
CHAPTER 1

SCORING HIGH ON THE GRE CAT

ABOUT THIS BOOK AND TESTware®

This book and our companion REA TESTware® software provide you with an accurate and complete depiction of the computer-adaptive Graduate Record Examination (GRE) General Test. The book also delves into all the ins and outs of the GRE Writing Assessment. Inside you will find topical reviews along with six written practice exams, all of which is designed to equip you with the information and strategies you need to do your best on the GRE General CAT. Our practice tests comprise every type of question that you can expect to appear on the exam. Following each test, you will find an answer key with detailed explanations designed to help you more completely grasp the test material. As we said, this is also the book to help you prepare for the GRE Writing Assessment. This test is administered and scored separately. We give you a comprehensive look at the exam, with the kind of material—including a series of six sample essays paired with extensive analyses—that will enable you to benchmark exactly what constitutes top-scoring performance. Apart from the book itself, we give you a compact disc with GRE General computer-adaptive tests that will enable you to become completely at ease with the CAT environment.

ABOUT THE TEST

The GRE General CAT is required by graduate and professional schools, as it is considered a crucial component for admission to a graduate program. Applicants for graduate school submit GRE CAT test results together with other undergraduate records as part of the admission process to graduate school. The exam tests verbal, quantitative, and analytical skills and abilities that have been found to contribute to successful achievement in a graduate program. It does not test prior knowledge of data or facts specific to any field of study.

The computer-based GRE contains three distinct sections with various types of questions:

- **Verbal Ability:** One 30-question section containing analogies, antonyms, sentence completions, and reading comprehension questions.
- **Quantitative Ability:** One 28-question section containing arithmetic, algebra, geometry, quantitative comparison, and data interpretation questions.
- **Analytical Ability:** One 35-question section containing analytical and logical reasoning questions.

Following this preface are test strategies, numerous examples, and suggested studying techniques illustrating the above types of questions.

The GRE General CAT consists entirely of multiple-choice questions contained in timed sections. Each question presents five answer choices, except for the Quantitative Comparison section which presents four choices. The actual test contains a trial section, included in the seven sections, which is not identified or counted towards your score. The purpose of the trial section is to test new questions for future exams. For practical purposes, this test preparation book and software have omitted the trial section and present only the counted and scored sample sections for each practice exam.

WHAT IS A COMPUTER-ADAPTIVE TEST (CAT)?

Computer-adaptive testing means that you will use a computer to take the test, and the software will determine which questions to ask based on your performance on the previous questions. In this way, the test will customize itself to your level of ability. A correct response will be followed by a more difficult question, and an incorrect response will be followed by an easier question. Difficult questions increase your score in greater increments than moderate or easier questions.

In the traditional paper-and-pencil test, every examinee sees the same questions. Because of the adaptive nature of the CAT, and the large pool of questions that are available, different examinees will be asked different questions. However, the questions have been designed to meet content and difficulty specifications that will allow an equitable comparison of scores.

Pros and Cons of Computer-Adaptive Testing

There are several advantages to computer-adaptive testing. First, you will receive your unofficial scores on the day you take your test, rather than several weeks later. Second, the CAT is offered much more frequently than the paper-and-pencil version, and you may register just a few

days in advance. Third, you may choose to take the test in the morning or afternoon. In addition, the testing venue is quieter and more orderly than traditional testing locations. Finally, there are fewer questions on the GRE CAT than on traditional paper-and-pencil tests.

Unfortunately, there are also some important disadvantages to the CAT. People who are unfamiliar with computers may find the testing environment intimidating. While no computer skills are required, an unusual environment may have a psychological impact on your preparedness.

In addition, you must answer the questions in the order in which they are presented. You cannot skip a question and return to it later — or return to an earlier question to change your answer, as you could with a paper-and-pencil test. This is significant because it eliminates the important test-taking strategy of answering the easier questions first and returning to the more difficult questions if you have time. Finally, because of the nature of adaptive testing, the majority of the questions you encounter will be challenging to you.

Taking the Test

The CAT testing environment is based on a point-and-click interface. You will be presented with a question, and you will use a mouse to choose your answer. When you have chosen your answer, you will click on the on-screen “Answer Confirm” button to verify your choice. When you have confirmed your answer, the computer will select the next question. The first question asked in each multiple-choice section will be of medium difficulty. Subsequent questions will be more or less difficult depending on your answer to the preceding question. The CAT software will continue to adjust throughout the test until it reaches your ability level.

At any time during the test, you may choose to quit an individual section, or the entire test. You may wish to exercise this option if you feel that you are ill-prepared for the exam. However, you must not take this decision lightly. Once you quit a section or the entire test and confirm your desire to do so, you will be unable to reverse your decision. Note that you will not be able to take the GRE CAT again for 30 days, *even if you do not complete the exam.*

When you complete the exam, the computer will instantaneously give you unofficial scores for the multiple-choice sections, as well as a total score for those sections. Your official score report will be mailed to you within 10 to 15 days of the test date.

Should I take written practice exams?

The written practice exams in this book are intended to provide supplemental practice and review to the computer-adaptive exams on the CD. You may use them to review question types and subject matter if you do not always have access to a computer. The tests are designed to provide a score that is comparable to what you would achieve on a computer-based test. The tests contain additional questions, and the testing time is 45 minutes longer than the computer-based version. Keep in mind that the format of these tests differs significantly from the computer-based test, and schedule your study time accordingly.

Who administers the test?

The test is administered by the Educational Testing Service under the direction of the Graduate Record Examinations Board, which, though independent, is affiliated with the Association of Graduate Schools and the Council of Graduate Schools.

Is there a registration fee?

Yes, there is a registration fee. All costs are listed in the information bulletin. There is a basic registration charge, and special services sometimes require extra fees. The fees for the GRE can be waived or reduced if you meet the criteria for financial assistance. Consult the ETS bulletin for further information on all fees and financial assistance.

When and where is the test given?

Test locations and dates are listed in the *GRE Information and Registration Bulletin*, which is provided upon request by ETS. For more information, or to get an information bulletin, see your college advisor, or contact ETS at the following address:

Graduate Record Examinations
Educational Testing Service
P.O. Box 6000
Princeton, NJ 08541-6000
Phone: (609) 771-7670
Website: <http://www.gre.org>

In addition, students with special needs may wish to consult the bulletin in order to make convenient testing accommodations.

HOW TO USE THIS BOOK

What do I study first?

Remember that the GRE General CAT is designed to test knowledge that has been acquired over a long period of time. Therefore, your best preparation is to take the sample tests provided in this book and on the accompanying software, which will familiarize you with the types of questions, directions, and format of the GRE CAT. It will also help you establish a time frame in which each section must be completed. Read over the book and its suggestions for test-taking, take one of the practice tests to determine your area(s) of weakness, and then, go back and focus your study on any specific problem area(s). Brushing up on the areas in which you tested well will also improve your total test score. It is strongly recommended that you follow the Study Schedule in the front of this book to best utilize your time.

When should I start studying?

It is never too early for you to start studying for the GRE. The earlier you begin, the more time you will have to sharpen your skills. Do not procrastinate! Cramming is not an effective way to study, since it does not allow you the time needed to *learn* the test material.

FORMAT OF THE GRE CAT

All of the questions on the GRE will be in multiple-choice format. Most of the questions will have five options lettered A through E, but some of the questions will only have four options. Be aware that there is a time limit for each section, so you should keep track of the time as you take each test section. Using the practice tests will help you prepare for this task.

Section	Number of Questions	Minutes
1 Verbal	10 antonyms, 7 analogies, 7 sentence completion, 6 reading comprehension	30
2 Quantitative	14 quantitative comparisons 14 mathematical problems	45

3 Analytical	20 analytical reasoning 15 logical reasoning	60
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4 Trial Section	Not included for preparation purposes	30
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Total 2 $\frac{3}{4}$ hours

Verbal = 30

Quantitative = 28

Analytical = 35

Total Questions = 93

NOTE: The order of the sections will vary in different exams.

SECTIONS OF THE GRE CAT

QUANTITATIVE ABILITY SECTION

This section of the test is designed to measure understanding of basic math skills, concepts, and the ability to solve problems of a quantitative nature. This section does not usually require any mathematical knowledge beyond the high school level. The mathematics section can be broken down into broad areas of arithmetic, geometry, data analysis, and algebra.

- 1) **Algebra:** These questions involve factoring and simplifying, relations and functions, equations and inequalities. Required skills include the ability to solve first- and second-degree equations, inequalities, and simultaneous equations. Word problems also fall under this section, as well as basic algebraic skills applicable to problem-solving.
- 2) **Arithmetic:** These questions involve such operations as addition, subtraction, multiplication, and division. These operations are to be performed on real numbers and radical expressions. This area also covers percents, estimates, absolute values, and properties of numbers.
- 3) **Geometry:** Geometry deals with the properties of circles, triangles, parallel lines, rectangles, and polygons. Area, volume, perimeter, angles, and the Pythagorean Theorem are also included. Simple

coordinate geometry is also tested by these questions, which cover intercepts, slopes, and graphing.

- 4) **Data Analysis:** Data analysis includes descriptive statistics, interpreting data given in graphs or tables, probability, determining if enough data is given to solve a problem, and choosing appropriate data for problem solution.

VERBAL ABILITY SECTION

This section will measure your ability to use words effectively to solve a problem. This involves understanding, analyzing, and discerning relationships among words or groups of words. The verbal ability section contains four types of questions: antonyms, analogies, sentence completion, and reading comprehension.

- 1) **Antonyms:** These questions measure the strength of your vocabulary and your ability to make a transition from a word to its most likely opposite.
- 2) **Analogies:** These questions test your ability to recognize relationships among words and to recognize when they parallel each other. A pair of words is given and you are asked to determine which, among the five answer choice sets, is most like the original pair.
- 3) **Sentence Completion:** These questions measure your ability to recognize which words or phrases best complete a sentence in terms of style and logic.
- 4) **Reading Comprehension:** These questions require you to analyze a written passage from several perspectives, and to read with thorough understanding and insight. You will encounter six types of reading comprehension questions. They primarily focus on the main idea, explicitly stated information, the author's implied ideas, applications of the author's ideas to other scenarios, the author's reasoning, logic, or persuasive technique, and attitude or tone of the passage. There are four passages on the general test, two of which are longer and yield seven or eight questions, and two shorter passages followed by three or four questions. Each of these passages is drawn from four different areas of study—social sciences, humanities, and physical and biological studies.

ANALYTICAL ABILITY SECTION

This section requires you to think logically. Four types of questions can be found in this section: analytical reasoning, logical reasoning, analysis of explanations, and pattern identification.

- 1) **Analytical Reasoning:** These questions test your ability to understand structure in a relationship and to derive new information from this relationship. A set of conditions is given; you must answer each question according to the structure of the conditions.
- 2) **Logical Reasoning:** These questions test your ability to understand and evaluate arguments. You may have to recognize points of an argument or assumptions on which an argument is based. You may also be asked to analyze presented evidence.
- 3) **Analysis of Explanation:** This type of question provides you with a situation and a result. From this, you must create explanations or assess whether or not a statement adequately explains the situation.
- 4) **Pattern Identification:** This question type entails looking at number sequences; it tests your ability to recognize patterns within a sequence.

ABOUT THE REVIEW SECTIONS

Our reviews are written to help you understand the concepts behind GRE CAT questions. They will help prepare you for the test by teaching you what you need to know. The reviews in this book are complete, with drills to help reinforce the subject matter. By using the reviews in conjunction with the practice tests, you will be able to sharpen your test-taking skills.

QUANTITATIVE ABILITY REVIEW

This review section includes refreshers with several examples to help refamiliarize you with basic math and its properties. Refreshers are provided for arithmetic, algebra, and geometry, as well as quantitative comparisons, and mastering data interpretation.

VERBAL ABILITY REVIEW

Strategies and tips for improving performance are provided in this section, as are the directions for each subset. Sentence completion, reading comprehension, analogies, and antonyms are each covered.

ANALYTICAL ABILITY REVIEW

The areas of analytical and logical reasoning are covered extensively with examples and typical questions. An overall strategy is provided to help you with general test-taking techniques.

SCORING THE PRACTICE EXAMS

SCORING THE GRE CAT EXAMS

When you complete a CAT exam using REA's TESTware® and return to the Main Menu, clicking on the *RESULTS* button will generate a score report. REA's TESTware® performs the raw score to scaled score conversion for you, and presents only scaled scores.

SCORING THE GRE WRITTEN PRACTICE EXAMS

If you do not have access to a computer but you would still like to take a practice exam, you can take one of the written tests included in this book. Use the following method to calculate your scaled score:

First, compare your Answer Sheet to the Answer Key. Mark each response as correct or incorrect. Then, total the number of correct responses for each individual section of the GRE CAT. Place each section's total of correct responses on its corresponding space on the Scoring Worksheet. Next, add the two Verbal, two Quantitative, and two Analytical sections together to compute three separate raw scores for each part of the GRE CAT. For example, add together your Reading Comprehension and Sentence Completion scores to obtain your Verbal Raw Score. Use the same procedure to find your other raw scores. Then, convert the raw scores to scaled scores. Refer to the "Scaled Scores and Percents Below" chart to complete this step. To do this, find your raw score in the raw score column, then find its corresponding scaled score in the scaled score column. Lastly, convert your scaled scores to percentiles by referring to the same chart. Keep a record of your scores so you can track your progress.

SCALED SCORES AND PERCENTS BELOW

Raw Score	Verbal Score	% Below	Quantitative Score	% Below	Analytical Score	% Below
72-76	800	99				
71	790	99				
70	780	99				
69	760	99				
68	750	98				
67	740	98				
66	720	96				
65	710	96				
64	700	95				
63	690	94				
62	680	93				
61	660	91				
60	650	89	800	98		
59	640	88	800	98		
58	630	86	790	98		
57	620	85	780	97		
56	610	84	770	95		
55	600	82	750	92		
54	590	80	740	90		
53	580	78	730	89		
52	570	75	720	87		
51	560	73	700	83		
50	550	71	690	81	800	99
49	540	68	680	79	800	99
48	530	65	670	77	800	99
47	520	63	650	72	790	98
46	510	60	640	71	770	98
45	500	57	630	68	760	97
44	490	55	620	65	740	95
43	480	52	600	61	730	94
42	470	49	590	59	710	92
41	460	45	580	56	700	91
40	450	43	560	52	680	88
39	440	40	550	49	670	86
38	430	37	540	46	650	84
37	420	34	530	44	640	81
36	420	34	510	39	620	77
35	410	31	500	37	610	74
34	400	28	490	34	590	69
33	390	26	480	32	580	67
32	380	24	460	27	560	61
31	370	22	450	26	550	59
30	360	18	440	23	530	53
29	360	18	430	21	520	50
28	350	17	410	18	500	44

SCALED SCORES AND PERCENTS BELOW

Raw Score	Verbal Score	% Below	Quantitative Score	% Below	Analytical Score	% Below
27	340	15	400	16	490	41
26	330	13	390	14	470	36
25	330	13	380	13	460	33
24	320	11	360	10	440	27
23	310	10	350	9	430	25
22	300	8	340	8	410	21
21	290	7	330	7	400	18
20	280	6	310	5	380	15
19	270	4	300	4	370	13
18	260	3	290	3	350	10
17	250	3	280	3	340	9
16	240	2	260	2	320	6
15	230	1	250	1	310	5
14	220	1	240	1	300	4
13	210	1	230	1	280	3
12	200	0	210	0	270	2
11	200	0	200	0	250	1
10	200	0	200	0	240	1
9	200	0	200	0	220	1
8	200	0	200	0	210	0
0-7	200	0	200	0	200	0

When will I receive my score report and what will it look like?

One of the advantages of computer-based testing is that scores are available more rapidly. You will receive unofficial, instantaneous scores for the multiple-choice sections. Separate scores and percentile ranks for each of the three sections will be provided. Percentile ranks indicate your score's position in relation to all others who have taken the test in the previous three-year period. A maximum score of 800 can be obtained and a minimum of 200 is possible, but at least one question must be answered in order to receive a score of 200. If no questions are answered, then no score can be given.

STUDYING FOR THE GRE CAT

It is very important for you to choose the time and the place for studying that works best for you. Some students may set aside a certain number of hours every morning to study, while others may choose to study at night before going to sleep. Other students may study during the day, while waiting on a line, or even while eating lunch. Only you can

determine when and where your study time will be most effective. But, be consistent and use your time wisely. Work out a study routine and stick to it.

When you take the written practice tests, try to make your testing conditions as much like those of the actual test as possible. Turn your television and radio off, and sit down at a quiet table free from distraction. Make sure to time yourself by setting a timer for 3½ hours.

As you complete each practice test, score your test and thoroughly review the explanations to the questions you answered incorrectly; however, do not review too much at once. Concentrate on one problem area at a time by reviewing the question and explanation, and by studying the review until you are confident that you completely understand the material.

Keep track of your scores. By doing so, you will be able to gauge your progress and discover general weaknesses in particular sections. You should carefully study the reviews that cover your areas of difficulty, as this will build your skills in those areas.

HOW TO STUDY USING REA'S TESTware®

REA's TESTware® is designed to provide complete and accurate test preparation for the GRE CAT. There are, however, a few important differences of which you should be aware.

1. REA's TESTware® includes letters in the ovals next to the answer choices. On the actual GRE CAT, the ovals are blank. We've included letters for your reference in the *Explanations* sections.
2. REA's TESTware® toolbar is slightly different from ETS's. The first thing you will notice is that REA's toolbar is more colorful than ETS's, but the buttons function in basically the same way. In fact, throughout the exam, the differences between our toolbar and theirs are largely cosmetic. The important differences do not present themselves until you reach the *Explanations* mode in REA's TESTware®. Because there are no explanations of test items on the actual GRE CAT, the *Explanations* toolbar is unique to REA's TESTware®.

GRE CAT TEST-TAKING TIPS

Computer-adaptive testing has eliminated many of the traditional test-taking strategies, such as answering the easier questions first and returning to the more difficult questions later. However, new strategies have

evolved that take the place of traditional ones. The most important of these strategies are listed here:

- **Take the Tutorial**
Even if you have some computer experience, pay attention to the tutorial that introduces the GRE CAT. This tutorial will teach you how to use the features and characteristics of the computer system to your advantage. As with any software package, there are some aspects of the testing system that are unique to the CAT environment. It is in your best interest to learn about these features before you take a timed test.
- **Use Your Time Wisely**
Keep in mind that this is a timed test, and check your time regularly. As with any standardized test, you should not spend too much time on any one question. If you do not know the answer to a question, try to make an educated guess by eliminating as many of the answer choices as possible, and move on to the next question.
- **Answer Every Question in Each Section**
Because the number of questions answered is calculated into your overall score, it is in your best interest to answer every question. If you are running out of time, you will be better served by guessing, even random guessing, than by leaving the last questions unanswered.
- **Pay Particular Attention to the First Questions of Each Section**
The adaptive testing engine makes major score adjustments based on your answers to the first few questions of each section, and uses subsequent questions to fine-tune its assessment of your performance level. While you should not spend an undue amount of time on these questions, you should be aware that they are potentially more important than later questions, and treat them accordingly.
- **Use the “Answer Confirm” Button to Your Advantage**
It is very easy to get into the habit of choosing an answer and automatically clicking on the “Answer Confirm” button. This is a dangerous tendency. Be sure that you have clicked on the appropriate answer choice before confirming.
- **Make Effective Use of Scratch Paper**
At the test center, you will be given scratch paper to be used for the mathematical and analytical sections. Drawing diagrams can be very helpful in working out the complex analytical, as well as mathematical problems.

- **Make Effective Use of Break Periods**

You will generally be given an optional ten-minute break between test sections. Use this time to rest and take a well-deserved break.

HOW TO BEAT THE CLOCK

Every second counts, so you want to use the available test time for each section in the most effective manner. Here's how:

- *Memorize the test directions for each section of the test.* You do not want to waste valuable time on the day of the exam reading directions. Your time should be spent answering the questions.
- *Pace yourself.* Work steadily and quickly. Do not get stuck or spend too much time on any one question.

THE DAY OF THE TEST

BEFORE THE TEST

On the day of the test, you should wake up early (after a decent night's rest, it is hoped) and have a good breakfast. Make sure that you dress comfortably, so that you are not distracted by being too hot or too cold while taking the test. Also plan to arrive at the test center early. This will allow you to collect your thoughts and relax before the test, and will also spare you the stress that comes with being late.

Before you leave for the test center, make sure that you have your authorization voucher or admission ticket, and one form of identification containing a recent photograph and signature. Acceptable forms of ID include passports, driver's licenses, national ID cards, or military ID cards. Expired IDs, Social Security cards, employee IDs, credit cards, and letters prepared by a notary are all unacceptable forms of identification. Without proper identification, you will not be admitted into the test center and you will lose your registration fee. If you do not have a valid ID or if you are taking the GRE outside of your country of citizenship, please contact ETS to find out about alternate forms of acceptable identification.

If you would like, you may wear a watch to the test center; however, only ordinary watches will be permitted. Watches with alarms, calculator functions, flashing lights, beeping sounds or the like will not be allowed. You also cannot bring calculators, slide rules, or any written material such as dictionaries, textbooks, or notebooks. In addition, you will not be permitted to have briefcases or packages in your testing room. Drinking, eating, and smoking are prohibited.

DURING THE TEST

When you arrive at the test center, you will be assigned a cubicle. If you need to use the rest room, you may leave the testing room, but you will not be allowed to make up any lost time. Procedures will be followed to maintain test security.

Once you enter the test center, follow all of the rules and instructions given by the test supervisor. If you do not, you risk being dismissed from the test and having your GRE scores cancelled.

AFTER THE TEST

When you have completed the last section of the GRE CAT, you must wait until the proctor collects all test-taking materials before you will be permitted to leave. Then, go home and relax!