

Introduction

The California Subject Examinations for Teachers (CSET) utilized by the California Department of Education (CDE) is a key element of California's statewide teacher certification program. Besides being a tool to assess and evaluate a beginning teacher's content background, it is one of three ways to meet the state of California's requirements for teacher certification.

This introductory chapter of *CliffsTestPrep CSET: Mathematics* gives you more details about the CSET: Mathematics, as well as provides materials that help get you ready to take this test. The following sections involve expanded details related to the CSET in general followed by sections concerning the CSET: Mathematics in particular. They include:

- Requirements for Teacher Certification in California
- The Goals and Scope of the CSET
- Administration of the CSET
- Important Considerations for this TestPrep Book
- Content Specifications in CSET: Mathematics
- Types of Items
- Scoring Information
- Using the Calculator You're Given
- Test-Taking Strategies

Requirements for Teacher Certification in California

According to the CDE's general information about the CSET program, California has three types of teacher certification credentials:

- Single Subject Teaching Credential
- Multiple Subject Teaching Credential
- Educational Specialist Instruction Credential

A Single Subject Teaching Credential gives you the authority to teach a specific subject in a departmentalized and specialized subject system from Kindergarten to Grade 12, although this type of teaching credential is mostly used in middle (Grades 6 to 8) and secondary schools (Grades 9 to 12). *Departmentalized* means that you are certified to teach only one subject, like mathematics. This type of credential is different from a Multiple Subject Teaching Credential, which gives you the authority to teach all subjects in a self-contained classroom (Kindergarten to Grade 12). This type of credential is mostly used in elementary schools (Kindergarten to Grade 6). Finally, an Educational Specialist Instruction Credential gives you the authority to teach any subject to students from Kindergarten to Grade 12 who have a specific disability or impairment.

According to the CDE guidelines, to earn any of the three teaching credentials (Single Subject, Multiple Subject, and Education Specialist), candidates need to verify their subject matter competency in one of the following stipulated ways:

- Complete a California Commission on Teacher Credentialing (CCTC)-approved subject matter preparation program.
- Take and pass the appropriate subject matter examination or examinations.
- If trained in a state other than California, provide verification of appropriate experience or education.

The Goals and Scope of the CSET

The CCTC has developed a new series of subject matter examinations, including mathematics, for prospective teachers who choose to meet the subject matter competence requirement for certification by taking examinations (2006). New examinations have been developed to match the recently revised K–12 California Student Academic Content Standards. The new and revised CSET replaces the examinations used before (Single Subject Assessment for Teaching and Praxis II tests) as the CCTC-approved subject matter examinations.

According to the CDE, the CCTC, National Evaluation System Inc. (NES), and California educators worked very closely to design the CSET program using the following goals as guidelines:

- “To develop tests specifically for credential candidates based on the unique needs and requirements of classroom teaching in California
- “To develop subject matter requirements to guide both the credential program and the examinations
- “To align tests with California student standards and curriculum frameworks
- “To provide for the repeated and significant participation of California teachers and teacher educators throughout the test development process
- “To prevent bias and ensure diversity in testing materials for the program
- “To provide support materials to examinees to help them prepare for the tests and interpret their results
- “To provide support materials to teacher education programs to help them relate test results to their instructional programs
- “To develop tests that are equitable to all examinees
- “To offer all examinees uniform and positive testing experiences
- “To provide California state policymakers with information to guide program and policy modifications”

(2006–2007 CSET Registration Bulletin retrieved May 27, 2007 from www.cset.nesinc.com/CS12_overview.asp).

Criterion-Referenced Tests

Another important CSET distinction is that the tests are criterion-referenced. Criterion-referenced tests determine what candidates know in relation to an established standard, not how they compare to other candidates. In other words, this type of test reports how well candidates are doing relative to a pre-established performance level. A cut-off score of passing or not passing the CSET has been pre-established, and no norms have been established. By passing the CSET, a candidate demonstrates that he or she has met the established standard in terms of subject matter knowledge and skills.

CSET Domains

The CSET are designed to measure pre-selected and pre-identified domains of knowledge. The content of each examination is defined by this set of subject matter requirements or content specifications. These domains are statements of important knowledge and skills and are selected and developed by groups of California educators: classroom teachers, teacher educators, school administrators, and other content and assessment specialists. A complete list of the domains for CSET: Mathematics is included in Part I of *CliffsTestPrep CSET: Mathematics*. This list was used as a framework to develop the test questions included in *CliffsTestPrep CSET: Mathematics*’ practice tests. The domain for each item is indicated in the Answers and Explanations section provided after each practice test. Use these descriptions to discover your strengths and weaknesses as they relate to the different domains in the area of mathematics.

Exam Questions

According to the CDE, the CSET’s exam questions are developed in consultation with groups of classroom teachers, teacher educators, administrators, and other content and assessment specialists using various resources, including textbooks, California curriculum syllabi, teacher education curricula, and teacher credential standards. The questions included in *CliffsTestPrep CSET: Mathematics* for Practice CSET: Math Test I and Practice CSET: Math Test II were developed by these same means.

Administration of the CSET

Subsections in this section cover time allotment, retaking the CSET, and requirements for test admission.

CSET Subtest Time Allotment

The CSET: Mathematics contains three subtests that are described in more detail later in this chapter. Candidates taking the CSET: Mathematics receive five uninterrupted hours of testing time. The subtests are not individually timed; all subtests should be completed within the allotted five hours time span. The CSET: Mathematics Examination, Subtest II, which allows the use of a graphing calculator, is always administered first in the test session. Because of this, you might want to start with Subtest II of the *CliffsTestPrep CSET: Mathematics* practice examinations and spend as much of the five hours as you need on each subtest.

Requirements for Test Admission

You need to pre-register to take the CSET, after which you receive an admission ticket containing important identification information, as well as the date, time, and location of your test session. You are required to present that admission ticket when you arrive at the test site. You are scheduled for the morning and/or afternoon session, depending on the subtest or subtests that you are registered to take. CSET: Mathematics is typically administered during the afternoon test sessions on the test administration day. Upon completion of the test, you need to hand in all test materials that were used during the session. This procedure is in place to protect the integrity and security of the testing process.

The CSET Web site (www.cset.nesinc.com) indicates that you must bring to the test administration a current, government-issued identification, in the name in which you registered, bearing your photograph and signature. Copies are not accepted. Acceptable forms of government-issued identification include photo-bearing driver's licenses and passports. The Department of Motor Vehicles provides acceptable photo-bearing identification cards for individuals who do not have a driver's license. Unacceptable forms of government-issued identification include student and employee identification cards, social security cards, draft classification cards, and credit cards. If you have any questions regarding acceptable photographic identification, call CSET (916-445-7254 or, if outside the 916 area code, you may call toll free at 888-921-2682) before the test date. If the name on your identification differs from the name in which you are registered, you must bring official verification of the change (for example, marriage certificate, court order).

If you do not have proper identification as described, you must bring a current, accurate photograph of yourself; report directly to the Information table at your test site; complete a personal identification information form; and certify, under penalty of perjury, that you are the person you purport to be. You may also be asked to provide your fingerprints on the day of the test. Your photograph is kept, and your official score report is not released unless you present the proper identification as described previously *no later than 16 calendar days after the test date*. In addition, you are not able to access your unofficial scores online. Instructions for providing proper identification after the test date are provided at the test site. If you do not provide documentation of your identification within 16 calendar days after the test date, your scores are permanently voided and are not reported to you or to the CCTC. Enhanced security measures, including additional security screenings, may be required by test site facilities. If an additional screening is conducted, only screened persons are admitted to the test site. If you do not proceed through the security screening, you are not allowed to test, and you do not receive a refund or credit of any kind.

Retaking the CSET

If you pass a CSET: Mathematics subtest, you do not have to take that subtest again as long as you use the score toward certification within five years of the test date. If you do not pass the subtest, you may register and retake that subtest on a subsequent test date. You can register and retake a subtest as many times as necessary. For the Practice CSET: Mathematics tests, we recommend that you take them as a whole (all three subtests) even if you pass one, two, or all of the three subtests. This approach provides you with more consistency and real-time practice.

Content Specifications in CSET: Mathematics

As indicated before, the CSET: Mathematics consists of three subtests that are scored separately and can be taken separately. Each subtest is composed of both multiple-choice and constructed-response items. Notice that there are 30 multiple-choice items, and 4 constructed-response items per subtest for a total of 102 items altogether. Algebra, Geometry, and Calculus make up about 70 percent of the total CSET: Mathematics content. The two Practice CSET: Mathematics tests included in *CliffsTestPrep CSET: Mathematics* follow the same content specifications.

Subtest	Domains	Number of Multiple-Choice Items	Number of Constructed-Response Items (short [focused] responses)
I	Algebra	24	3
	Number Theory	6	1
	Subtest Total	30	4
II	Geometry	22	3
	Probability and Statistics	8	1
	Subtest Total	30	4
III	Calculus	26	3
	History of Mathematics	4	1
	Subtest Total	30	4
	Total Number of Items	90	12

Candidates verifying subject matter competence by examination for a credential in Foundation-Level Mathematics are required to take and pass CSET Subtests I and II only.

Types of Questions

The CSET: Mathematics includes three types of questions: multiple-choice, enhanced multiple-choice, and written responses. The items are intended to be straightforward. They are not attempts to trick you or make you get the wrong answer. You should not try to overthink your answers to the questions.

Multiple-Choice Questions

This type of item presents a question or an incomplete statement that may be answered or completed correctly by only one of four possible alternatives: A, B, C, or D. You need to identify the *best* possible answer to the question from these four alternatives. The key word here is “best.” If you cannot find the best answer, try eliminating as many options as possible. This approach increases your chances of being right, but always attempt to find the best choice first. Multiple-choice items might be accompanied by supplementary or additional information such as a passage, drawing, table, graph, or diagram to provide necessary background or information for an item. The inclusion of such items might require you to think critically about the question or material presented and could require comparisons, applications, judgments, and/or analyses. Mark your responses carefully on your answer sheet to help in avoiding errors in the electronic scoring process. Incomplete erasures and extraneous marks might cause the electronic scorer to indicate a false error. If you have to change an answer, erase the old answer completely and brush off erasure dust. You should keep your answer sheet free of extraneous marks and have only your answer choices marked (one per item).

Enhanced Multiple-Choice Questions

Some of the multiple-choice questions in this book have been identified as **ENHANCED**. This term is used to indicate that these items are complex multiple-choice questions, which require 2–3 minutes each to complete. Enhanced multiple-choice questions are not identified on the actual CSET: Mathematics test. The solution manual for each practice test included in this book identifies the enhanced multiple-choice items for your convenience.

Constructed-Response Questions

Four constructed-response questions (also known as written-response questions) are asked in each of the three subtests. Each of these written-response items is designed so that you can complete the answer within a short amount of time (approximately 10 to 15 minutes each). For the written-response questions or constructed-response questions, you generally are presented with introductory information, which could include or take the form of a map, sketch, graph, paragraph, table, quotation, excerpt, and/or drawing. This information is followed by a specific assignment. For example, you might be asked to prove, discuss, analyze, explain, compare, transform, or evaluate the information. You should read very carefully and address all parts of the constructed-response questions. They usually require more than one task. During the actual test, you write your answers in a written response sheet. In the practice tests, you will use extra lined paper to write your answers.

Scoring Information

The CDE uses electronic scoring for the multiple-choice items and hand scoring for constructed-response items. Candidates' multiple-choice answers are scored using computer programs that read candidates' bubbled answers and score them based on an answer key. No penalty is assessed for guessing the answers to questions. A blank answer has the same weight as a wrong answer. However, you should try to solve a problem or narrow down to the possible best answer before you try to guess. In other words, you might want to make a more educated guess instead of just a wild guess.

The constructed questions are scored differently than the multiple-choice questions. Qualified and trained California educators read and evaluate candidates' answers to the written-response questions. They use answer keys and **rubrics** (criteria) that have been established and validated by the California educators. The rubrics are **focused holistic scoring rubrics**. A focused holistic rubric is used to assign a single score or rating for an entire written response based on an overall impression of a student's work. In essence, this type of evaluation rubric combines all the important ingredients of a written response to arrive at an overall single judgment of quality. Using these rubrics, the evaluators judge the overall correctness and quality of each response while focusing on a set of performance characteristics that have been identified as important. Each response is assigned a score based on an approved scoring scale presented later in this section.

The following table includes the performance characteristics that guide the scoring of your responses on each of the 12 constructed-response items in each subtest (4 items per each of 3 subtests):

Performance Characteristics for CSET: Mathematics Subtests I, II, and III	
Purpose	The extent to which the response addresses the constructed-response assignment's charge in relation to relevant CSET subject matter requirements.
Subject Matter Knowledge	The application of accurate subject matter knowledge as described in the relevant CSET subject matter requirements.
Support	The appropriateness and quality of the supporting evidence in relation to relevant CSET subject matter requirements.
Depth and Breadth of Understanding	The degree to which the response demonstrates understanding of the relevant CSET subject matter requirements.

The following table includes the scoring scale that is used to score your answers to the constructed-response questions on each of the CSET: Mathematics subtests:

Scoring Scale for CSET: Mathematics Subtests I, II, and III	
Score Point	Score Point Description
4	<p>The “4” response reflects a thorough command of the relevant knowledge and skills as defined in the subject matter requirements for CSET: Mathematics.</p> <ul style="list-style-type: none"> ■ The purpose of the assignment is fully achieved. ■ There is a substantial and accurate application of relevant subject matter knowledge. ■ The supporting evidence is sound; there are high-quality, relevant examples. ■ The response reflects a comprehensive understanding of the assignment.
3	<p>The “3” response reflects a general command of the relevant knowledge and skills as defined in the subject matter requirements for CSET: Mathematics.</p> <ul style="list-style-type: none"> ■ The purpose of the assignment is largely achieved. ■ There is a largely accurate application of relevant subject matter knowledge. ■ The supporting evidence is adequate; there are some acceptable, relevant examples. ■ The response reflects an adequate understanding of the assignment.
2	<p>The “2” response reflects a limited command of the relevant knowledge and skills as defined in the subject matter requirements for CSET: Mathematics.</p> <ul style="list-style-type: none"> ■ The purpose of the assignment is partially achieved. ■ There is limited accurate application of relevant subject matter knowledge. ■ The supporting evidence is limited; there are few relevant examples. ■ The response reflects a limited understanding of the assignment.
1	<p>The “1” response reflects little or no command of the relevant knowledge and skills as defined in the subject matter requirements for CSET: Mathematics.</p> <ul style="list-style-type: none"> ■ The purpose of the assignment is not achieved. ■ There is little or no accurate application of relevant subject matter knowledge. ■ The supporting evidence is weak; there are no or few relevant examples. ■ The response reflects little or no understanding of the assignment.
U	The “U” (Unscorable) is assigned to a response that is unrelated to the assignment, illegible, primarily in a language other than English, or does not contain a sufficient amount of original work to score.
B	The “B” (Blank) is assigned to a response that is blank.

You should get acquainted with the performance characteristics and scoring scale that are used to score the constructed-response questions. The total score that a candidate may receive is a combination of the total points received for the constructed-response questions and the multiple-choice questions for each of the CSET: Mathematics subtests.

After taking the test, your score report provides information about your scoring for each subtest taken, your passing status, and—if you did not pass—your total subtest score. It also includes summary information about CSET: Mathematics subtests passed to date. The reverse side contains diagnostic information for each subtest taken to provide you with information about your areas of strength and weakness in each subtest section. Use this information if you need to retake any of the subtests.

Each of the CSET: Mathematics subtests is scored separately. To pass an examination, you must achieve a passing score on each of the examination's required subtests: Algebra/Number Theory, Geometry/Probability and Statistics, and Calculus/History of Mathematics. The minimum passing score for each subtest was established by the CCTC based on recommendations from California teachers and teacher educators and on the basis of total subtest performance. Test results are reported as scaled scores, which are based on the number of raw score points earned on each section (multiple-choice section and/or constructed-response section) and the weighting of each section. Raw scores for each subtest are converted to a scale of 100 to 300. The scaled score of 220 represents the minimum passing score for each section.

A passing subtest score must be achieved at a single CSET administration for each subtest. Your performance on each of the three subtests of the CSET: Mathematics cannot be combined across administrations. After you pass a subtest, you do not have to take that subtest again as long as you use the score toward certification within five years of the test date. You may register to retake all sections or some sections of the CSET: Mathematics. All necessary registration information and forms are provided in the current CSET Registration Bulletin or via the Internet at www.cset.nesinc.com.

Use of Approved Graphing Calculator

You need and are allowed to use a calculator for CSET: Mathematics Subtest II: Geometry and Probability and Statistics. You must bring your own graphing calculator to the test administration, and it must be one of the approved models listed in the current version of the CSET registration bulletin (www.cset.nesinc.com). Since the approved list of calculators might change, you should check for possible changes. The following table contains the approved graphing calculators at the time of this book's publication. Remember that the test administration staff clears the memory of your calculator both before and after testing. You should make sure that you back up the memory of your calculator, including applications, to an external device before arriving at the test site. **Note:** You are not allowed to bring the calculator's manual to the testing place. You must follow the same graphing calculator rules for your Practice CSET: Mathematics Subtest II in this book. Make sure you are familiar and know how to use the calculator you are planning to bring to the test site. This practice helps you simulate the testing conditions that you will have on your testing date, and your confidence in passing this section of the test should improve.

<i>Manufacturer</i>	<i>Approved Models</i>
Casio	FX 1.0 PLUS, fx-7400G, fx-7400G PLUS, fx-9750G PLUS, CFX-9850G, CFX-9850G PLUS, CFX-9850Ga, CFX-9850Ga PLUS, CFX-9850GB PLUS, CFX-9850GB PLUS(WE), CFX-9850GC PLUS, CFX-9970G, Algebra FX 2.0 (ALGFX2.0)
Sharp	EL-9300, EL-9600, EL-9600c, EL-9900
Texas Instruments	TI-73, TI-80, TI-81, TI-82, TI-83, TI-83 Plus, TI-83 Plus Silver, TI-84, TI-84 Plus, TI-84 Plus Silver, TI-85, TI-86, TI-89, TI-89 Titanium
Hewlett-Packard	HP 9g, HP 40g, HP 49g, HP 49 g PLUS

Test-Taking Strategies

The following are some tips for you to consider during the preparation period before taking the CSET: Mathematics. These ideas should help you analyze and focus your preparation time as you get ready to take the test.

Develop a Focusing Process

The practice tests provided in this book will help you prepare to take the actual CSET: Mathematics. It is a good idea that you read all the background information provided in this book and identify all the areas that the actual test covers: Algebra, Number Theory, Geometry, Probability and Statistics, Calculus, and History of Mathematics. Check the “Content Specifications in CSET: Mathematics” section (earlier in this chapter) for more details regarding the number of items per topic. This overall picture helps you in concentrating on the areas that are important for this test.

Take a close look at “CSET Mathematics Content Areas and Domains” in Part I of this book. This section helps you to focus your studies before you take the practice tests and to prepare for taking the actual test. After reviewing these domains, you should make a list of mathematics topics, skills, and concepts for which you feel you need more background or practice and for which you feel less familiar and confident. We have also included a section with sample practice items that deal with mathematical topics which are often more difficult. The two full-length practice exams also should help you get acquainted with the format of the CSET: Mathematics’ multiple-choice and constructed-response questions. Also, take a look at the glossary of important mathematics terms and descriptions of important mathematical formulas sections in the back of this book. Then, using all of this information, set priorities based on this list of mathematics ideas and check the resources you need to start studying in more detail. Study each of the topics covered in the test, starting with the ones you need more time to study according to your priority list. At the end, you should have studied all areas, both those in which you are familiar and less familiar. Do not leave any topic out and spend sufficient time on each topic.

Setting aside time for your studies before you take the practice tests is very important. You want to have terms, formulas, concepts, and skills fresh in your mind for the practice and actual tests. Select the resources that work best for you to be used during this study time. You might also need a tutor, teacher, mentor, advisor, or a study group for support and extra help. However, you should take into account your preferences and study habits as you set a sound study plan.

After carefully studying for the test, find a quiet place (no phone, cell phone, television, radio, stereo, or other forms of electronic entertainment), take the first practice test, and spend five uninterrupted hours answering the questions. You should probably use a desk for this and avoid any disruption. This gives you an idea on how to time yourself. You might want to start with Subtest II using your graphing calculator. You may address multiple-choice questions and written-response questions within each subtest in the order that you prefer, but you must finish one subtest completely before moving on to another subtest. Remember, Subtest II is the ONLY subtest in which you can use a calculator.

Remember that every person is different in terms of timing. You need to know yourself and the speed that is comfortable for you. During the actual test, do not pay attention to what others do. Remember to use your graphing calculator for only Subtest II, prepare several number-2 sharpened pencils, and write your answers in the given test answer book for later review. You should write your solution process as you work on the questions as detailed and clearly as possible. These notes are very helpful when you start evaluating your solutions. Check the answers for the first practice test and see whether you had any problems by subtest and domain. You should check for correctness as well as quality of your responses to the questions. Are there any major areas of concern or priority? This gives you another opportunity to narrow down and focus your preparation priorities. We recommend that you go back and study everything a bit more, with an emphasis on the areas of need. Once again, after carefully studying for the test, find a quiet place and take the second practice test. Check the answers for the second practice test and, if you need to, study other subtest and domain areas before taking the actual test.

After these focusing exercises, you should have a better idea of how and when you are ready to take the actual CSET: Mathematics. You may decide to register for and attempt during a test session only some of the CSET: Mathematics subtests, leaving one or two subtests for another time. This allows you to spend more preparation time or coursework on the areas you judge you need to later.

Check the Resources You Need

After you set and focus your preparation priorities, you are ready to find the resources you need. Think about your coursework background and find any college mathematics textbooks; secondary mathematics textbooks; Web links; class notes; videos; publications from local, state, and national professional organizations; or other material that might

help you study for the test. We have included a list of resources in this book that you can use to help with this selection process. You should organize the resources you have in terms of your preparation priorities and used them in that order. Remember to review all the topics—even those you feel you know well.

Refer to the Solution Manual

An answer/explanation section is provided at the end of each practice CSET: Mathematics test. Use this section to help you understand possible solutions and improve your test-taking ability. You might have used a different path for a solution to a specific problem. This is okay; if you get to the same answer, and the procedures you used are mathematically accurate, you don't need to have the same solution process. It is good to also learn other ways to solve the problem, however.

You should not take more than one practice exam per day. You need some time in between taking the exams to review your answers and possibly to readdress your study priorities.

Get R-E-A-D-Y before the test! The following are some ideas to keep in mind before you take the test, which are partly based on information provided by CSET registration bulletin (www.cset.nesinc.com):

- Rest and sleep well several days before the test. You will not do as well if you are not rested and feel tired or tense.
- Eat well. A nutritious and balanced breakfast and lunch (if the test is taken in the afternoon) can go a long way. If you will be taking examinations during both the morning and afternoon testing sessions, you might want to bring along something to eat during the break. Food is not allowed in the testing room.
- Accessories you need for the test:

Several number-2 sharpened pencils

You need your own graphing calculator ready to be used for part II of the test only. Remember that the test administration staff will clear the memory of your calculator both before and after testing. You should make sure that you back up the memory of your calculator, including applications, to an external device before arriving at the test site. Remember that no scrap paper is allowed for any section of the test. All computation needs to be done directly on the test book that is provided at the site.

You also need the admission ticket you receive after registering for a test date. You must bring to the test administration a current, government-issued identification, in the name in which you registered, bearing your photograph and signature. Copies are not accepted. See the previous section for more details regarding the identification requirements from the CSET registration bulletin.

- Dress comfortably and in layers so you can adapt to the testing room conditions. It is better to wear soft-soled shoes so that you do not disturb others if you need to leave your seat.
- You need to relax and get **R-E-A-D-Y**. Leave plenty of time to get to the test session without pressure or anxiety. That way, you will arrive on time and be as relaxed as possible and ready to begin the test.

Get double R-E-A-D-Y during the test! The following are some additional ideas to keep in mind during the test:

- Read and review the directions carefully (at least twice). Make sure that you understand and follow the instructions for the test and for each item of the test. This first step is crucial. When answering multiple-choice questions, make sure that you read all of the answer choices before choosing an answer. Remember that you are selecting the best possible answer out of four choices.
- Estimate and use common sense before calculating problems; this should give you a rough idea of what the answer should be before you start to work on the problem. You can also use your estimate to check your final answer and calculation errors. Sometimes, with multiple-choice items, you can eliminate one or two of the choices that contain errors or don't make sense and then choose the best answer out of the remaining choices. You should mark an answer to the multiple-choice items, even if you are not sure of the correct answer. Your score is not reduced because of wrong answers. However, you should attempt to figure out the best answer before guessing. Remember that the CSET: Mathematics has three subtests, but Subtest II is always administered first in the test session. If you are completing two or three sections, work on one subtest at a time. You receive one test booklet for each subtest that you are taking. You can allocate your time within the subtests on your own, spending more time on one subtest than on another.

- Always refer to the original directions and context of the problem, especially when an answer doesn't make sense. You might have missed something about the problem setting. The test booklet contains general directions for the examination as a whole and specific directions for the individual questions and, in some cases, groups of questions. If you do not understand a specific direction, raise your hand and ask the test administrator.
- Double-check your answer choice and work. Don't skip steps. Work carefully and avoid accidental computational or reasoning errors. Check the accuracy of your answers for the multiple-choice items, and make sure that they were marked appropriately. Also, check the quality, legibility, and completeness of your answers to the constructed-response questions. However, don't overdo your checking. Remember to time and pace yourself. Timing yourself is very important in this test since you are responsible for setting your own pace. You should have developed a plan regarding how much time you will devote on each subtest that you are taking (assuming you are taking more than one). Try to stick to your plan and finish each subtest within your planned time. At the end of the five hours, you are required to stop working and return all test materials to the test administrator. You should make plans to stay for the full five hours that you are given to complete the test, even if it could take you less time to complete the exam. Do not rush to finish.
- You can do it! You are **R-E-A-D-Y!**

Important Considerations for This TestPrep Book

Unlike other test prep books for the CSET: Mathematics already on the market, *CliffsTestPrep CSET: Mathematics* offers targeted information on the format and structure of the exam (rather than sacrificing a great amount of space on review), and provides two full-length practice tests. After each practice test, a detailed description of answers is provided to help you thoroughly understand each item. The intention of the authors is to make this book a tool you can use to practice and learn more about the CSET: Mathematics. This book is not intended as a substitute for quality learning from courses and other experiences, but provides in-depth practice of test-taking skills needed for the successful completion of the CSET for this certification area.

After a list of respective content areas and domains for the CSET: Mathematics, practice items relating to topics that tend to be more difficult are included in Part I of the book. At the end of *CliffsTestPrep CSET: Mathematics* are three more sections related to the CSET: Mathematics—a glossary of important mathematical terms, a description of important formulas, and a list of resources. You should study all of these sections before you complete the two Practice CSET: Mathematics Tests. This approach can help you learn more quickly and increase the effectiveness of the materials provided in this book.

This book concentrates on presenting information and practice tests related to the new revisions made to the CSET for Single Subject Teaching Credential in the area of mathematics (referred to in this document as CSET: Mathematics). More information is available from the CSET registration bulletin and the CSET Web site (www.cset.nesinc.com). Also, changes to the CSET program that modify or supplement information presented in this book are disseminated through the CSET Web site.

The two practice tests in *CliffsTestPrep CSET: Mathematics* are, like the test itself, divided in three subtests. We recommend that you set aside five uninterrupted hours to complete each Practice CSET: Mathematics Test. We have included an answer key and explanation for each item's possible responses; however, we recommend and encourage you to initially take the practice tests without looking at these sections of this book. You should record your responses on a separate sheet of paper and review your answers with the provided responses afterward.