exam if the candidate has already attempted a college-level course closely aligned with that exam. For example, if you successfully completed English 101 or a comparable course on another campus, you will probably not be permitted to also receive CLEP credit in that subject. Some colleges will not permit you to earn CLEP credit for a course that you failed.

7. *Does the college make additional stipulations before credit will be granted?*

It is common practice for colleges to award CLEP credit only to their enrolled students. There are other stipulations, however, that vary from college to college. For example, does the college require you to formally apply for or to accept CLEP credit by completing and signing a form? Or does the college require you to ''validate'' your CLEP score by successfully completing a more advanced course in the subject? Getting answers to these and other questions will help to smooth the process of earning college credit through CLEP.

III. Deciding Which Examinations to Take

If You're Taking the Examinations for College Credit or Career Advancement…

Most people who take CLEP exams want to earn credit for college courses. Others take the exams to qualify for job promotions, professional certification, or licensing. Whatever the reason, it is vital to most candidates that they be well prepared for the exams so that they can advance as rapidly as possible toward their educational or career goals.

Those who have limited knowledge in the subjects covered by the exams they are considering are advised to enroll in the college courses in which that material is taught. Although there is no way to predict whether you will pass a particular CLEP exam, you may find the following guidelines helpful.

1. *Test Descriptions*

    For each exam, read the test description and the outline of "Knowledge and Skills Required" that are provided in the *CLEP Official Study Guide*. Are you familiar with most of the topics and terminology in the outline?

2. *Textbooks*

    Review the textbook and other resource materials used for the corresponding course at your college. You can find a list of suggested textbooks and free online resources for each exam at clep.collegeboard. org/test-preparation. Are you familiar with most of the topics and terminology used in college textbooks on this subject?

3. *Sample Questions*

    The sample questions included in this examination guide are intended to be representative of the content and difficulty of the questions on the exam. None of the sample questions appear on any CLEP examination. You may use them to get an understanding of the content and difficulty level of the questions on an actual exam. Knowing the correct answers to all of the sample questions is not a substitute for college-level study or a guarantee of satisfactory performance on the exam.

    Following the instructions and suggestions in the chapter entitled "Taking the Examinations," answer as many of the sample questions for the exam as you can. Check your answers against the answer key at the end of the section.
    - Were you able to answer almost all of the questions correctly? You may not need to study the subject extensively.
    - Did you have difficulty answering the questions? You will probably benefit from more extensive study of the subject.

4. *Previous Study*

Have you taken noncredit courses in this subject offered by an adult school or a private school, through correspondence, or in connection with your job? Did you do exceptionally well in this subject in high school, or did you take an honors course in this subject?

5. *Experience*

Have you learned or used the knowledge or skills included in this exam in your job or life experience? For example, if you lived in a Spanish-speaking country and spoke the language for a year or more, you might consider taking the Spanish Language exam. Or, if you have worked at a job in which you used accounting and finance skills, Financial Accounting would be an exam to consider taking. Or, if you have read a considerable amount of literature and attended many art exhibits, concerts, and plays, you might expect to do well on the Humanities exam.

6. *Other Exams*

Have you done well on other standardized tests in subjects related to the one you want to take? For example, did you score well above average on a portion of a college entrance exam covering similar skills, or did you obtain an exceptionally high score on a high school equivalency test or a licensing exam in this subject? Although such tests do not cover exactly the same material as the CLEP exams and may be easier, people who do well on these tests often do well on CLEP exams too.

7. *Advice*

Has a college counselor, professor, or some other professional person familiar with your ability advised you to take a CLEP exam?

If you answered yes to several of the above questions, you probably have a good chance of passing the CLEP exam you are considering. It is unlikely that you would have acquired sufficient background from experience alone. Learning gained through reading and study is essential, and you will probably find some additional study helpful before taking a CLEP exam. Information on how to review for CLEP exams can be found in the chapter entitled "Preparing to Take CLEP Examinations."

IV. Preparing to Take CLEP Examinations

Having made the decision to take one or more CLEP exams, most people then want to know how to prepare for them — how much, how long, when, and how should they go about it? The precise answers to these questions vary greatly from individual to individual. However, most candidates find that some type of test preparation is helpful.

Most people who take CLEP exams do so to show that they have already learned the key material taught in a college course. Many of them need only a quick review to assure themselves that they have not forgotten what they once studied, and to fill in some of the gaps in their knowledge of the subject. Others feel that they need a thorough review and spend several weeks studying for an exam. Some people take a CLEP exam as a kind of "final exam" for independent study of a subject. This last group requires significantly more study than do those who only need to review, and they may need some guidance from professors of the subjects they are studying.

The key to how you prepare for CLEP exams often lies in locating those skills and areas of prior learning in which you are strongest and deciding where to focus your energies. Some people may know a great deal about a certain subject area but may not test well. These individuals would probably be just as concerned about strengthening their test-taking skills as they would about studying for a specific test. Many mental and physical skills are required in preparing for a test. It is important not only to review or study for the exams but also to make certain that you are alert, relatively free of anxiety, and aware of how to approach standardized tests. Suggestions about developing test-taking skills and preparing psychologically and physically for a test are given in this chapter. The following section suggests ways of assessing your knowledge of the content of an exam and then reviewing and studying the material.

Using the Examination Guides

The individual exam guides, available for purchase on clep.collegeboard.org, contain the same information you will find in the *CLEP Official Study Guide*. Each exam guide includes an outline of the knowledge and skills covered by the test, sample questions similar to those that appear on the exam, and tips for preparing to take the exam.

You may also choose to contact a college in your area that offers a course with content comparable to that on the CLEP exam you want to take, or read the suggested resources for each exam on clep.collegeboard.org/exam. If possible, use the textbook and other materials required for that course to help you prepare. To get this information, check the college's catalog for a list of courses offered. Then call the admission office, explain what subject you're interested in, and ask who in that academic department you can contact for specific information on textbooks and other study resources to use. You might also be able to find the course syllabus, which will list course materials and assignments, online at the college's website. Be sure that the college you're interested in gives credit for the CLEP exam for which you're preparing.

Begin by carefully reading the test description and outline of knowledge and skills required for the exam in the exam guide. As you read through the topics listed, ask yourself how much you know about each one. Also
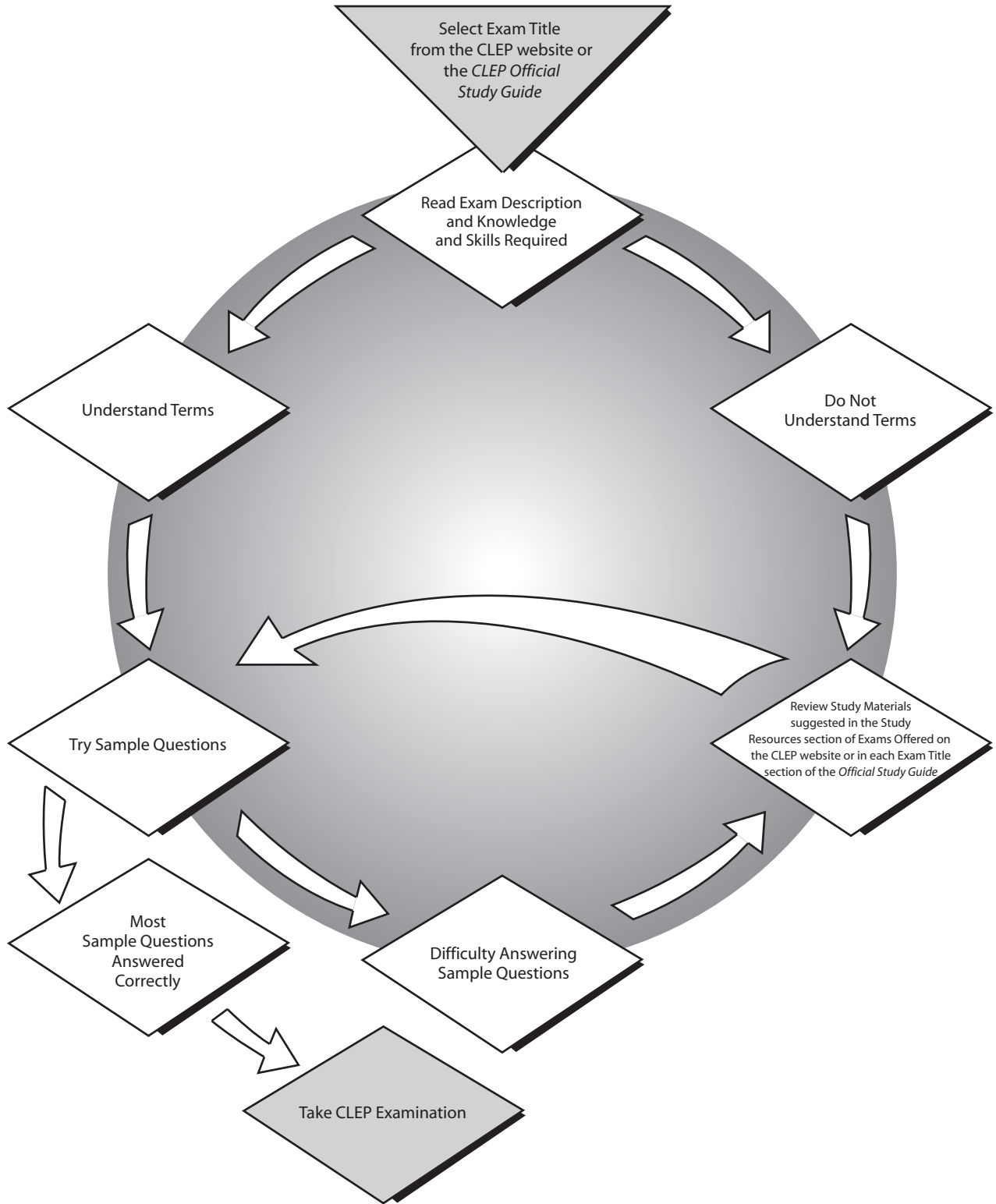
note the terms, names, and symbols that are mentioned, and ask yourself whether you are familiar with them. This will give you a quick overview of how much you know about the subject. If you are familiar with nearly all the material, you will probably need a minimum of review; however, if topics and terms are unfamiliar, you will probably require substantial study to do well on the exam.

If, after reviewing the test description provided in the exam guide, you find that you need extensive review, put off answering the sample questions until you have done some reading in the subject. If you complete them before reviewing the material, you will probably look for the answers as you study, and this will not be a good assessment of your ability at a later date. Do not refer to the sample questions as you prepare for the exam. The sample questions are representative of the types of questions you will find on a CLEP exam, but none of the questions will actually appear on an exam, so concentrating on them without broader study of the subject won't help you.

If you think you are familiar with most of the test material, try to answer the sample questions, checking your responses against the answer key. Use the test-taking strategies described in the next chapter.

Assessing Your Readiness
for a CLEP Examination

Select Exam Title
from the CLEP website or
the *CLEP Official
Study Guide*

Read Exam Description
and Knowledge
and Skills Required

Understand Terms

Do Not
Understand Terms

Try Sample Questions

Review Study Materials
suggested in the Study
Resources section of Exams Offered on
the CLEP website or in each Exam Title
section of the *Official Study Guide*

Most
Sample Questions
Answered
Correctly

Difficulty Answering
Sample Questions

Take CLEP Examination

Suggestions for Studying

The following suggestions have been gathered from people who have prepared for CLEP exams or other college-level tests.

1. *Review the CLEP Tutorial video.*

The CLEP Tutorial video walks you through the Internet-based testing experience. Through this tutorial you will become familiar with the Internet-based format of the CLEP exams, access sample questions through a virtual experience, and view a demonstration on how to use the online calculators. You can access the CLEP Tutorial video by visiting clep.collegeboard.org/test-preparation.

> **Remember, if you want to review *content* covered by each examination, the *CLEP Official Study Guide* contains a complete exam description — including a content outline, a description of the knowledge and skills required to do well, and sample questions — for each subject. An answer key for each subject is also included. However, the *Guide* is not intended to replace a textbook. Additional study may be required.**

2. *Define your goals and locate study materials.*

Once you've determined how much preparation you'll need to do, you'll need to define your study goals. Set aside a block of time to review the material provided in this book. Using the guidelines for knowledge and skills required, locate suitable resource materials. If a preparation course is offered by an adult school or college in your area, you might find it helpful to enroll. (You should be aware, however, that such courses are not authorized or sponsored by the College Board. The College Board has no responsibility for the content of these courses, nor are they responsible for books on preparing for CLEP exams that have been published by other organizations.) If you know others who have taken CLEP exams, ask them how they prepared.

You may want to get a copy of a syllabus for the college course that is comparable to the CLEP exam(s) you plan to take. You can also ask the appropriate professor at the school you'll be attending, or check his or her website, for a reading list. Use the syllabus, course materials and/or reading list as a guide for selecting textbooks and study materials. You may purchase these or check them out of your local library. Some websites offer course materials and lectures online; these can be an excellent resource. Examples of these include:
- MIT OpenCourseWare (http://ocw.mit.edu),
- Carnegie Mellon's Open Learning Initiative (http://www.cmu.edu/oli/),
- and the National Repository of Online Courses (http://www.thenrocproject.org).

Most of this material is offered for free. Educational websites, like those offered by PBS (www.pbs.org) or the National Geographic Society (www.nationalgeographic.com), can be helpful as well. You can also find a list of suggested textbooks and online resources for each CLEP exam at clep.collegeboard.org/exam.

Check with your librarian about locating study aids relevant to the exams you plan to take. These supplementary materials may include videos or DVDs made by education-oriented companies and organizations, language tapes, and computer software. And don't forget that what you do with your leisure time can be very educational, whether it's surfing current-events websites, watching a PBS series, reading a financial newsletter, or attending a play.

3. *Find a good place to study.*

To determine what kind of place you need for studying, ask yourself the following questions: Do I need a quiet place? Does the telephone distract me? Do objects I see in this place remind me of things I should do? Is it too warm? Is it well lit? Am I too comfortable here? Do I have space to spread out my materials? You may find the library more conducive to studying than your home. If you decide to study at home or in your dorm, you might prevent interruptions by other household members by putting a sign on the door of your study room to indicate when you will be available.

4. *Schedule time to study.*

To help you determine where studying best fits into your schedule, try this exercise: Make a list of your daily activities (for example, sleeping, working, eating, attending class, sports, or exercise) and estimate how many hours a day you spend on each activity. Now, rate all the activities on your list in order of their importance and evaluate your use of time. Often people are astonished at how an average day appears from this perspective. You may discover that your time can be scheduled in alternative ways. For example, you could remove the least important activities from your day and devote that time to studying or to another important activity.

5. *Establish a study routine and a set of goals.*

To study effectively, you should establish specific goals and a schedule for accomplishing them. Some people find it helpful to write out a weekly schedule and cross out each study period when it is completed. Others maintain their concentration better by writing down the time when they expect to complete a study task. Most people find short periods of intense study more productive than long stretches of time. For example, they may follow a regular schedule of several 20- or 30-minute study periods with short breaks between them. Some people like to allow themselves rewards as they complete each study goal. It is not essential that you accomplish every goal exactly within your schedule; the point is to be committed to your task.

6. *Learn how to take an active role in studying.*

If you have not done much studying for some time, you may find it difficult to concentrate at first. Try a method of studying, such as the one outlined below and on the next page, that will help you concentrate on and remember what you read.

a. First, read the chapter summary and the introduction so you will know what to look for in your reading.

b. Next, convert the section or paragraph headlines into questions. For example, if you are reading a section entitled "The Causes of the American Revolution," ask yourself, "What were the causes of the American Revolution?" Compose the answer as you read the paragraph. Reading and answering questions aloud will help you understand and remember the material.

c. Take notes on key ideas or concepts as you read. Writing will also help you fix concepts more firmly in your mind. Underlining key ideas or writing notes in your book can be helpful and will be useful for review. Underline only important points. If you underline more than a third of each paragraph, you are probably underlining too much.

d. If there are questions or problems at the end of a chapter, answer or solve them on paper as if you were asked to do them for homework. Mathematics textbooks (and some other books) sometimes include answers to some or all of the exercises. If you have such a book, write your answers before looking at the ones given. When problem solving is involved, work enough problems to master the required methods and concepts. If you have difficulty with problems, review any sample problems or explanations in the chapter.

e. To retain knowledge, most people have to review the material periodically. If you are preparing for an exam over an extended period of time, review key concepts and notes each week or so. Do not wait for weeks to review the material or you will need to relearn much of it.

Test Preparation Tips

1. Familiarize yourself as much as possible with the test and the test situation before the day of the exam. It will be helpful for you to know ahead of time:

    a. how much time will be allowed for the test and whether there are timed subsections. (This information is included in this examination guide and in the CLEP Tutorial video.)

    b. what types of questions and directions appear on the exam.

    c. how your test score will be computed.

    d. in which building and room the exam will be administered.

    e. the time of the test administration.

    f. direction, transit and parking information to the test center.

2. Register and pay your exam fee through My Account at https://clepportal.collegeboard.org/myaccount and print your registration ticket. Contact your preferred test center to schedule your appointment to test. Your test center may require an additional administration fee. Check with your test center and confirm the amount required and acceptable method of payment.

3. On the day of the exam, remember to do the following.

    a. Arrive early enough so that you can find a parking place, locate the test center, and get settled comfortably before testing begins.

    b. Bring the following with you:

- completed registration ticket

- any registration forms or printouts required by the test center. Make sure you have filled out all necessary paperwork in advance of your testing date.

- a form of valid and acceptable identification. Acceptable identification must:

  - Be government-issued.

  - Be an original document — photocopied documents are not acceptable.

  - Be valid and current — expired documents (bearing expiration dates that have passed) are not acceptable, no matter how recently they may have expired.

  - Bear the test-taker's full name, in English language characters, exactly as it appears on the Registration Ticket, including the order of the names.

  - Middle initials are optional and only need to match the first letter of the middle name when present on both the ticket and the identification.

  - Bear a recent recognizable photograph that clearly matches the test-taker.

  - Include the test-taker's signature.

  - Be in good condition, with clearly legible text and a clearly visible photograph.

  Refer to the Exam Day Info page on the CLEP website (http://clep.collegeboard.org/ exam-day-info) for more details on acceptable and unacceptable forms of identification.

- Military test-takers, bring your Geneva Convention Identification Card. Refer to clep.collegeboard. org/military for additional information on IDs for active duty members, spouses, and civil service civilian employees.

- Two number 2 pencils with good erasers. Mechanical pencils are prohibited in the testing room.

    c. Leave all books, papers, and notes outside the test center. You will not be permitted to use your own scratch paper; it will be provided by the test center.

    d. Do not take a calculator to the exam. If a calculator is required, it will be built into the testing software and available to you on the computer. The CLEP Tutorial video will have a demonstration on how to use online calculators.

    e. Do not bring a cell phone or other electronic devices into the testing room.

4. When you enter the testing room:

    a. You will be assigned to a computer testing station. If you have special needs, be sure to communicate them to the test center administrator *before* the day you test.

b. Be relaxed while you are taking the exam. Read directions carefully and listen to all instructions given by the test administrator. If you don't understand the directions, ask for help before the test begins. If you must ask a question that is not related to the exam after testing has begun, raise your hand and a proctor will assist you. The proctor cannot answer questions related to the exam.

c. Know your rights as a test-taker. You can expect to be given the full working time allowed for taking the exam and a reasonably quiet and comfortable place in which to work. If a poor testing situation is preventing you from doing your best, ask whether the situation can be remedied. If it can't, ask the test administrator to report the problem on a Center Problem Report that will be submitted with your test results. You may also wish to immediately write a letter to CLEP, P.O. Box 6656, Princeton, NJ 08541-6656. Describe the exact circumstances as completely as you can. Be sure to include the name of the test center, the test date and the name(s) of the exam(s) you took.

Accommodations for Students with Disabilities

If you have a disability, such as a learning or physical disability, that would prevent you from taking a CLEP exam under standard conditions, you may request accommodations at your preferred test center. Contact your preferred test center well in advance of the test date to make the necessary arrangements and to find out its deadline for submission of documentation and approval of accommodations. Each test center sets its own guidelines in terms of deadlines for submission of documentation and approval of accommodations.

Accommodations that can be arranged directly with test centers include:
- ZoomText (screen magnification)
- Modifiable screen colors
- Use of a reader, amanuensis, or sign language interpreter
- Extended time
- Untimed rest breaks

If the above accommodations do not meet your needs, contact CLEP Services at clep@info.collegeboard.org for information about other accommodations.

V. Taking the Examinations

Test-taking skills enable a person to use all available information to earn a score that truly reflects his or her ability. There are different strategies for approaching different kinds of exam questions. For example, free-response and multiple-choice questions require very different approaches. Other factors, such as how the exam will be scored, may also influence your approach to the exam and your use of test time. Thus, your preparation for an exam should include finding out all you can about the exam so you can use the most effective test-taking strategies.

Test-Taking Strategies for Multiple-Choice Questions

1. Listen carefully to any instructions given by the test administrator and read the on-screen instructions before you begin to answer the questions.

2. Keep an eye on the clock and the timing that is built into the testing software. You have the option of turning the clock on or off at any time. As you proceed, make sure that you are not working too slowly. You should have answered at least half the questions in a section when half the time for that section has passed.

3. Before answering a question, read the entire question, including all the answer choices. Instructions usually tell you to select the "best" answer. Sometimes one answer choice is partially correct but another option is better, so it's a good idea to read all the answers even if the first or second choice looks correct to you.

4. Read and consider every question. Questions that look complicated at first glance may not actually be so difficult once you have read them carefully.

5. Do not spend too much time on any one question. If you don't know the answer after you've considered it briefly, go on to the next question. Mark that question using the mark tool at the bottom of the screen, and go back to review the question later, if you have time.

6. Watch for the following key words in test questions:

all	generally	never	perhaps
always	however	none	rarely
but	may	not	seldom
except	must	often	sometimes
every	necessary	only	usually

When a question or answer option contains words such as "always," "every," "only," "never," and "none," there can be no exceptions to the answer you choose. Use of words such as "often," "rarely," "sometimes," and "generally," indicates that there may be some exceptions to the answer.

7. Make educated guesses. There is no penalty for incorrect answers. Therefore, you should guess even if you do not know an answer. If you have some knowledge of the question and are able to eliminate one or more of the answer choices as wrong, your chance of getting the right answer is improved.

8. Do not waste your time looking for clues to right answers based on flaws in question wording or patterns in correct answers. CLEP puts a great deal of effort into developing valid, reliable, and fair exams. CLEP test development committees are composed of college faculty who are experts in the subjects covered by the exams and are appointed by the College Board to write test questions and to scrutinize each question that is included on a CLEP exam. They make every effort to ensure that the questions are not ambiguous, that they have only one correct answer, and that they cover college-level topics. These committees do not intentionally include "trick" questions. If you think a question is flawed, ask the test administrator to report it, or write immediately to CLEP Test Development, P.O. Box 6600, Princeton, NJ 08541-6600. Include the name of the exam and test center, the exam date, and the number of the exam question. All such inquiries are investigated by test development professionals.

Answering Essay Questions

The College Composition exam is the only CLEP exam that includes two mandatory essays. Both the multiple-choice section and the essay section of the exam are administered on the computer. You are required to type your essays using a format similar to word processing.

The essays for the College Composition exam will be scored by English professors from a variety of colleges and universities who are trained by CLEP. A process called holistic scoring is used to rate your writing abilities. This process is explained in the examination guide for College Composition, which also includes scored sample essays and essay questions.

Four other CLEP exams have optional essays. Some colleges or universities may require you to take one of these optional essays as part of the American Literature, Analyzing and Interpreting Literature, English Literature, or College Composition Modular exam. There is an additional fee of $10 for each of the optional essays, payable to the institution that administers the exam. These essays are scored by the faculty of the institution that grants the credit. Therefore, you may find it helpful to talk with someone at your college to find out what criteria will be used to determine whether you will get credit. Ask how much emphasis will be placed on your writing ability and your ability to organize your thoughts, as opposed to your knowledge of the subject matter. Find out how much weight will be given to your multiple-choice test score in comparison with your free-response score in determining whether you will get credit. This will give you an idea of where you should expend the greatest effort in preparing for and taking the exam.

Test-Taking Strategies for Essay Writing

1. Before you begin to respond, read all the questions carefully and take a few minutes to jot down some ideas or create an outline. Scratch paper will be provided at the test center.

2. If you are given a choice of questions to answer, choose the questions that you think you can answer most clearly and knowledgeably.

3. Determine the order in which you will answer the questions. First, answer those you find the easiest so you can spend any extra time on the questions you find more difficult.

4. When you know which questions you will answer and in what order, determine how much testing time remains and estimate how many minutes you will devote to each question. Unless suggested times are given for the questions, try to allot an equal amount of time for each question.

5. Before answering each question, read it again carefully to make sure you are interpreting it correctly. Pay attention to key words, such as those listed below, that often appear in free-response questions. Be sure you know the exact meaning of these words before taking the exam.

analyze	demonstrate	enumerate	list
apply	derive	explain	outline
assess	describe	generalize	prove
compare	determine	illustrate	rank
contrast	discuss	interpret	show
define	distinguish	justify	summarize

If a question asks you to ''outline,'' ''define,'' or ''summarize,'' do not write a detailed explanation; if a question asks you to ''analyze,'' ''explain,'' ''illustrate,'' ''interpret,'' or ''show,'' you must do more than briefly describe the topic.

VI. Interpreting Your Scores

CLEP score requirements for awarding credit vary from institution to institution. The College Board, however, recommends that colleges refer to the standards set by the American Council on Education (ACE). All ACE recommendations are the result of careful and periodic review by evaluation teams made up of faculty who are subject-matter experts and technical experts in testing and measurement. To determine whether you are eligible for credit for your CLEP scores, you should refer to the policy of the college you will be attending. The policy will state the score that is required to earn credit at that institution. Many colleges award credit at the score levels recommended by ACE. However, some require scores that are higher or lower than these.

Your exam score will be printed for you at the test center immediately upon completion of the examination, unless you took College Composition. For this exam, you will receive your score four to six weeks after the exam date. Your CLEP exam scores are reported only to you, unless you ask to have them sent elsewhere. If you want your scores sent to a college, employer, or certifying agency, you must select this option through My Account. This service is free only if you select your score recipient at the time you register to take your exam. A fee will be charged for each score recipient you select at a later date. Your scores are kept on file for 20 years. For a fee, you can request a transcript at a later date.

The pamphlet *What Your CLEP Score Means*, which you will receive with your exam score, gives detailed information about interpreting your scores. A copy of the pamphlet is in the appendix of this *Guide*. A brief explanation appears below.

How CLEP Scores Are Computed

In order to reach a total score on your exam, two calculations are performed.

First, your "raw score" is calculated. This is the number of questions you answer correctly. Your raw score is increased by one point for each question you answer correctly, and no points are gained or lost when you do not answer a question or answer it incorrectly.

Second, your raw score is converted into a "scaled score" by a statistical process called *equating*. Equating maintains the consistency of standards for test scores over time by adjusting for slight differences in difficulty between test forms. This ensures that your score does not depend on the specific test form you took or how well others did on the same form. Your raw score is converted to a scaled score that ranges from 20, the lowest, to 80, the highest. The final scaled score is the score that appears on your score report.

How Essays Are Scored

The College Board arranges for college English professors to score the essays written for the College Composition exam. These carefully selected college faculty members teach at two- and four-year institutions nationwide. The faculty members receive extensive training and thoroughly review the College Board scoring policies and procedures before grading the essays. Each essay is read and scored

by two professors, the sum of the two scores for each essay is combined with the multiple-choice score, and the result is reported as a scaled score between 20 and 80. Although the format of the two sections is very different, both measure skills required for expository writing. Knowledge of formal grammar, sentence structure, and organizational skills are necessary for the multiple-choice section, but the emphasis in the free-response section is on writing skills rather than grammar.

Optional essays for CLEP Composition Modular and the literature examinations are evaluated and scored by the colleges that require them, rather than by the College Board. If you take an optional essay, it will be sent to the institution you designate when you take the test. If you did not designate a score recipient institution when you took an optional essay, you may still select one as long as you notify CLEP within 18 months of taking the exam. Copies of essays are not held beyond 18 months or after they have been sent to an institution.

College Algebra

Description of the Examination

The College Algebra examination covers material that is usually taught in a one-semester college course in algebra. Nearly half of the test is made up of routine problems requiring basic algebraic skills; the remainder involves solving nonroutine problems in which candidates must demonstrate their understanding of concepts. The test includes questions on basic algebraic operations; linear and quadratic equations, inequalities and graphs; algebraic, exponential and logarithmic functions; and miscellaneous other topics. It is assumed that candidates are familiar with currently taught algebraic vocabulary, symbols and notation. The test places little emphasis on arithmetic calculations. However, an online scientific calculator (nongraphing) will be available during the examination.

The examination contains approximately 60 questions to be answered in 90 minutes. Some of these are pretest questions that will not be scored. Any time candidates spend on tutorials and providing personal information is in addition to the actual testing time.

Knowledge and Skills Required

Questions on the College Algebra examination require candidates to demonstrate the following abilities in the approximate proportions indicated.

- Solving routine, straightforward problems (about 50 percent of the examination)
- Solving nonroutine problems requiring an understanding of concepts and the application of skills and concepts (about 50 percent of the examination)

The subject matter of the College Algebra examination is drawn from the following topics. The percentages next to the main topics indicate the approximate percentage of exam questions on that topic.

25% Algebraic Operations

Operations with exponents
Factoring and expanding polynomials
Operations with algebraic expressions
Absolute value
Properties of logarithms

25% Equations and Inequalities

Linear equations and inequalities
Quadratic equations and inequalities
Absolute value equations and inequalities
Systems of equations and inequalities
Exponential and logarithmic equations

30% Functions and Their Properties*

Definition, interpretation and representation/ modeling (graphical, numerical, symbolic, verbal)
Domain and range
Evaluation of functions
Algebra of functions
Graphs and their properties (including intercepts, symmetry, transformations)
Inverse functions

20% Number Systems and Operations

Real numbers
Complex numbers
Sequences and series
Factorials and Binomial Theorem

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*Each test may contain a variety of functions, including linear, polynomial (degree ≤ 5), rational, absolute value, power, exponential, logarithmic and piecewise-defined.

Sample Test Questions

The following sample questions do not appear on an actual CLEP examination. They are intended to give potential test-takers an indication of the format and difficulty level of the examination and to provide content for practice and review. Knowing the correct answers to all of the sample questions is not a guarantee of satisfactory performance on the exam.

Directions: An online scientific calculator will be available for the questions in this test.

Some questions will require you to select from among five choices. For these questions, select the BEST of the choices given.

Some questions will require you to type a numerical answer in the box provided.

Notes: (1) Unless otherwise specified, the domain of any function f is assumed to be the set of all real numbers x for which $f(x)$ is a real number.

(2) i will be used to denote $\sqrt{-1}$.

(3) Figures that accompany questions are intended to provide information useful in answering the questions. All figures lie in a plane unless otherwise indicated. The figures are drawn as accurately as possible EXCEPT when it is stated in a specific question that the figure is not drawn to scale. Straight lines and smooth curves may appear slightly jagged on the screen.

1. Which of the following expressions is equivalent to $(3 - 5b)^2$?

   (A) $9 - 25b^2$
   (B) $9 + 25b^2$
   (C) $9 - 15b - 25b^2$
   (D) $9 + 30b - 25b^2$
   (E) $9 - 30b + 25b^2$

2. Which of the following is a factor of $4 - (x + y)^2$?

   (A) $-(x + y)^2$
   (B) $x + y$
   (C) $2 - x + y$
   (D) $2 + x + y$
   (E) $4 + x + y$

3. $2v(3v^2 - 1) - (6 - 8v^3 + 14v) + 3 =$

   (A) $-2v^3 + 12v - 3$
   (B) $14v^3 + 12v - 3$
   (C) $14v^3 - 14v - 4$
   (D) $14v^3 - 16v - 3$
   (E) $14v^3 - 16v - 6$

4. The radius of the Sun is approximately 10^9 meters, and the radius of an oxygen atom is approximately 10^{-12} meter. The radius of the Sun is approximately how many times the radius of an oxygen atom?

   (A) 10^{-21}
   (B) 10^{-3}
   (C) 10^3
   (D) 10^9
   (E) 10^{21}

5. Where defined, $\dfrac{\dfrac{x^2 - 9}{x + 2}}{\dfrac{x - 3}{x - 2}} =$

   (A) $\dfrac{x - 2}{x + 2}$

   (B) $\dfrac{(x - 2)(x + 3)}{x + 2}$

   (C) $\dfrac{x^2 - x + 6}{x + 2}$

   (D) $\dfrac{1}{(x - 2)(x + 2)}$

   (E) $\dfrac{x + 3}{(x - 2)(x + 2)}$

6. Which of the following are solutions of the equation $(2x - 3)(3x + 5) = -14$?

   (A) $x = \dfrac{1}{3}$ and $x = -\dfrac{1}{2}$

   (B) $x = -\dfrac{1}{3}$ and $x = \dfrac{1}{2}$

   (C) $x = \dfrac{3}{2}$ and $x = -\dfrac{5}{3}$

   (D) $x = -\dfrac{3}{2}$ and $x = \dfrac{5}{3}$

   (E) $x = 2$ and $x = -7$

7. Of the following, which is greatest?

   (A) $2^{\left(3^5\right)}$

   (B) $\left(2^3\right)^5$

   (C) $3^{\left(2^5\right)}$

   (D) $\left(3^2\right)^5$

   (E) $5^{\left(3^2\right)}$

8. For any positive integer n, $\dfrac{(n+1)!}{n!} - n =$

   (A) 0   (B) 1   (C) n (D) $n+1$ (E) $n!$

9. Which of the following is equal to $r^2 t^{1/2} r^{2/3} t^{-3/2}$?

   (A) $-r^{8/3} t$

   (B) $\dfrac{r^{4/3}}{t^{3/4}}$

   (C) $\dfrac{r^{4/3}}{t}$

   (D) $\dfrac{r^{5/2}}{t^{5/6}}$

   (E) $\dfrac{r^{8/3}}{t}$

10. A ball is dropped from a height of h feet and repeatedly bounces off the floor. After each bounce, the ball reaches a height that is $\dfrac{2}{3}$ of the height from which it previously fell. For example, after the first bounce, the ball reaches a height of $\dfrac{2}{3}h$ feet. Which of the following represents the total number of feet the ball travels between the first and the sixth bounce?

   (A) $\displaystyle\sum_{i=1}^{5}(2h)\left(\frac{2}{3}\right)^{i}$

   (B) $\displaystyle\sum_{i=1}^{5}h\left(\frac{2}{3}\right)^{i}$

   (C) $\displaystyle\sum_{i=1}^{5}\left(\frac{2}{3}h\right)^{i}$

   (D) $\displaystyle\sum_{i=1}^{6}(2h)\left(\frac{2}{3}\right)^{i-1}$

   (E) $\displaystyle\sum_{i=1}^{\infty}h\left(\frac{2}{3}\right)^{i}$
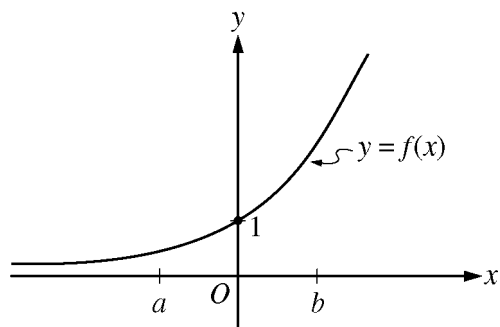
11. The graph shows an exponential function f in the xy-plane. The function g is defined by $g(x) = 2^{-x}$. Complete each sentence in the table by indicating the correct relationship between the two values.
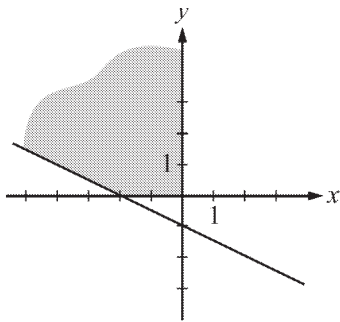
	less than	greater than	equal to	
$f(a)$ is				$g(a)$.
$f(b)$ is				$g(b)$.
$f(0)$ is				$g(0)$.

12. Which of the following defines the interval of real numbers $[-4, 2]$?

   (A) $|x - 0| \le 2$

   (B) $|x + 1| \le 3$

   (C) $|x + 1| \ge 3$
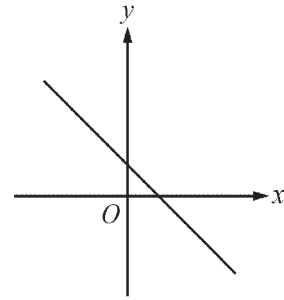
   (D) $|x - 4| \le 2$

   (E) $|x - 4| \ge 2$

13. Which of the following are the solutions of the equation $2x^2 + 2x = 4 - x$?

   (A) $x = 4$ and $x = 1$

   (B) $x = 4$ and $x = -\dfrac{1}{2}$

   (C) $x = \dfrac{3 + \sqrt{35}}{4}$ and $x = \dfrac{3 - \sqrt{35}}{4}$

   (D) $x = \dfrac{-3 + \sqrt{41}}{4}$ and $x = \dfrac{-3 - \sqrt{41}}{4}$

   (E) $x = \dfrac{-3 + i\sqrt{23}}{2}$ and $x = \dfrac{-3 - i\sqrt{23}}{2}$

14. The shaded region in the figure above represents the intersection of the graphs of $x \le 0$, $y \ge 0$, and which of the following inequalities?

   (A) $y \le -2x - 1$

   (B) $y \le -\dfrac{1}{2}x + 1$

   (C) $y \ge -2x - 1$

   (D) $y \ge -\dfrac{1}{2}x - 1$

   (E) $y \ge \dfrac{1}{2}x - 1$

15. The graph of the line with equation $ax + by = 1$ is shown above. Which of the following must be true?

   (A) $a > 0$ and $b < 0$

   (B) $a > 0$ and $b > 0$

   (C) $a < 0$ and $b < 0$

   (D) $a < 0$ and $b > 0$

   (E) $a = 0$ and $b > 0$

16. What are all the values of b for which the equation $9x^2 + bx + 1 = 0$ has no real solutions?

   (A) $b = -6$ or $b = 6$

   (B) $b < -6$ or $b > 6$

   (C) $b \le -6$ or $b \ge 6$

   (D) $-6 < b < 6$

   (E) $-6 \le b \le 6$

17. Which quadrants of the xy-plane contain points of the graph of $2x - y > 4$?

   (A) I, II, and III only

   (B) I, II, and IV only

   (C) I, III, and IV only

   (D) II, III, and IV only

   (E) I, II, III, and IV

18. Joe invests $40,000 and, at the same time, Tom invests $10,000. The value of Joe's investment decreases by $4,000 per year, while the value of Tom's investment increases by $1,000 per year. Which of the following systems of equations could be used to find the number of years, t, that it will take for the values, v, of the two investments to be equal?

(A) $v = 40,000 - t$ and $v = 10,000 + t$

(B) $v = 40,000 - 4t$ and $v = 10,000 + t$

(C) $v = 40,000 + 1,000t$ and
$v = 10,000 - 4,000t$

(D) $v = 40,000 + 4,000t$ and
$v = 10,000 - 1,000t$

(E) $v = 40,000 - 4,000t$ and
$v = 10,000 + 1,000t$

19. Which of the following is an equation of the line that passes through the points $(-2, 1)$ and $(1, 2)$ in the xy-plane?

(A) $x + 3y = 1$

(B) $x + 3y = 5$

(C) $x + 3y = -5$

(D) $x - 3y = -5$

(E) $x - 3y = -1$

20. If x is an irrational number, which of the following statements must be true?

(A) x^3 is an irrational number.

(B) x^2 is an irrational number.

(C) $x + x$ is an irrational number.

(D) x^2 is a rational number.

(E) $x + x$ is a rational number.

21. When $\dfrac{3 + 4i}{2 + i}$ is expressed in the form $a + bi$, what is the value of a?

[ ]

22. If $a < 0 < b < c$, then each of the following must be true EXCEPT

(A) $ac < ab$

(B) $a^2 < b^2 < c^2$

(C) $a^3 < b^3 < c^3$

(D) $ab < b^2 < bc$

(E) $a^2 b < a^2 c$

23. The illuminance of a surface varies inversely with the square of its distance from the light source. If the illuminance of a surface is 120 lumens per square meter when its distance from a certain light source is 6 meters, by how many meters should the distance of the surface from the source be increased to reduce its illuminance to 30 lumens per square meter?

(A) 3

(B) 6

(C) 12

(D) 15

(E) 18

24. What are all real values of x for which
$$\frac{2}{3 - x} = \frac{1}{3} - \frac{1}{x}?$$

(A) $x = -3$ only

(B) $x = 3$ only

(C) $x = -3$ and $x = 0$

(D) $x = -3$ and $x = 3$

(E) There are no real solutions.

25. Indicate whether each statement is always true, never true, or sometimes true for the real numbers a and b.

Statement	Always True	Never True	Sometimes True
$\lvert a + b \rvert = \lvert a \rvert + \lvert b \rvert$			
$\lvert a + b \rvert < \lvert a \rvert + \lvert b \rvert$			
$\lvert a + b \rvert \leq \lvert a \rvert + \lvert b \rvert$			
$\lvert a + b \rvert > \lvert a \rvert + \lvert b \rvert$			

x	0	1	2	3	4	5	6	7
$p(x)$	−30	22	110	150	34	−130	222	2,350

26. The table above gives some of the values of a 5th degree polynomial $p(x)$. Based on the values shown, what is the minimum number of real roots of the equation $p(x) = 0$?

    (A) One
    (B) Two
    (C) Three
    (D) Four
    (E) Five

27. The number of bricks in the bottom row of a brick wall is 49. The next row up from the bottom contains 47 bricks, and each subsequent row contains 2 fewer bricks than the row immediately below it. The number of bricks in the top row is 3. If the wall is one brick thick, what is the total number of bricks in the wall?

    ☐

28. Which of the following is the expansion of $(2x + 3)^3$?

    (A) $2x^3 + 3(2x^2) + 3(2x) + 1$
    (B) $2x^3 + 3(2x^2) + 3^2(2x) + 3$
    (C) $2x^3 + 3(2x^2) + 3^2(2x) + 3^3$
    (D) $(2x)^3 + 3(2x)^2 + 3^2(2x) + 3^3$
    (E) $(2x)^3 + 3^2(2x)^2 + 3^3(2x) + 3^3$

29. If $x = -3$ is a root of the equation $x^3 + 3x^2 - ax - 12 = 0$, what is the value of a ?

    ☐

30. If the first term of a geometric sequence is $\dfrac{3}{2}$ and the second and third terms are $-\dfrac{3}{4}$ and $\dfrac{3}{8}$, respectively, which of the following represents the nth term of the sequence?

    (A) $\dfrac{3(-1)^{n-1}}{2n}$

    (B) $\dfrac{3(-1)^{n}}{2n}$

    (C) $\dfrac{3(-1)^{n-1}}{2^{n}}$

    (D) $\dfrac{3(-1)^{n}}{2^{n}}$

    (E) $\dfrac{3(-1)^{n-1}}{2^{n+1}}$

31. A clothing company has budgeted $58,000 for the purchase of 7 sewing machines. The 7 sewing machines are to be chosen from two models, model X and model Y. If a model X sewing machine costs $8,000 and a model Y sewing machine costs $9,000, how many model X sewing machines should the company purchase to use exactly the budgeted money?

    (A) 2   (B) 3   (C) 4   (D) 5   (E) 6
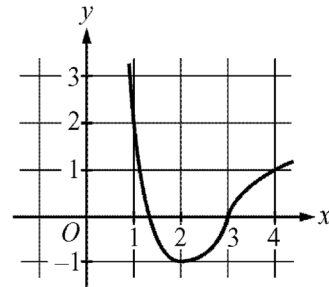
32. The graph of the function f is shown above. What is the value of $f(f(1))$?

    (A) −1   (B) 0   (C) 1   (D) 2   (E) 4

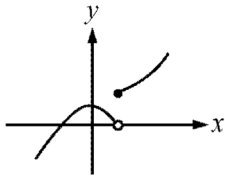33. In the xy-plane, what is the x-intercept of the graph of $y = -\dfrac{2}{3}x - 4$?

    ☐

34. Which of the following define y as a function of x ?

I. $2x^2 + y = 7$

II.

x	1	2	3	4
y	2	5	−1	2

III.

(A) None
(B) I and II only
(C) I and III only
(D) II and III only
(E) I, II, and III

35. If $3^{x+1} = 9^{2x-1}$, then $x =$

[   ]

36. Select two of the following choices and place them in the blanks below so that the resulting statements are true.

$M(t) = 210(0.89)^t$ 155

$M(t) = 210(0.11)^t$ 117

$M(t) = 11(210)^t$ 28

A patient takes a 210-milligram dose of medicine. The amount of medicine present in the body decreases by 11 percent each hour after it is taken. The amount of medicine M present in the body t hours after the medicine is taken can be modeled by the function _____. According to the model, _____ milligrams of the medicine are present in the body 5 hours after the medicine is taken.

37. If $f(x) = 2x + 1$ and $g(x) = 3x - 1$, then $f(g(x)) =$

(A) $5x$
(B) $x - 2$
(C) $6x - 1$
(D) $6x + 2$
(E) $6x^2 + x - 1$

38. If $\log_4 (y + 2) = 3$, what is the value of y ?

(A) 10   (B) 62   (C) 64   (D) 79   (E) 83

39. A colony of bacteria starts with 2 bacteria at noon. If the number of bacteria triples every 30 minutes, how many bacteria will be present at 3:00 P.M. on the same day?

(A)   486
(B)   729
(C)   1,458
(D) 46,656
(E) 118,098

40. Which of the following must be true?

I. $\log_3 3^t = t$
II. $\ln 10^{4.3} = 4.3 \ln 10$
III. $\log_{10}(xy^n) = \log_{10} x + n \log_{10} y$ for all positive numbers x and y

(A) I only
(B) II only
(C) I and II only
(D) II and III only
(E) I, II, and III

41. If $f(x) = 5 - 2x^3$ and f^{-1} denotes the inverse function of f, then $f^{-1}(x) =$

(A) $\sqrt[3]{\dfrac{5-x}{2}}$

(B) $\dfrac{\sqrt[3]{5-x}}{2}$

(C) $\sqrt[3]{\dfrac{x-5}{2}}$

(D) $\dfrac{1}{5-2x^3}$

(E) $5x^3 + 2$

42. $\dfrac{2x-1}{x+3} - \dfrac{x-2}{2x+1} =$

(A) $\dfrac{x+1}{3x+4}$

(B) $\dfrac{x-3}{(x+3)(2x+1)}$

(C) $\dfrac{3x-3}{(x+3)(2x+1)}$

(D) $\dfrac{3x^2 - x + 5}{(x+3)(2x+1)}$

(E) $\dfrac{3x^2 + x - 7}{(x+3)(2x+1)}$

43. In the xy-plane, the point (8, 10) lies on the graph of the function $y = f(x)$. Which of the following points must lie on the graph of the function $y = 2f(x-3) + 5$?

(A) (5, 10)

(B) (5, 15)

(C) (5, 25)

(D) (11, 15)

(E) (11, 25)

44. $(i+1)(3-i) + (2i-1) =$

(A) -6

(B) $1 + 4i$

(C) $2 + 4i$

(D) $3 + 4i$

(E) $4 + 2i$

45. The population of a small town is modeled by an exponential function of the form $p(t) = ab^t$, where t represents the number of years since 2010. The population of the town was recorded as 425 in 2010 and 612 in 2012. Based on the data for the years 2010 and 2012, what is the value of b in the model?

46. Which of the following, when added to $4a^2 + 9$, will result in a perfect square for all integer values of a ?

   (A) 0   (B) $3a$ (C) $6a$ (D) $9a$ (E) $12a$

$$x^2 + y^2 = 25$$
$$x + y = 1$$

47. For what values of x will (x, y) be a solution of the system of equations above?

   (A) $x = -4$ and $x = 3$
   (B) $x = -4$ and $x = 5$
   (C) $x = -3$ and $x = 4$
   (D) $x = 1$ and $x = 5$
   (E) The system has no solution.

48. A company's daily cost c, in hundreds of dollars, to manufacture n items of a certain product can be modeled by the function $c(n)$. According to the model, which of the following is the best interpretation of $c^{-1}(5) = 80$, where c^{-1} is the inverse function of c?

   (A) The company's daily cost to manufacture 5 items of the product is $80.
   (B) The company's daily cost to manufacture 5 items of the product is $8,000.
   (C) The company's daily cost to manufacture 500 items of the product is $80.
   (D) The company's daily cost to manufacture 80 items of the product is $5.
   (E) The company's daily cost to manufacture 80 items of the product is $500.

$$f(x) = \begin{cases} x^2 & \text{for } x \le 0 \\ ax + b & \text{for } x > 0 \end{cases}$$

49. The function f above has an inverse function for which of the following values of a and b ?

   (A) $a = -1, b = -2$
   (B) $a = -1, b = 2$
   (C) $a = 0, b = -1$
   (D) $a = 1, b = -2$
   (E) $a = 1, b = 2$

50. For the function $g(x) = \log_2 x$, which of the following must be true?

   I. The domain is $[0, \infty)$.
   II. The range is $(-\infty, \infty)$
   III. $g(x)$ increases with increasing values of x.

   (A) III only
   (B) I and II only
   (C) I and III only
   (D) II and III only
   (E) I, II, and III

51. A rectangular box has volume $x^3 - 8$ cubic inches. If the height of the box is $x - 2$ inches, what is the area of the base of the box, in square inches? (The volume of a box equals the area of the base times the height.)

   (A) $x^2 + 4$
   (B) $x^2 - 2x - 4$
   (C) $x^2 - 2x + 4$
   (D) $x^2 + 2x + 4$
   (E) $x^2 + 4x + 4$

52. If $y = 8x^2 + 4x - 1$ is expressed in the form $y = a(x - h)^2 + k$, where a, h, and k are constants, what is the value of k ?

   (A) -3
   (B) -2
   (C) $-\dfrac{3}{2}$
   (D) $-\dfrac{17}{16}$
   (E) $-\dfrac{1}{2}$

53. If b and c are integers such that the equation $3x^2 + bx + c = 0$ has only one real root, which of the following statements must be true?

   I. b is even.
   II. c is odd.
   III. b^2 is a multiple of 3.

   (A) I only
   (B) III only
   (C) I and II only
   (D) I and III only
   (E) I, II, and III

54. A rock is thrown straight up into the air from a height of 4 feet. The height of the rock above the ground, in feet, t seconds after it is thrown is given by $-16t^2 + 56t + 4$. For how many seconds will the height of the rock be at least 28 feet above the ground?

   (A) 0.5
   (B) 1.5
   (C) 2.5
   (D) 3.0
   (E) 3.5

55. $\log_5 \sqrt{125} - \log_2 \sqrt{2} =$

   [ ]
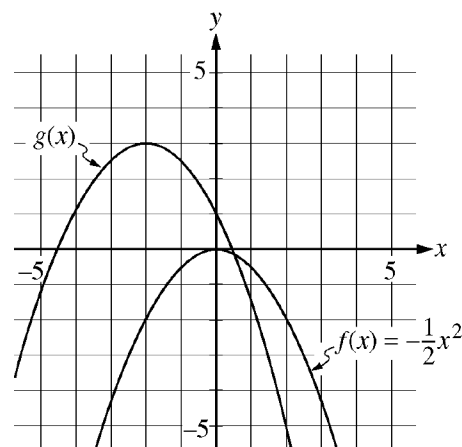
56. In the figure shown above, the graph of the function g is a transformation of the graph of the function f. Which of the following is the equation of g ?

   (A) $g(x) = -\dfrac{1}{2}x^2 + 3$
   (B) $g(x) = -\dfrac{1}{2}(x - 2)^2 + 3$
   (C) $g(x) = -\dfrac{1}{2}(x - 2)^2 - 3$
   (D) $g(x) = -\dfrac{1}{2}(x + 2)^2 + 3$
   (E) $g(x) = -\dfrac{1}{2}(x + 2)^2 - 3$

57. The polynomial $p(x) = x^3 + 2x - 11$ has a real zero between which two consecutive integers?

   (A) 0 and 1
   (B) 1 and 2
   (C) 2 and 3
   (D) 3 and 4
   (E) 4 and 5

58. Which of the following could be the graph of $y = ax^2 + bx + c$, where $b^2 - 4ac = 0$?

(A)

(B)

(C)

(D)

(E)
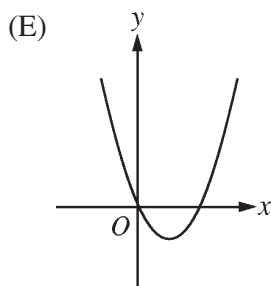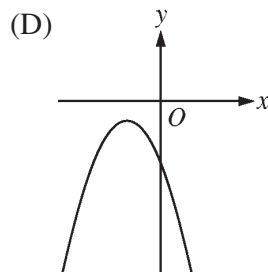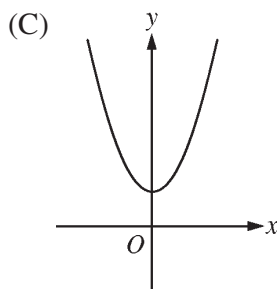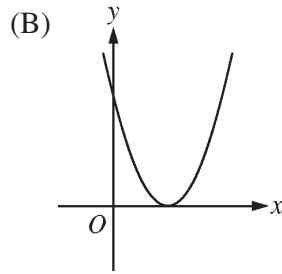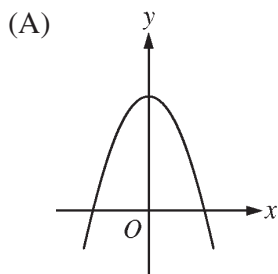
59. Consider each function below. Is the domain of the function the set of all real numbers?

Function	Yes	No
$f(x) = \dfrac{x-1}{x^2+2}$		
$g(x) = \dfrac{x^2}{x+1}$		
$h(x) = \dfrac{\sqrt{x}}{x^2+3}$		

60. The sum of the first n terms of an arithmetic sequence $a_1, a_2, a_3, \ldots, a_n$ is $\dfrac{1}{2}n(a_1 + a_n)$, where a_1 and a_n are the first and the nth terms of the sequence, respectively. What is the sum of the odd integers from 1 to 99, inclusive?

(A) 2,400
(B) 2,450
(C) 2,475
(D) 2,500
(E) 2,550

61. The function f is defined for all real numbers x by $f(x) = ax^2 + bx + c$, where a, b, and c are constants and a is negative. In the xy-plane, the x-coordinate of the vertex of the parabola $y = f(x)$ is –1. If t is a number for which $f(t) > f(0)$, which of the following must be true?

  I. $-2 < t < 0$
  II. $f(t) < f(-2)$
  III. $f(t) > f(1)$

(A) I only
(B) II only
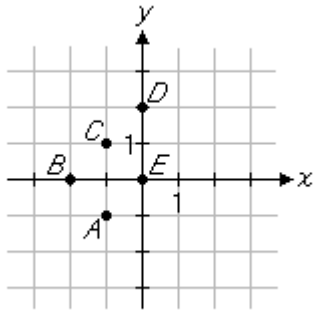(C) I and III only
(D) II and III only
(E) I, II, and III

x	$h(x)$
-3	5
-2	-4
2	c

62. The table above shows some values of the function h, which is defined for all real numbers x. If h is an odd function, what is the value of c ?

(A) -5
(B) -4
(C) -2
(D) 2
(E) 4

63. If $\sum_{n=1}^{10} a_n = 50$, what is the value of $\sum_{n=1}^{10}(4a_n + 3)$?

(A) 53
(B) 80
(C) 203
(D) 223
(E) 230

64. If $z = -1 + i$ and $\overline{z}$ denotes the complex conjugate of z, which of the following points in the complex plane above represents $z + \overline{z}$?

(A) A
(B) B
(C) C
(D) D
(E) E

65. What is the remainder when the polynomial $9x^{23} - 7x^{12} - 2x^5 + 1$ is divided by $x + 1$?

(A) -19
(B) -13
(C) -7
(D) 1
(E) 11

66.
$$f(x) = \sqrt{x+1}$$
$$g(x) = \sqrt{2-x}$$

Functions f and g are defined as shown above. What is the domain of the function $f + g$?

(A) $x \geq 0$
(B) $x \geq 1$
(C) $x \geq 2$
(D) $-1 \leq x \leq 2$
(E) $-2 \leq x \leq 1$

67. In the xy-plane, the line given by which of the following is perpendicular to the line $5x - 2y = 7$?

(A) $2x + 5y = 7$
(B) $2x - 5y = 7$
(C) $5x + 2y = 7$
(D) $5x - 2y = 10$
(E) $5x - 5y = 10$

68. Which of the following statements about the polynomial $p(x) = (x-4)^2(x^2+4)$ are true?

   I. The polynomial has two imaginary roots.

   II. The polynomial has no real roots.

   III. The polynomial has four complex roots, counting multiplicities.

(A) I only

(B) II only

(C) III only

(D) I and III only

(E) I, II, and III

69.
$$C(x) = 1200 + 1000x$$
$$R(x) = 1200x - x^2$$

For a certain company, the functions shown above model the cost C of producing x units of a product and the revenue R from selling x units of the same product. The profit function P is equal to $R - C$. Which of the following defines the function P ?

(A) $P(x) = x^2 - 200x + 1200$

(B) $P(x) = x^2 + 200x - 1200$

(C) $P(x) = -x^2 + 200x - 1200$

(D) $P(x) = -x^2 + 2200x - 1200$

(E) $P(x) = -x^2 + 2200x + 1200$

70. Which of the following is equivalent to $\dfrac{\sqrt[4]{36}}{\sqrt{6}}$?

(A) $6\sqrt[4]{6}$

(B) $\sqrt[4]{6}$

(C) $\sqrt{6}$

(D) 6

(E) 1

71. If $\log_x 5 = 2$, what is the value of x ?

(A) $\sqrt{5}$

(B) $\sqrt{2}$

(C) $\sqrt[5]{2}$

(D) 2^5

(E) 5^2

72. What is the solution of the equation $4^{2x} = 64$?

(A) $\dfrac{2}{3}$

(B) $\dfrac{3}{2}$

(C) 2

(D) 3

(E) 8

73. The function f is defined by $f(x) = x^2 + 3$. Which of the following is equal to $f(x+5)$?

(A) $x^2 + 8$

(B) $x^2 + 28$

(C) $x^2 + 5x + 8$

(D) $x^2 + 10x + 8$

(E) $x^2 + 10x + 28$

74. The population of a certain city was 10,200 on January 1, 2013. If the population increases by 8 percent per year for the next 3 years, which of the following best approximates the population of the city on January 1, 2016 ?

(A) $10,200(0.8)^3$

(B) $10,200(0.08)^3$

(C) $10,200(1.08)^3$

(D) $10,200 + (0.8)(3)$

(E) $10,200 + (1.08)(3)$

75. What is the value of $f(0)$ for the function
$f(x) = \log_{10} 10 + 9^x + (x-2)(x-1)$?

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76. If $20 = 3^x$, which of the following expresses x as a base ten logarithm?

(A) $\log_{10} 60$

(B) $(\log_{10} 20) + (\log_{10} 3)$

(C) $(\log_{10} 20) - (\log_{10} 3)$

(D) $(\log_{10} 20)(\log_{10} 3)$

(E) $\dfrac{\log_{10} 20}{\log_{10} 3}$

77. The owner of a small restaurant earned a profit of $300 during the first month of operation. According to the business model for the next 12 months, it is projected that the profit for each month after the first will be $50 more than the profit for the preceding month. If $p(m)$ represents the profit for each month m and $m = 1$ represents the first month, which of the following functions describes the business model?

(A) $p(m) = m + 50$

(B) $p(m) = m + 300$

(C) $p(m) = 50m + 250$

(D) $p(m) = 50m + 300$

(E) $p(m) = 300m + 50$

78. When the quadratic functions below are graphed in the xy-plane, is the vertex for each function above the x-axis, below the x-axis, or on the x-axis?

Function	Above	Below	On
$f(x) = x^2 + 3$			
$f(x) = (x+3)^2$			
$f(x) = -x^2 + 3$			
$f(x) = x^2 - 3$			

79. A circular cylindrical water tank is filled with water to 75 percent of its total volume of V cubic inches. The radius of the tank is 6 inches, and the height of the tank is h inches. Which of the following represents the height, in inches, of the water in the tank? (Note: The volume of a cylinder with radius r and height h is given by $\pi r^2 h$.)

(A) $\dfrac{V}{6\pi}$

(B) $\dfrac{V}{8\pi}$

(C) $\dfrac{V}{27\pi}$

(D) $\dfrac{V}{36\pi}$

(E) $\dfrac{V}{48\pi}$

80. Select two of the following choices and place them in the blanks below so that the resulting statement is true.

$f(x) = |x| + 8$ $f(x) = x^2 - 4$ $f(x) = \ln x$
increasing   decreasing   constant

The function _____ is _____ on its domain.

Study Resources

Most textbooks used in college-level algebra courses cover the topics in the outline given earlier, but the approaches to certain topics and the emphases given to them may differ. To prepare for the College Algebra exam, it is advisable to study one or more college textbooks, which can be found in most college bookstores. When selecting a textbook, check the table of contents against the knowledge and skills required for this test.

Visit clep.collegeboard.org/test-preparation for additional college algebra resources. You can also find suggestions for exam preparation in Chapter IV of the *Official Study Guide*. In addition, many college faculty post their course materials on their schools' websites.

Answer Key

1.	E	40.	E
2.	D	41.	A
3.	D	42.	D
4.	E	43.	E
5.	B	44.	D
6.	A	45.	1.2
7.	A	46.	E
8.	B	47.	C
9.	E	48.	E
10.	A	49.	A
11.	See the following page	50.	D
		51.	D
		52.	C
12.	B	53.	D
13.	D	54.	C
14.	D	55.	1
15.	B	56.	D
16.	D	57.	B
17.	C	58.	B
18.	E	59.	See the following page
19.	D		
20.	C	60.	D
21.	2	61.	C
22.	B	62.	E
23.	B	63.	E
24.	E	64.	B
25.	See the following page	65.	B
		66.	D
		67.	A
26.	C	68.	D
27.	624	69.	C
28.	E	70.	E
29.	4	71.	A
30.	C	72.	B
31.	D	73.	E
32.	A	74.	C
33.	–6	75.	4
34.	E	76.	E
35.	1	77.	C
36.	See the following page	78.	See the following page
		79.	E
37.	C	80.	See the following page
38.	B		
39.	C		

11.

	less than	greater than	equal to	
$f(a)$ is	√			$g(a)$.
$f(b)$ is		√		$g(b)$.
$f(0)$ is			√	$g(0)$.

25.

Statement	Always True	Never True	Sometimes True
$\|a+b\| = \|a\| + \|b\|$			√
$\|a+b\| < \|a\| + \|b\|$			√
$\|a+b\| \le \|a\| + \|b\|$	√		
$\|a+b\| > \|a\| + \|b\|$		√	

36.

The amount of medicine M present in the body at t hours after the medicine is taken can be modeled by the function $\underline{M(t) = 210(0.89)^t}$. According to the model, $\underline{117}$ mg of the medicine is present in the body at 5 hours after the medicine is taken.

59.

Function	Yes	No
$f(x) = \dfrac{x-1}{x^2+2}$	√	
$g(x) = \dfrac{x^2}{x+1}$		√
$h(x) = \dfrac{\sqrt{x}}{x^2+3}$		√

78.

Function	Above	Below	On
$f(x) = x^2 + 3$	√		
$f(x) = (x+3)^2$			√
$f(x) = -x^2 + 3$	√		
$f(x) = x^2 - 3$		√	

80.

The function $\underline{f(x) = \ln x}$ is $\underline{\text{increasing}}$ on its domain.

CLEP

What Your CLEP® Score Means

In order to reach the total score you see on your score report, two calculations are performed.

First, your "raw score" is calculated. This is the number of questions you answered correctly. Your raw score increases by one point for each question answered correctly, and no points are gained or lost when a question is not answered or is answered incorrectly.

Second, your raw score is converted into a "scaled score" by a statistical process called *equating*. Equating maintains the consistency of standards for test scores over time by adjusting for slight differences in difficulty between test forms. This ensures that your score does not depend on the specific test form you took or how well others did on the same form. Your raw score is converted to a scaled score that ranges from 20, the lowest, to 80, the highest. The final scaled score is the score that appears on your score report. The score scale is defined so that a scaled score of 50 corresponds to the score recommended by a panel of educators as the lowest score for which course credit should be granted.

To see whether you attained a score sufficient to receive college credit, compare your score to the score in the table shown. The scores that appear in this table are the credit-granting scores recommended by the American Council on Education (ACE). **Each college, however, reserves the right to set its own credit-granting policy, which may differ from that of ACE.** If you have not already done so, contact your college as soon as possible to find out the score it requires to grant credit, the number of credit hours granted and the course(s) that can be bypassed with a satisfactory score.

Please note that College-Level Examination Program® (CLEP®) examinations are developed and evaluated independently and are not linked to each other except by the program's common purpose, format and method of reporting results. For this reason, direct comparisons should not be made between CLEP examinations in different subjects. CLEP scores are not comparable to SAT® scores or other test scores.

Test scores are kept on file for 20 years. During this period, score reports may be sent to an institution, but only at the request of the candidate. A Transcript Request Form and instructions for having a transcript sent to an institution can be downloaded from the CLEP website (www.collegeboard.org/clep) or obtained by contacting CLEP.

Candidates may not repeat an examination of the same title within the specified wait period of the initial testing date. If the candidate retakes the examination within the specified wait period, the administration will be considered invalid, the score will be canceled and any test fees will be forfeited. For military service members: effective December 11, 2010, DANTES does not fund retesting on a previously funded CLEP exam. However, service members may personally fund a retest after the specified wait period.

If you have a question about your score report, about a test question or about any other aspect of a CLEP examination that your test center cannot answer, write to CLEP, P.O. Box 6600, Princeton, NJ 08541-6600 or e-mail clep@info.collegeboard.org.

Visit CLEP on the Web: www.collegeboard.org/clep

CollegeBoard

2015-16 CLEP® Credit-Granting Recommendations

	Computer-Based Testing (CBT) and Paper-and-Pencil Testing	
	ACE Recommended Score[1]	Semester Hours[1]
Business		
Financial Accounting	50	3
Information Systems	50	3
Introductory Business Law	50	3
Principles of Management	50	3
Principles of Marketing	50	3
Composition and Literature		
American Literature	50	3
Analyzing and Interpreting Literature	50	3
College Composition	50	6
College Composition Modular	50	3
English Literature	50	3
Humanities	50	3
World Languages		
French Language, Level 1	50	6
French Language, Level 2	59	9
German Language, Level 1	50	6
German Language, Level 2	60	9
Spanish Language, Level 1	50	6
Spanish Language, Level 2	63	9
Level 1 — equivalent to the first two semesters (or six semester hours) of college-level world language course work		
Level 2 — equivalent to the first three semesters (or nine semester hours) of college-level world language course work		
History and Social Sciences		
American Government	50	3
History of the United States I: Early Colonization to 1877	50	3
History of the United States II: 1865 to Present	50	3
Human Growth and Development	50	3
Introduction to Educational Psychology	50	3
Introductory Psychology	50	3
Introductory Sociology	50	3
Principles of Macroeconomics	50	3
Principles of Microeconomics	50	3
Social Sciences and History	50	6
Western Civilization I: Ancient Near East to 1648	50	3
Western Civilization II: 1648 to Present	50	3
Science and Mathematics		
Biology	50	6
Calculus	50	4
Chemistry	50	6
College Algebra	50	3
College Mathematics	50	6
Natural Sciences	50	6
Precalculus	50	3

1. The American Council on Education's College Credit Recommendation Service (ACE CREDIT) has evaluated CLEP processes and procedures for developing, administering and scoring the exams. The scores listed above are equivalent to a grade of C in the corresponding course. The American Council on Education, the major coordinating body for all the nation's higher education institutions, seeks to provide leadership and a unifying voice on key higher education issues and to influence public policy through advocacy, research and program initiatives. For more information, visit the ACE CREDIT website at www.acenet.edu/acecredit.