



**GRE<sup>®</sup>**

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GRADUATE RECORD EXAMINATIONS<sup>®</sup>

# Guide to the Use of Scores

2007–08

**This publication includes:**

- Guidelines for the use of GRE<sup>®</sup> scores
- Considerations in score interpretation
- Score interpretation and statistical information

Published for the Graduate Record Examinations Board by Educational Testing Service.

This publication can be downloaded from the GRE website at [www.ets.org/gre/edupubs.html](http://www.ets.org/gre/edupubs.html).

**Visit the GRE website at [www.ets.org/gre](http://www.ets.org/gre)**



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## COMMUNICATING WITH THE GRE PROGRAM

### *By E-mail*

Inquiries from Educators—[gretests@ets.org](mailto:gretests@ets.org)  
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### *By Mail*

GRE Program  
Educational Testing Service  
PO Box 6000  
Princeton, NJ 08541-6000

### *By Phone*

Inquiries from Educators—1-609-683-2002  
Inquiries from Examinees—1-609-771-7670  
or 1-866-473-4373 (toll free for test takers in  
the U.S., U.S. Territories\*, and Canada)

### *By Fax*

GRE Program  
Educational Testing Service  
1-610-290-8975

\*Includes American Samoa, Guam, Puerto Rico, and U.S. Virgin Islands

## GRE INSTITUTIONAL SERVICES

- **Criterion<sup>SM</sup> Online Writing Evaluation Service**—this web-based institutional service gives students valuable writing practice on authentic GRE Analytical Writing topics and provides both students and instructors with holistic evaluations of students' writing skills and diagnostic feedback, instantly. Visit [www.ets.org/criterion](http://www.ets.org/criterion).
- **GRE Test Preparation Workshops for Campus Educators**—these workshops provide in-depth information about GRE tests to attendees so they are able to serve as campus-wide resources in organizing and presenting campus-based GRE test preparation workshops. Visit [www.ets.org/gre/tpworkshops.html](http://www.ets.org/gre/tpworkshops.html).
- **Institutional Summary Statistics Reports**—provide graduate institutions with performance data about their applicants; provide undergraduate institutions with performance data about their enrolled seniors and unenrolled college graduates who have graduated within the past two years. Visit [www.ets.org/gre/issr.html](http://www.ets.org/gre/issr.html).
- **Search Service**—aids institutions interested in recruiting qualified applicants for their programs. Visit [www.ets.org/gre/search.html](http://www.ets.org/gre/search.html).
- **Survey of Graduate Enrollment**—collects, on an annual basis, total graduate school enrollment data and discipline data from institutions that are members of the Council of Graduate Schools (CGS) and members of the regional associations affiliated with CGS. Visit [www.ets.org/gre/research.html](http://www.ets.org/gre/research.html).

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# THE GRADUATE RECORD EXAMINATIONS BOARD AND ITS COMMITTEES

The Graduate Record Examinations® (GRE®) Board was formed in 1966 as an independent board and is affiliated with the Association of Graduate Schools (AGS) and the Council of Graduate Schools (CGS). The Board establishes all policies for the GRE Program, which is administered by Educational Testing Service® (ETS®). In addition, ETS provides information, technical advice, and professional counsel to the Board and develops proposals to achieve its program, research, and service goals.

GRE Program activities include testing, research, publishing, and advisory services. These services are designed to assist graduate schools and departments in admission, guidance and placement, program evaluation, and selection of fellowship recipients and to assist students with their transition to graduate education.

The GRE Board is mindful of the impact of its testing, information, research, and services on students, institutions, and graduate education, and it recognizes its obligation to ensure that its policies and activities serve the best interests of the entire graduate education community. The GRE Board strives to equalize higher education opportunities for all students, improve the practices, procedures, and quality of graduate education, and promote maximum utilization of human talents and financial resources.

The GRE Board consists of 18 appointed members: five AGS appointees, four CGS appointees, and eight at-large appointees of the Board. In addition, the president of CGS is an ex-officio member of the Board.

There are five standing committees of the GRE Board: (1) the Executive Committee, which is empowered to make interim decisions and set the agenda for board meetings; (2) the Research Committee, which establishes long-range planning strategies related to research, considers proposals for new research, monitors the progress of all research projects, and allocates designated GRE Board funds for research projects; (3) the Services Committee, which monitors all GRE operating services, maintains a close relationship with graduate students and faculty, and identifies long-range planning strategies involving the development of new services; (4) the Minority Graduate Education Committee, which considers new program services and long-range planning strategies for minority students, monitors ongoing minority-related GRE programs (including the Fee Reduction Program and the GRE Search Service), and evaluates research proposals and ongoing research projects that affect minorities; and (5) the Finance Committee, which considers and makes recommendations for action on all GRE budget and finance issues.

## GRE Board and Committee Members

**Graduate Record Examinations Board:** **Scott Bass**, University of Maryland, Baltimore County\*; **Patricia Bishop**, University of Central Florida; **Gregory Camilli**, Rutgers University; **Isaac Colbert** (Past Chair), Massachusetts Institute of Technology\*; **John Contreni**, Purdue University; **Linda Dykstra**, University of North Carolina, Chapel Hill; **Jeffery Gibeling**, University of California, Davis; **Ana Guadalupe**, University of Puerto Rico, Rio Piedras; **Bruce Jacobs**, University of Rochester; **Karen Klomparens**, Michigan State University\*; **Daniel Koretz**, Harvard University; **Carol Lynch**, University of Colorado at Boulder\*; **Suzanne Ortega** (Chair), University of Washington, Seattle\*; **Liora Pedhazur Schmelkin**, Hofstra

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## Test of English as a Foreign Language (TOEFL®) Board

In recognition of the fact that a large number of TOEFL examinees are potential graduate students, a cooperative arrangement for the operation of the program was entered into on July 1, 1973, by Educational Testing Service, the College Board, and the Graduate Record Examinations Board. Under this arrangement, policies governing the TOEFL program are formulated by a board of 15 members. Both the College Board and the GRE Board appoint three members to the TOEFL Board to represent the interests of their respective constituencies. These six members select the remaining nine, who are identified with such groups as graduate schools of business, community colleges, foreign student advisers, teachers of English as a foreign language, nonprofit educational exchange agencies, and agencies of the federal government.

\*Executive Committee

## OVERVIEW OF THE GRE TESTS

GRE test scores can be used by admissions or fellowship panels to supplement undergraduate records and other qualifications for graduate study. The scores provide common measures for comparing the qualifications of applicants and aid in the evaluation of grades and recommendations.

Accredited undergraduate and graduate institutions and non-degree-granting organizations that award graduate fellowships are eligible for consideration as score recipients. Institutions and organizations that do not meet either one of these requirements are, in general, not eligible to be score recipients. The GRE Board retains the right to make exceptions to this policy in special circumstances.

The weight to be given to GRE scores can generally be established by relating what the tests measure to the orientation, curriculum, and aims of a department. Specifically, the content validity of the tests for a graduate department should be determined by reviewing each test carefully and then making subjective decisions as to the weight, if any, the scores on GRE tests should receive in relation to other admission factors. Score users should be familiar with the responsibilities of test users outlined in Part III of the *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 1999).

### General Test

#### Content

The General Test measures verbal reasoning, quantitative reasoning and analytical writing abilities that have been acquired and developed over a long period of time. The **Verbal** section tests the ability to analyze and evaluate written material and synthesize information obtained from it, to analyze relationships among component parts of sentences, and to recognize relationships between words and concepts. In each test edition, there is a balance among the passages across three different subject matter areas: humanities, social sciences, and natural sciences. The **Quantitative** section tests basic mathematical skills and understanding of elementary mathematical concepts, as well as the ability to reason quantitatively and to solve problems in a quantitative setting. There is a balance among the questions requiring arithmetic, algebra, geometry, and data analysis. The **Analytical Writing** section tests critical thinking and analytical writing skills. It assesses the ability to articulate and support complex ideas, analyze an argument, and sustain a focused and coherent discussion. It does not assess specific knowledge, and there is no single best way to respond.

The Analytical Writing section, which is always the first section of the test, consists of two tasks: a 45-minute “Present Your Perspective on an Issue” task and a 30-minute “Analyze an Argument” task. The Issue task states an opinion on an issue of general interest and asks test takers to address the issue from any perspective(s) they wish, so long as they provide relevant reasons and examples to explain and support their views. The Argument task presents a different challenge: it requires test takers to critique an argument by discussing how well reasoned they find it. Test takers are asked to consider the logical soundness of the argument rather than to agree or disagree with the position it presents. The two tasks are complementary in that one requires

test takers to construct their own arguments by making claims and providing evidence supporting their positions on the issue, whereas the other requires examinees to critique someone else’s argument by assessing its claims and evaluating the evidence it provides.

Individuals who are interested in reviewing the content of the General Test can download the GRE POWERPREP software free of charge from the GRE website at [www.ets.org/gre/tpresources.html](http://www.ets.org/gre/tpresources.html).

Some questions on the General Test are being pretested for possible use in future editions of the test; other questions may appear in identified research sections. Answers to pretest and research questions are not used in the calculation of scores for the test.

#### Administration

The GRE General Test is offered on computer in the U.S., Canada, and many other countries. Paper-based GRE General Test administrations are offered in areas of the world where computer-based testing is not available. The GRE calendar on the back cover of this *Guide* shows paper-based test administrations and score reporting dates for the academic year.

The Verbal and Quantitative sections of the computer-based General Test are adaptive, which means that the selection of questions is tailored to an examinee’s ability level in each of the measures. Initially, an examinee is presented with a question of about average difficulty. Thereafter, the computer selects questions based upon (1) the statistical characteristics of those questions already answered (including the difficulty level), (2) the required variety of question types, and (3) appropriate coverage of content. The computer-based test format does not require test takers to be familiar with computers; a tutorial section at the beginning of the computer-based test teaches the test taker how to use the testing system.

In the Analytical Writing section of the computer-based General Test, the GRE Program uses an elementary word processor developed by ETS so that individuals familiar with a specific commercial word processing software do not have an advantage or disadvantage. This software contains the following functionalities: inserting text, deleting text, cut and paste, and undoing the previous action. Tools such as a spelling checker and grammar checker are not available in the ETS software, in large part to maintain fairness with those examinees who handwrite their essays during the paper-based General Test.

#### How the Analytical Writing Section is Scored

The scoring of the Analytical Writing section is the same whether the test is taken on computer or paper. Each essay receives a score from two trained readers, using a six-point holistic scale. In holistic scoring, readers are trained to assign scores on the basis of the overall quality of an essay in response to the assigned task. If the two assigned scores differ by more than one point on the scale, the discrepancy is adjudicated by a third GRE reader. Otherwise, the scores from the two readings of an essay are averaged. The final scores on the two essays are then averaged and rounded up to the nearest half-point interval. A single score is reported for the Analytical Writing measure.

The primary emphasis in scoring the Analytical Writing section is on examinees' critical thinking and analytical writing skills rather than on grammar and mechanics. (Scoring guides for each essay task are available on the GRE website at [www.ets.org/gre/awguides.html](http://www.ets.org/gre/awguides.html).)

Test takers' essay responses on the Analytical Writing section will be reviewed by ETS essay-similarity-detection software and by experienced essay readers during the scoring process. In light of the high value placed on independent intellectual activity within United States graduate schools and universities, ETS reserves the right to cancel test scores of any test taker when there is substantial evidence that an essay response includes, but is not limited to, any of the following:

- text that is similar to that found in one or more other GRE essay responses;
- quoting or paraphrasing, without attribution, language that appears in published or unpublished sources;
- unacknowledged use of work that has been produced through collaboration with others without citation of the contribution of others;
- essays that are submitted as work of the examinee when the words have, in fact, been borrowed from elsewhere or prepared by another person.

When one or more of the above circumstances occurs, the test taker's essay text, in ETS's professional judgment, does not reflect the independent, analytical writing skills that this test seeks to measure. Therefore, ETS must cancel the essay score as invalid and cannot report the GRE General Test scores of which the essay score is an indispensable part.

Test takers whose scores are canceled will forfeit their test fees and must pay to take the entire GRE General Test again at a future administration. No record of the score cancellations, or the reason for cancellation, will appear on their future score reports sent to colleges and universities.

## Subject Tests

Subject Tests, available in the eight disciplines listed below, measure achievement in particular fields of study.

Biochemistry, Cell and Molecular Biology	Literature in English
Biology	Mathematics
Chemistry	Physics
Computer Science	Psychology

Every Subject Test yields a total score, and some yield subscores. Subscores enable assessment of strengths and weaknesses and can be used for guidance and placement purposes. Each test deals with the subject matter that is emphasized in many undergraduate programs as preparation for graduate study in the field.

Individuals who are interested in reviewing the content of a particular Subject Test can download a copy of the corresponding Subject Test practice book free of charge from the GRE website at [www.ets.org/gre/greprep.html](http://www.ets.org/gre/greprep.html).

The Subject Tests, offered only at paper-based administrations, will be given in October 2007, November 2007, and April 2008 at test centers throughout the world. The GRE calendar on the back cover of this *Guide* shows test administration and score reporting dates for the academic year.

## GUIDELINES FOR THE USE OF GRE SCORES\*

The GRE Board has adopted a statement regarding fair and appropriate use of GRE scores. This statement can be found on the GRE website at [www.ets.org/gre/greguidelines.html](http://www.ets.org/gre/greguidelines.html).

### Introduction

These guidelines have been adopted by the Graduate Record Examinations (GRE) Board to provide information about the appropriate use of GRE test scores for those who use the scores in graduate admissions and fellowship selection processes and for other approved purposes. They are also intended to protect students from unfair decisions that may result from inappropriate uses of scores. Adherence to the guidelines is important.

The GRE General Test and Subject Tests are designed to assess academic knowledge and skills relevant to graduate study. As measures with known statistical properties and high-quality technical characteristics, the scores from these tests, when used properly, can improve graduate admissions and fellowship selection processes.

Any GRE test, however, has two primary limitations: (1) it does not and cannot measure all the qualities that are important in predicting success in graduate study or in confirming undergraduate achievement and (2) it is an inexact measure; that is, only score differences that exceed the standard error of measurement of a given score can serve as reliable

indications of real differences in academic knowledge and developed abilities.

Although limitations and cautions apply to all admissions measures, the GRE Board has a particular obligation to inform users of the appropriate uses of GRE scores and to identify and try to rectify instances of misuse. To this end, the following policies and guidelines are available to all GRE test takers, institutions, and organizations that are recipients of GRE scores.

### Policies

In recognition of its obligation to ensure the appropriate use of GRE scores, the GRE Board has developed policies designed to make score reports available only to approved recipients, to encourage these score users to become knowledgeable about the validity of the tests, to protect the confidentiality of examinees' scores, and to follow up on cases of possible misuse of scores. The policies are discussed below.

**Score recipients.** Accredited undergraduate and graduate institutions and non-degree-granting organizations that award

\*Revised and approved by the GRE Executive Committee in June 2002, for implementation in October 2002.



graduate fellowships are eligible for consideration as score recipients. Institutions and organizations that do not meet either one of these requirements are, in general, not eligible to be score recipients. The GRE Board retains the right to make exceptions to this policy in special circumstances.

**Validity.** The general appropriateness of using GRE test scores for graduate admissions, fellowship selection, and other approved purposes has been established by research studies carried out by Educational Testing Service and others, as well as by studies conducted through the GRE Validity Study Service. GRE scores may be appropriate for some other purposes, but it is important for the user to validate their use for those purposes. To assist institutions in evaluating proposed uses, these guidelines include information about appropriate and inappropriate uses.

**Confidentiality.** GRE scores, whether for an individual or aggregated for an institution, are confidential and can be released only by authorization of the individual or institution or by compulsion of legal process.

**Use of scores in aggregated form.** Information based on GRE scores may be useful to prospective students, but use of a precise mean or median should be avoided. Graduate programs and institutions are urged to report GRE scores in ranges such as the highest and lowest scores of the middle 50 percent of the admitted students. Presenting information by score ranges emphasizes the diversity of individual scores for any one graduate program or institution, and also makes clear the overlap of scores among graduate programs and institutions.

Use of GRE scores in aggregated form as a measure for ranking or rating graduate programs, institutions, university systems, or states is strongly discouraged except when the scores are used as one indicator among several appropriate indicators of educational quality.

**Encouragement of appropriate use and investigation of reported misuse.** All users of GRE scores have an obligation to use the scores in accordance with published GRE Board policies and guidelines. Institutions have a responsibility to ensure that all individuals using GRE scores are aware of the GRE Board score-use policies and guidelines and to monitor the use of the scores, correcting instances of misuse when they are identified. The GRE Program staff is available to assist institutions in resolving score-misuse issues.

## Guidelines

### 1. Use Multiple Criteria

Regardless of the decision to be made, multiple sources of information should be used to ensure fairness and balance the limitations of any single measure of knowledge, skills, or abilities. These sources may include undergraduate grade point average, letters of recommendation, personal statement, samples of academic work, and professional experience related to proposed graduate study. GRE scores should not be used exclusively.

Use of multiple criteria is particularly important when using GRE scores to assess the abilities of educationally disadvantaged students, students whose primary language is not English, and students who are returning to school after an extended absence. Score users are urged to become familiar with factors affecting score interpretation for these groups as discussed in this publication.

### 2. Accept Only Official GRE Score Reports

The only official reports of GRE scores are those issued by Educational Testing Service and sent directly to approved institutions and organizations designated by the test takers. Scores obtained from other sources should not be accepted. If there is a question about the authenticity of a score report, the question should be referred to ETS. ETS will verify the accuracy of the scores and whether an official report was issued.

### 3. Conduct Validity Studies

Departments using GRE scores for graduate admissions, fellowship awards, and other approved purposes are encouraged to collect validity information by conducting their own studies. The GRE Program staff will provide advice on the design of appropriate validation studies without charge.

### 4. Maintain Confidentiality of GRE Scores

All individuals who have access to GRE scores should be aware of the confidential nature of the scores and agree to maintain their confidentiality. Institutional policies should be developed to ensure that confidentiality is maintained. For example, GRE scores should not be placed on documents sent outside the institution.

### 5. Consider Verbal, Quantitative, and Analytical Writing Scores as Three Separate and Independent Measures

Since the level of skills in verbal, quantitative, and analytical writing abilities required for success in graduate school varies by field or department, Verbal, Quantitative, and Analytical Writing scores should not be combined. In some cases, departments may wish to establish weights for the three measures, given the program's emphasis on particular skills. This is appropriate only when based upon empirical evidence, such as a validity study.

### 6. Consider Carefully Any Use of a Composite Measure

A cutoff score based only on GRE scores should never be used as a sole criterion for denial of admission. The use of a cutoff score combining Verbal, Quantitative, and Analytical Writing is especially problematic because the scales for the measures differ greatly. Any department considering the use of a cutoff score should compile a rationale justifying the appropriateness of such a score for each measure: (1) evidence that the proposed cutoff score for the measure usefully distinguishes between individuals who are likely to succeed in graduate school and those who are not, and (2) the impact of the proposed cutoff score on the institution's goals related to diversity.

## **7. Conduct Reviews of Subject Test Content**

Although each Subject Test is developed and updated regularly by a committee of examiners composed of individuals who are actively teaching in the field, the match between the test and the curriculum in a given department may not be exact and may vary over time. Departments, therefore, are encouraged to obtain free copies of the relevant tests periodically and review them to verify the appropriateness of their content. The free practice books can be downloaded from the GRE website at [www.ets.org/gre/greprep.html](http://www.ets.org/gre/greprep.html).

## **8. Avoid Decisions Based on Small Score Differences**

Small differences in GRE scores (as defined by the standard error of measurement) should not be used to make distinctions among examinees. Standard errors of measurement (SEMs) vary by test and are available in this publication.

## **9. Do Not Compare Scores from Different Tests**

GRE General Test scores are not directly comparable with scores on other graduate or undergraduate admission tests. Subject Test scores should be compared only with other scores on the same Subject Tests (for example, a 680 on the Physics Test is not equivalent to a 680 on the Chemistry Test). Percentile ranks should be compared only if they are based on the same reference population.

## **10. Recognize Limitations of Scores Earned on Tests**

### **Taken Under Special Conditions**

GRE tests are offered with special arrangements and test materials to accommodate the needs of students with visual, physical, hearing, and learning disabilities. Depending upon the nature and extent of the disability, the scores may not accurately reflect a student's educational achievement. For some students, the nature of their disabilities may make it advisable to waive GRE test score requirements.

## **Normally Appropriate and Inappropriate Uses of GRE Scores**

The suitability of a GRE test for a particular use should be explicitly examined before using test scores for that purpose. The following lists of appropriate and inappropriate uses of GRE scores are based on the policies and guidelines outlined above. The lists are meant to be illustrative, not exhaustive, in nature. There may be other appropriate uses of GRE scores, particularly for non-admissions purposes, but any uses other than those listed below should be discussed in advance with GRE Program staff to determine their appropriateness.

If a use other than those appropriate uses listed below is contemplated, it will be important for the user to validate the use of scores for that purpose. The GRE Program staff will provide advice on the design of such validity studies without charge.

Subject Test scores may be considered for the award of undergraduate credit only in the field of the test and only when a rationale has been developed that discusses the relationship between GRE Subject Test scores and the amount of credit awarded. This rationale must be made available to users of any transcripts that contain credit awarded in this manner.

## **Appropriate Uses**

Provided all applicable guidelines are adhered to, General Test, Subject Tests, and Writing Assessment scores are suitable for the following uses:

1. selection of applicants for admission to graduate school
2. selection of graduate fellowship applicants for awards
3. selection of graduate teaching or research assistants
4. guidance and counseling for graduate study

## **Inappropriate Uses**

1. Requirement of a minimum score on the General Test for conferral of a degree, credit-by-examination, advancement to candidacy, or any noneducational purpose
2. Requirement of scores on the General Test, Subject Tests, or Writing Assessment for employment decisions, including hiring, salary, promotion, tenure, or retention (except for the awarding of assistantships to graduate students)
3. Use of any measure involving a summation of Verbal, Quantitative, Analytical, and Analytical Writing scores, or any subset of these scores, without first conducting and documenting a validity study to establish an appropriate weight for each measure

Comments, complaints, inquiries, and suggestions about the use of GRE test scores are welcome. To contact the GRE Program office, see the inside front cover.

## CONSIDERATIONS IN SCORE INTERPRETATION

GRE test scores should be used to supplement the information provided in a person's application, such as undergraduate record and letters of recommendation. Officials responsible for admission at each institution must determine the significance of GRE scores for each applicant. Particular attention must be paid to the use of GRE scores for individuals described below. Experience of institutions or departments should continue to be the best guide to interpretation of GRE test scores in these instances. GRE research reports on the topics listed below can be downloaded from the Research section of the GRE website at [www.ets.org/gre/research.html](http://www.ets.org/gre/research.html).

### Repeat Test Takers

Test takers are advised that it may be to an individual's advantage to take a GRE test more than once if the individual thinks that the scores obtained do not reflect his or her true abilities. Those considering repeating a test are advised that large score increases are unusual, and for some test takers scores will go down. Score reports include test results obtained within the past five-year period.

There are several ways that graduate departments can judge multiple scores for an individual. For example, they may use the average of all scores, the most recent scores, or the highest scores. Whatever approach is adopted, it should be used consistently with all applicants.

### Minority Examinees

GRE scores, like those on similar standardized tests, cannot completely represent the potential of any person, nor can they alone reflect an individual's chances of long-term success in an academic environment. It should be remembered that the GRE tests provide measures of certain types of developed abilities and achievement, reflecting educational and cultural experience over a long period. Special care is required in interpreting the GRE scores of students who may have had educational and cultural experiences somewhat different from those of the traditional majority.

Research indicates that GRE scores are valid predictors of success in the first year of graduate school for all students. Available samples of minority students, however, have been very small. Information about specific research regarding test scores and minority groups can be found in the publication entitled *Factors That Can Influence Performance on the GRE General Test 2004–2005* on the GRE website at [www.ets.org/gre/edupubs.html](http://www.ets.org/gre/edupubs.html).

### International Examinees

Various factors complicate the interpretation of GRE scores for international students. Obviously, an understanding of English is important since lack of fluency in English may affect test performance. Moreover, since the GRE tests are developed for students who have been educated in the United States, cultural and educational backgrounds must be considered along with linguistic factors.

ETS offers tests developed specifically for testing the English language proficiency of nonnative English speakers. The most widely used academic English language proficiency test is the Test of English as a Foreign Language, commonly known as the TOEFL test. The primary purpose of the TOEFL test is to measure the general English proficiency of people who are nonnative speakers of English and want to study at colleges and universities where English is the language of instruction. The TOEFL test is offered in two formats: Internet-based and paper-based. The TOEFL Internet-based test (iBT) measures English language

proficiency in all four language skills: reading, listening, writing, and speaking. In areas where access to the Internet-based test may be limited, the paper-based version of the test is administered (TOEFL PBT), which measures English language proficiency in the areas of listening comprehension, structure and written expression, and reading comprehension. The Test of Written English (TWE®), is required with every TOEFL paper-based administration. Test takers are required to write a short essay on an assigned topic to demonstrate their ability to write in English. A computer-based version (TOEFL CBT) was also available and, since TOEFL scores are valid for two years, score users can still expect to receive TOEFL CBT scores in 2008. A TOEFL-related test is the Test of Spoken English (TSE®), which measures the ability of nonnative speakers of English to communicate orally in English. The TSE will be available upon request in areas where TOEFL PBT is administered.

These English language proficiency tests are often required for admission to graduate as well as undergraduate institutions, and are designed to complement one another in the admissions process. An indicator of the general level of English proficiency of international students may be obtained by looking at the section scores as well as the total score on the TOEFL exam. This information, in conjunction with the performance on the GRE tests, should provide a better basis for determining the extent to which English proficiency may be a factor in the GRE scores earned by these students.

Score users should be aware that the writing measure on the TOEFL iBT and the GRE Analytical Writing measure are very different. The TOEFL iBT writing measure is not designed to measure higher levels of thinking and analytical writing. Therefore the scores on the two tests are not comparable. However, because the TOEFL iBT test emphasizes both fundamental writing skills as well as the ability to organize and convey in writing information that has been understood from spoken and written text, the TOEFL scores can supplement an Analytical Writing score by helping faculty determine whether a low score on the GRE Analytical Writing measure is due to lack of familiarity with English or lack of ability to produce and analyze logical arguments. The TOEFL Test of Written English (TWE®), which is administered as part of the paper-based test, centers on the command of English vocabulary, grammar, spelling, and syntax. This score can also supplement the Analytical Writing score in determining whether a low score on the GRE Analytical Writing measure is due to lack of familiarity with English or lack of ability to produce and analyze logical arguments. Additional information regarding TOEFL test scores is available on the TOEFL website ([www.ets.org/toefl](http://www.ets.org/toefl)).

### Examinees with Disabilities

ETS makes special testing arrangements for individuals who have currently documented visual, physical, hearing, or learning disabilities and are unable to take the tests under standard conditions. The tests are administered in a nonstandard manner chosen to minimize any adverse effect of the examinee's disability upon test performance and to help ensure that, insofar as possible, the resulting scores represent the examinee's educational achievement.

Depending on the nature and extent of the disability, an examinee's scores may not fully reflect his or her educational achievement and, because there are so few disabled persons taking GRE tests and their circumstances vary so widely, it has not been possible to provide special interpretive data for these examinees.



Therefore, graduate schools should seriously consider waiving GRE requirements for applicants with certain disabilities.

### Essay Responses on the Analytical Writing Section

GRE criteria for evaluating Analytical Writing essay responses emphasize critical thinking skills (the ability to reason, assemble evidence to develop a position, and communicate complex ideas) more heavily than an examinee's control of the fine points of grammar or the mechanics of writing (e.g., spelling).

A GRE essay response should be considered a rough first draft since examinees do not have sufficient time to revise their essays during the test. Examinees also do not have dictionaries or spell checking or grammar checking software available to them.

Essay responses at paper-based administrations must be handwritten; essay responses at computer-based administrations must be word processed. Typed essays often appear shorter than handwritten essays; handwritten essays can appear to be more heavily revised than typed essays. GRE readers are trained to evaluate the content of essays and to give the same score to a handwritten essay as they would to its typed version.

GRE essay topics are administered under standardized conditions; essay scores can provide important information above and beyond any academic writing samples that may be required (e.g., papers from a course). Validity research has shown that the

Analytical Writing essay score is correlated with academic writing more highly than is the personal statement.

ESL test takers naturally find the Analytical Writing section more challenging, on average, than native speakers of English. Steps have already been taken to ensure that these performance differences are not due to differences on the cross-cultural accessibility of the prompts. Special fairness reviews occur for all prompts to ensure that the content and tasks are clear and accessible for all groups of test takers, including ESL students. In addition, scorers are trained to focus on the analytical logic of the essays more than on spelling, grammar, or syntax. The mechanics of writing are weighed in their ratings only to the extent that these impede clarity of meaning. Since the Analytical Writing measure is tapping into different skills than the multiple-choice measures, it may not be surprising that the performance of ESL examinees differs on this measure. Given that graduate faculty have indicated that analytical writing is an important component of work in most graduate schools, including the Analytical Writing measure should increase the validity of the General Test.

The ability of ESL students to write in English may be affected not only by their language capability but also by their prior experience with the kinds of critical writing tasks in the test. Where educational systems do not stress these skills, performance may not reflect the applicant's ability to learn these skills in a graduate setting.

## REPORTING AND USING GRE SCORES

### Score Reporting Policies

GRE score reporting policies have been adopted by the GRE Board to encourage the appropriate use of GRE scores and to protect the right of individuals to control the distribution of their own score reports. Current GRE Board policy states that scores are reportable for five years.

Score reports for the computer-based General Test are released approximately 10–15 days after the test date to the examinees and to accredited institutions of higher education granting the baccalaureate or higher degrees and approved graduate fellowship-granting sponsors designated by the examinees.

Score reports for the paper-based General Test and Subject Tests are distributed approximately four to six weeks after the test date.

GRE score reporting is cumulative. That is, if an examinee has taken one or more tests within the five-year period previous to the 2007–2008 testing year (July 1, 2002, to June 30, 2007), previously earned scores will be reported with the latest ones. Absences are not reported.

An examinee may choose to have only General Test scores, only Subject Test scores, only stand-alone Analytical Writing or Writing Assessment scores, or any combination of the above sent to an institution. However, the examinee may not choose to have only those scores from a specific test date reported.

Percentile ranks shown on score reports are based on the performance of the current reference group for each test regardless of when the scores were earned. The percentile rank for any score may vary over the years depending on the scores of the group with which the score is compared. Thus, when two or more applicants are being compared, the comparison should be made on the basis of their respective scores; if percentile ranks are considered, they should all be based on the percentile rank tables in the most recent edition of the *Guide*.

### Reporting Revised Scores

ETS routinely follows extensive review and quality control procedures to detect and avoid flawed questions and consequent errors in scoring. Nonetheless, occasionally an error is discovered after scores have been reported. Whenever this happens, the specific circumstances are reviewed carefully, and a decision is made about how best to take corrective action that is fairest to all concerned. Revised scores reported during the current year are reported directly to graduate schools and graduate fellowship sponsors as well as to students because such scores are likely to be part of current applications for admission. Revisions to scores reported in the previous five years are sent to the affected students, who may request that ETS send the revised scores to any graduate schools or fellowship sponsors still considering their applications.

### Confidentiality and Authenticity of GRE Scores

GRE scores are confidential and are not to be released by an institutional recipient without the explicit permission of the examinee. **GRE scores are not to be included in academic transcripts.** Dissemination of score records should be kept at a minimum, and all staff who have access to them should be explicitly advised of the confidential nature of the scores.

**To ensure the authenticity of scores, the GRE Board urges that institutions accept only official reports of GRE scores received directly from ETS.**

The GRE Program recognizes the right of institutions as well as individuals to privacy with regard to information supplied by and about them. ETS therefore safeguards from unauthorized disclosure all information stored in its data or research files. Information about an institution (identified by name) will be released only in a manner consistent with a prior agreement, or with the consent of the institution.

## GRE Scores and Graduate Admissions

Many factors play a role in an applicant's admissibility and expectation of success as a graduate student. GRE scores are only one element in this total picture and should be considered along with other data. **The GRE Board believes that GRE scores should never be the sole basis for an admissions decision and that it is inadvisable to reject an applicant solely on the basis of GRE scores. A cutoff score below which every applicant is categorically rejected without consideration of any other information should not be used.**

Scores on the GRE General Test permit comparison of one applicant to a graduate school with other applicants for the same program at that institution as well as with everyone else who took the test. The GRE Subject Tests provide an additional measure of applicants' preparation for graduate school. For certain Subject

Tests, subscores provide further information for consideration. These subscores, which reflect a student's general strengths and weaknesses in the major areas on which the total score is based, aid in the interpretation of the total score. Often the subscores can suggest areas in which the student may require extra work. A low subscore, however, may be the result of lack of exposure to a particular subfield. As a result, subscores should always be reviewed in relation to the applicant's undergraduate history.

For admissions decisions, the weight to be given to GRE scores can generally be established by relating what the tests measure to the orientation, curriculum, and aims of the department. Specifically, the content validity of the tests for a graduate department should be determined by reviewing each test carefully and then making subjective decisions as to the weight, if any, the scores on GRE tests should receive in relation to other admission factors.

## SCORE INTERPRETATION AND STATISTICAL INFORMATION

### Verbal and Quantitative Sections of the General Test

- The range of Verbal and Quantitative scores is from 200 to 800, in 10-point increments. If no answers are given for a section, an NS (No Score) is reported for that section. Examinees who received an NS are excluded from the data reported in Tables 1A, 4, 5, and 6.
- Scores from the different measures should not be compared, because each measure is scaled separately.
- For the computer-based measures, the reported score is based on the performance on the particular questions that are presented by the design of the test as well as on the number of questions answered. The test design factors that influence which questions will be presented to an examinee include the (1) characteristics (including difficulty level) of those questions already answered, (2) question types, and (3) appropriate coverage of content. On the paper-based version of the General Test, the reported scores are derived from the number of questions answered correctly.
- For each measure, some examinees do not finish the test. Because the number of answers is incorporated into the calculation of the scores, it is important that test takers answer every question.
- Research indicates that scores obtained from the computer-based multiple-choice sections are comparable to scores from the paper-based sections. Thus, the mode of testing is not indicated on the score report. A research report, *Comparability of Paper-and-Pencil and Computer-Adaptive Test Scores on the GRE General Test* (No. 95–08P), can be downloaded from the Research section of the GRE website at [www.ets.org/gre/research.html](http://www.ets.org/gre/research.html).
- Because the Verbal and Quantitative measures are computer adaptive tests, the reliability of these measures is routinely evaluated using simulation data. In addition, a study using the alternate forms design has been conducted to collect reliability information based on real data for these two measures. Results from both approaches demonstrate reliabilities for the Verbal and Quantitative measures appropriate for a high-stakes admission test.

- The standard errors of measurement (SEM) of score differences should be taken into account when comparing examinees' scores on the same measure (see Table 5). Score recipients should avoid making decisions based on small score differences.
- The conditional standard errors of measurement (CSEM) presented in Table 6A reflect the variation in observed scores at particular points on the score scale. Like the SEM, they can be used to compute a confidence band around an examinee's observed score to determine a score range in which the true score probably lies. Unlike the SEM, the CSEM takes the variation in measurement precision across the score scale into account. The CSEM of difference scores (Table 6B) can be used to evaluate the difference between the scores from two examinees.
- Although each General Test measure assesses different developed abilities, scores on the multiple-choice measures are moderately to highly related. The correlation between Verbal and Quantitative scores is .35, the correlation between Verbal and Analytical Writing scores is .62, and the correlation between Quantitative and Analytical Writing scores is .22.
- The predictive validity results reported in Tables 7–9 indicate that General Test scores are moderately predictive of graduate first-year grade point average. The GRE Verbal and Quantitative sections predict as well as or better than UGPA. Table 8 shows that the GRE General Test predicts about as well for master's degree students as for doctoral degree students.

### Analytical Writing Section of the General Test and Writing Assessment

- The range of Analytical Writing scores is from 0 to 6, in half-point increments. The Analytical Writing section consists of two essay tasks—Issue and Argument—and the reported score represents the average of a test taker's scores for the two essays. If no essay response is given for either of the two tasks in this section, an NS (No Score) is reported for the section. If an essay response is provided for only one of the two writing tasks, the task for which no essay response is provided will receive a score of zero.

- Scoring guides have been developed for both writing tasks. The scoring guides, which describe the characteristics of a typical essay at each score level, are available on the GRE website at [www.ets.org/gre/awguides.html](http://www.ets.org/gre/awguides.html). Score level descriptions appear on page 23 of this publication.
- Scores on the Analytical Writing section should be interpreted in the same way across years. A score of 4 earned in 2006, for example, will be based on the same standards as a score of 4 earned in 2005.
- The reliability of Analytical Writing scores is estimated at .72. This is similar to the reliability for other writing measures where the reported score is obtained by averaging the performance on two prompts.
- Essay test reliability is influenced by the consistency of scores assigned to the same pair of essays by different raters. For the Analytical Writing scores, estimated interrater reliability is .88.
- Each Issue essay and each Argument essay is read by two readers. Readers' ratings are in exact agreement about 58 percent of the time, they differ by one score point about 39 percent of the time, and they differ by two score points about 3 percent of the time.
- Results of the Analytical Writing section show that there is less difference in the scores of men and women on the Analytical Writing section than on the multiple-choice measures. The differences between African American and White examinees and between most Hispanic and White examinees are also smaller on the Analytical Writing section than on the multiple-choice measures. The difference between Asian American and White examinees is about the same as the difference on the Verbal and Analytical measures (Asian American examinees outscore White examinees on the Quantitative measure).
- A research study (*Further Validation of a Writing Assessment for Graduate Admissions* [GRE No. 96–13]) was conducted to establish the relationship between students' performance on each of the two writing exercises and several nontest indicators of students' writing skills and achievements. The study results revealed modest relationships between Writing Assessment essays and the various nontest indicators of writing. Performance on the Writing Assessment exhibited the strongest relationship with course-related writing samples, arguably the most compelling of the nontest indicators of students' writing ability. There was no indication that the relationship between essays and course-related writing samples might depend on particular characteristics of the sample, including gender, ethnicity, best language, and undergraduate major. The research report can be downloaded from the Research section of the GRE website at [www.ets.org/gre/research.html](http://www.ets.org/gre/research.html).
- The Analytical Writing section is designed to measure different skills from those assessed in the multiple-choice Verbal section of the GRE General Test. The Analytical Writing section is performance based, and candidates must organize and articulate their own ideas as they discuss a complex issue and evaluate the logical soundness of an argument.
- The TOEFL and GRE writing measures are quite different, by design. The TOEFL test emphasizes rhetorical and syntactic competence, whereas the GRE Analytical Writing section emphasizes critical reasoning and analytical writing proficiency. The TOEFL iBT writing measure is reported as a Section Scaled Score, rather than a 6-point scale, like the GRE Analytical Writing measure. Therefore, the scores on the two tests cannot be compared. Additional information about the scoring of the TOEFL iBT writing measure is available on the TOEFL website ([www.ets.org/toefl](http://www.ets.org/toefl)).
- Faculty seeking help in conducting validity studies on the Analytical Writing section should review the Score Level Descriptions on page 23 of this publication and consult the document, *How to Interpret and Use GRE Analytical Writing Scores*, which is available for free download on the GRE website at [www.ets.org/gre/edupubs.html](http://www.ets.org/gre/edupubs.html).

## Subject Tests

- The range of scaled scores is from 200 to 990, in 10-point increments, although the score range for any particular Subject Test is usually smaller. The range of subscores is from 20 to 99, although the range for any particular Subject Test subscore is usually smaller.
- On all the Subject Tests, the reported score is derived from the number of correct answers minus one-fourth of the number of incorrect answers.
- Scaled scores on the same Subject Tests generally are directly comparable across years. A Chemistry Test score of 650 in 2006, for example, should be considered equivalent to a Chemistry Test score of 650 earned in 2005.
- The Subject Tests are intended to have reliabilities of at least .90 for the total test scores. For each of the Subject Tests, the reliability coefficient of the total scores is at least .90, and the reliability coefficient of the subscores is at least .80.
- The SEM of score differences should be taken into account when comparing examinees' scores on the same Subject Test (see Table 5). Fine distinctions should not be made between two scores.
- The predictive validity results reported in Tables 7 and 9 indicate that individual Subject Tests predicted graduate first-year grade point average moderately well and often provided better prediction than each of the General Test measures. Table 9 shows that GRE Subject Tests predict as well as or better than UGPA for most major fields.

## STATISTICAL TABLES

### Description of the Tables

#### Tables 1–3 (Interpretive Data)

To aid in the interpretation of scaled scores, the GRE Program describes scores in terms of their standing in appropriate reference groups. Tables 1A–3 provide percentile ranks (i.e., the percentages of examinees in a group who obtained scores lower than specified

scores) for the General Test, Subject Tests, and Subject Test subscores. Tables 1A, 1B, 2, and 3 are based on all examinees who tested between July 1, 2003, and June 30, 2006.<sup>1</sup>

<sup>1</sup> Verbal and Quantitative interpretive information based on college seniors or recent college graduates who have not yet enrolled in graduate school can be viewed on the GRE website at [www.ets.org/gre/edupubs.html](http://www.ets.org/gre/edupubs.html).



The percentile ranks given in Table 3 for the Subject Test subscores may be used for diagnostic interpretation of the total score. For example, an examinee who obtains a score of 650 on the GRE Biology Test is likely to have subscores of 65, assuming the examinee is similarly able in the content areas measured by each subscore. For that examinee, scores much above or below 65 on a subscore would indicate strength or weakness in the content area associated with that subscore. Note that the strength or weakness could possibly reflect training that was targeted toward specific content areas.

Percentile rank information for the Analytical measure that was discontinued in September 2002 is available on the GRE website at [www.ets.org/gre/edupubs.html](http://www.ets.org/gre/edupubs.html).

Percentile rank information for discontinued and significantly revised Subject Tests and subscores is available from the GRE Program upon request.

#### **Table 4 (Interpretive Data by Major Field)**

Table 4 contains Verbal, Quantitative, and Analytical Writing data for seniors and nonenrolled college graduates who stated that they intended to do graduate work in one of approximately 300 major fields. The score data are summarized by broad graduate major field categories so that applicants can be compared to others likely to be most similar to them in educational goal.

No institution is likely to attract graduate school applicants comparable to the full range of individuals taking the General Test. Thus, the data in Tables 1A–4 may be of limited use to a school interested in evaluating the performance of its own applicants. For this reason, local data based on an institution's applicants or admitted students might be more relevant. Local data for General Test scores of students admitted to different departments within the institution may be even more useful. These local data can be compared to the data in Table 4.

#### **Table 5 (Reliability and Standard Error of Measurement)**

Table 5 provides data on reliability coefficients for GRE tests. Reliability indicates the degree to which individual examinees would keep the same relative standing if the test were administered more than once to each examinee. The reliability index ranges from zero to 1.00; a reliability index of 1.00 indicates that there is no measurement error in the test and therefore the test is perfectly reliable.

Table 5 also provides data on the Standard Error of Measurement (SEM) and SEM of score differences. SEM is an index of the variation in scores to be expected because of imprecise measurement. For a group of examinees, it is an estimate of the average difference between observed scores and true scores (i.e., what examinees' scores on a test would hypothetically be if there were no error in the measurement process). Approximately 95 percent of examinees will have obtained scores that are within a range extending from two standard errors below to two standard errors above their true scores. The SEM of score differences is an index used to determine whether the difference between two scores is meaningful. Small differences in scores may be due to measurement error and not to true differences in the abilities of the examinees. This index incorporates the error of measurement in each examinee's score being compared. Approximately 95 percent of the observed differences between the obtained scores of examinees who have the same true score will be less than two times the SEM of score differences.

For the Analytical Writing section, in which the scoring involves human judgment, the standard error of scoring describes the reliability of the process of scoring the examinees' responses.

The more consistent the ratings assigned to the same responses by different essay readers, the smaller the standard error of scoring. For example, if a large number of examinees take a test for which the standard error of scoring is 1 point, about two-thirds of the examinees will receive scores within 1 point of the scores that they would get if their responses were scored by all possible essay readers.

#### **Tables 6A and 6B (Conditional Standard Errors of Measurement)**

Tables 6A and 6B contain estimates of the Conditional Standard Error of Measurement (CSEM) at selected reported scores for the Verbal and Quantitative measures. While the SEMs presented in Table 5 address the *average* measurement precision of the test, the measurement precision actually varies across the score scale. The CSEM reflects this variation by indicating the amount of error in an examinee's reported score at a given point on the scale. The CSEM of score differences is affected by two test scores, which means that small differences in scores are unlikely to reflect a true difference in ability. To use the CSEM of difference scores, take the larger CSEM value and multiply by 1.65. Scores exceeding this value are likely to reflect a true difference in ability at 90% confidence level.

#### **Tables 7, 8, and 9 and Figures 1 and 2 (Predictive Validity Data)**

Predictive validity is the extent to which one variable, such as a test score, can predict a criterion variable, such as later grades. Predictive validity is expressed as a correlation coefficient between the predictor variable and the criterion variable. Table 7 presents estimated correlations between various predictors (GRE General and Subject Test scores and undergraduate grade point average) and criterion measures (graduate first-year grade point average, faculty ratings, comprehensive exam scores and degree attainment).

Correlations have been adjusted for range restriction in the predictors and unreliability in the grade and ratings criteria. Tables 8 and 9 present similar adjusted correlations between GRE General and Subject Test scores (and undergraduate GPA) by degree level (master's and doctoral) and by sub-discipline (humanities, life sciences, math and physical sciences and social sciences), respectively.

(The tables have been adapted from Kuncel, N.R.; et al (2001), "Comprehensive Meta-Analysis of the Predictive Validity of the Graduate Record Examinations: Implications for Graduate Student Selection and Performance," *Psychological Bulletin*, January 2001, Vol 127(1), 162-181; and from a draft research report by Kuncel et al., *The Validity of the Graduate Record Examination for Master's and Doctoral Programs: A Meta-Analytic Investigation*.)

Figures 1 and 2 represent the percent of students who are very successful in the first year of graduate study (defined as a 3.8 or better average). If the GRE General Test added nothing to the undergraduate GPA, then the two bars on the left should be of the same height. Similarly, the GRE General Test would add nothing to students with high UGPA levels if the two bars on the right were of the same height. (Note that for the purposes of these descriptive analyses, the Verbal and Quantitative scores have been summed. The GRE Board and Program recommend that these tests not be summed when making decisions about individual applicants. See the GRE website ([www.ets.org/gre](http://www.ets.org/gre)) for more details on appropriate score use.)

**Table 1A: Verbal and Quantitative Interpretive Data  
Used on Score Reports**

(Based on the performance of all examinees who tested between  
July 1, 2003, and June 30, 2006)

Scaled Score	Percent of Examinees Scoring Lower than Selected Scaled Scores	
	VERBAL REASONING	QUANTITATIVE REASONING
800	99	94
780	99	90
760	99	86
740	99	82
720	98	77
700	97	72
680	96	68
660	94	63
640	91	58
620	89	53
600	85	49
580	81	44
560	76	40
540	71	35
520	65	31
500	60	28
480	55	24
460	49	21
440	43	18
420	37	15
400	31	13
380	26	11
360	21	9
340	15	7
320	10	5
300	6	4
280	3	3
260	1	2
240	1	1
220		1
200		
Mean	465	584
Standard Deviation	117	149
Number of Examinees	1,223,245	1,222,580
Percent Women	56	56
Percent Men	40	40

**Table 1B: Analytical Writing Interpretive Data  
Used on Score Reports**

(Based on the performance of all examinees who tested between  
July 1, 2003, and June 30, 2006)

Score Levels	Percent of Examinees Scoring Lower than Selected Scaled Scores
	ANALYTICAL WRITING
6.0	96
5.5	88
5.0	73
4.5	54
4.0	33
3.5	18
3.0	7
2.5	2
2.0	1
1.5	0
1.0	0
0.5	0
0.0	0
Number of Examinees	1,213,786
Mean	4.1
Standard Deviation	0.9
Percent Women	56
Percent Men	40

**Note:** Interpretive data for the Analytical section of the General Test that was discontinued on September 30, 2002, is available on the GRE website at [www.ets.org/gre/edupubs.html](http://www.ets.org/gre/edupubs.html).

**Table 2: Subject Tests Total Score Interpretive Data Used on Score Reports**

(Based on the performance of all examinees who tested between July 1, 2003, and June 30, 2006)

Percent of Examinees Scoring Lower than Selected Scaled Scores									
Scaled Score	Biochemistry, Cell and Molecular Biology*	Biology*	Chemistry	Computer Science	Literature in English	Mathematics	Physics†	Psychology*	Scaled Score
980							96		980
960							95		960
940		99					93		940
920		99	99				91		920
900		98	97			99	89		900
880		97	95	99		97	87		880
860		96	92	95		95	84		860
840		94	89	90		94	82		840
820		91	86	84		91	79		820
800		88	82	76		88	76	99	800
780		84	78	69		85	72	98	780
760	99	80	73	61	99	82	69	95	760
740	99	75	68	53	98	77	65	92	740
720	97	70	63	47	97	73	62	87	720
700	96	64	57	40	94	68	58	82	700
680	93	58	51	33	91	63	54	76	680
660	90	53	45	27	87	59	49	69	660
640	87	46	39	20	82	54	44	62	640
620	83	40	33	15	76	49	40	55	620
600	77	34	27	11	70	44	35	47	600
580	71	28	22	7	63	38	30	40	580
560	64	23	16	5	55	33	25	33	560
540	57	18	12	3	48	27	20	27	540
520	49	14	8	2	40	21	16	21	520
500	41	10	5		33	17	12	17	500
480	34	7	3		26	13	8	12	480
460	27	5	1		20	8	5	9	460
440	21	3			15	6	2	6	440
420	15	2			10	4	1	4	420
400	11	1			7	2		3	400
380	7				4	1		2	380
360	4				3	1		1	360
340	3				1			1	340
320	1				1				320
300	1								300
280									280
260									260
240									240
220									220
200									200
Number of Examinees	6,744	13,549	8,555	7,198	11,263	9,217	12,484	27,001	Number of Examinees
Percent Women	53	65	43	14	65	27	23	77	Percent Women
Percent Men	47	35	57	85	35	72	77	22	Percent Men
Mean	519	650	677	717	541	627	678	598	Mean
Standard Deviation	99	118	116	92	97	129	153	101	Standard Deviation

\* For additional data and interpretive information about subscores for these tests, see Table 3.

† For the Physics Test, the percentage of examinees scoring lower than 990 is 97.



**Table 3: Subject Tests Interpretive Data for Subscores**(Based on the performance of all examinees who tested  
between July 1, 2003, and June 30, 2006)

Percent of Examinees Scoring Lower than Selected Scaled Scores									
Scaled Score	<i>Biochemistry, Cell and Molecular Biology</i>			<i>Biology</i>			<i>Psychology</i>		Scaled Score
	<i>Biochemistry</i>	<i>Cell Biology</i>	<i>Molecular Biology and Genetics</i>	<i>Cellular and Molecular Biology</i>	<i>Organismal Biology</i>	<i>Ecology and Evolution</i>	<i>Experimental Psychology</i>	<i>Social Psychology</i>	
98									98
96									96
94					99				94
92				99	99	99			92
90				98	98	99			90
88				97	97	98			88
86				96	95	96			86
84				94	93	94			84
82				91	91	91	99		82
80				88	88	88	98	99	80
78				85	85	84	97	98	78
76	99	99		80	81	79	94	96	76
74	99	98		75	76	74	91	93	74
72	98	97	99	71	70	69	87	89	72
70	96	95	98	65	65	63	81	83	70
68	93	93	95	59	59	56	75	77	68
66	91	90	93	54	53	50	68	70	66
64	87	86	89	48	47	44	62	62	64
62	82	83	84	42	42	38	55	54	62
60	76	77	78	35	35	33	48	46	60
58	70	71	71	29	28	28	41	40	58
56	64	65	64	23	23	23	34	32	56
54	56	58	57	18	18	18	27	27	54
52	48	51	49	14	14	14	22	21	52
50	41	43	41	9	9	10	16	16	50
48	33	35	33	5	6	7	12	12	48
46	26	27	27	3	4	5	8	9	46
44	20	20	21	2	2	4	5	6	44
42	14	14	16	1	1	2	3	5	42
40	10	9	11		1	1	2	3	40
38	6	6	8			1	1	2	38
36	3	2	5					1	36
34	2	1	3					1	34
32	1		2						32
30			1						30
28									28
26									26
24									24
22									22
20									20
Number of Examinees	6,744			13,549			27,001		Number of Examinees
Mean	52	52	52	65	65	65	60	60	Mean
Standard Deviation	10	10	10	12	12	12	10	10	Standard Deviation
Total Score Mean	519			650			598		Total Score Mean
Standard Deviation	99			118			101		Standard Deviation

# Department Code List for Use with Table 4

The following Department Code List contains the fields of study from which examinees select their intended graduate major. These fields are grouped into broad graduate major fields under seven branches of learning (Natural Sciences, Engineering, Social Sciences, Humanities and Arts, Education, Business, and Other Fields).

Table 4 (see pages 17–19) contains score data by intended graduate major field and broad graduate major field (e.g., aggregation of the fields of study that constitute Agriculture) and also for the following aggregated groups of broad graduate major fields: Life Sciences, Physical Sciences, Engineering, Social Sciences, Humanities and Arts, Education, Business, and Other Fields. Score data presented includes number of examinees (N), means, standard deviations (S.D.), and the percentage of students in each of seven score ranges for verbal and quantitative scaled scores. However, only the number of examinees is reported for the broad major field “Other” or the “Other Fields” grouping (e.g., the aggregation of Architecture and Environmental Design, Communications, Home Economics).

**Note:** The Natural Sciences category in the Department Code List is separated in Table 4 into Life Sciences (Agriculture, Biological Sciences, and Health and Medical Sciences) and Physical Sciences (Chemistry; Computer and Information Sciences; Earth, Atmospheric, and Marine Sciences; Mathematical Sciences; Physics and Astronomy; and Other).

<b>NATURAL SCIENCES</b>		<b>Mathematical Sciences</b>		<b>Sociology</b>		<b>Education—Other</b>	
<b>Agriculture</b>		0701 Actuarial Sciences		2101 Demography		3901 Adult and Continuing Education	
0101 Agricultural Economics		0702 Applied Mathematics		2102 Sociology		3908 Agricultural Education	
0102 Agricultural Production		0703 Mathematics		<b>Social Sciences—Other</b>		3902 Bilingual/Crosscultural Education	
0103 Agricultural Sciences		0704 Probability & Statistics		2206 American Studies		3903 Educational Media	
0104 Agronomy		0799 Mathematical Sciences—Other		2201 Area, Ethnic, and Gender Studies		3904 Junior High/Middle School Education	
0105 Animal Sciences		<b>Physics and Astronomy</b>		2202 Criminal Justice/Criminology		3909 Physical Education	
0106 Fishery Sciences		0801 Astronomy		2203 Geography		3905 Pre-Elementary Education	
0107 Food Sciences		0802 Astrophysics		2207 Gerontology		3906 Social Foundations	
0108 Forestry and Related Sciences		0803 Atomic/Molecular Physics		2204 Public Affairs		3907 Teaching English as a Second Language/Foreign Language	
0109 Horticulture		0804 Nuclear Physics		2205 Urban Studies		3910 Vocational/Technical Education	
0111 Parks and Recreation Management		0805 Optics		2299 Social Sciences—Other		3999 Education—Other	
0112 Plant Sciences (Except Agronomy, see 0104)		0808 Physics		<b>HUMANITIES AND ARTS</b>		<b>BUSINESS</b>	
0113 Renewable Natural Resources		0806 Planetary Science		<b>Arts—History, Theory, and Criticism</b>		<b>Accounting</b>	
0110 Resource Management		0807 Solid State Physics		2301 Art History and Criticism		4001 Accounting	
0114 Soil Sciences		0899 Physics and Astronomy—Other		2302 Music History, Musicology, and Theory		4002 Taxation	
0115 Wildlife Management		<b>Natural Sciences—Other</b>		2399 Arts—History, Theory, and Criticism—Other		4003 Auditing*	
0199 Agriculture—Other		0999 Natural Sciences—Other		<b>Arts—Performance and Studio</b>		<b>Banking and Finance</b>	
<b>Biological Sciences</b>		<b>ENGINEERING</b>		2401 Art		4101 Commercial Banking	
0201 Anatomy		<b>Engineering—Chemical</b>		2402 Dance		4102 Finance	
0221 Bacteriology		1001 Chemical Engineering		2405 Design		4103 Investments and Securities	
0202 Biochemistry		1002 Pulp and Paper Production		2403 Drama/Theatre Arts		<b>Business Administration and Management</b>	
0203 Biology		1003 Wood Science		2406 Fine Arts		4201 Business Administration and Management	
0204 Biometry		1099 Chemical Engineering—Other		2407 Industrial Design		4209 E-Commerce*	
0222 Biophysics		<b>Engineering—Civil</b>		2404 Music		4210 Entrepreneurship*	
0205 Botany		1101 Architectural Engineering		2499 Arts—Performance and Studio—Other		4211 Health Care Administration*	
0206 Cell and Molecular Biology		1102 Civil Engineering		<b>English Language and Literature</b>		4208 Hospitality Services Management	
0207 Ecology		1103 Environmental/Sanitary Engineering		2502 American Language and Literature		4202 Human Resource Development	
0208 Developmental Biology		1199 Civil Engineering—Other		2503 Creative Writing		4203 Institutional Management	
0209 Entomology and Parasitology		<b>Engineering—Electrical and Electronics</b>		2501 English Language and Literature		4204 Labor/Industrial Relations	
0210 Genetics		1202 Communications Engineering		2599 English Language and Literature—Other		4205 Management Science	
0211 Marine Biology		1201 Computer Engineering		<b>Foreign Languages and Literatures</b>		4212 Manufacturing and Technology Management*	
0212 Microbiology		1203 Electrical Engineering		2601 Asian Languages		4213 Operations Management*	
0213 Neurosciences		1204 Electronics Engineering		2609 Classical Languages		4206 Organizational Behavior	
0214 Nutrition		1299 Electrical & Electronics Engineering—Other		2602 Foreign Literature		4207 Personnel Management	
0215 Pathology		<b>Engineering—Industrial</b>		2603 French		4299 Business Management—Other	
0216 Pharmacology		1301 Industrial Engineering		2604 Germanic Languages		<b>Business—Other</b>	
0217 Physiology		1302 Operations Research		2605 Italian		4306 Actuarial Science—Business*	
0218 Radiobiology		1399 Industrial Engineering—Other		2606 Russian		4301 Business Economics	
0219 Toxicology		<b>Engineering—Materials</b>		2607 Semitic Languages		4302 International Business Management	
0220 Zoology		1401 Ceramic Engineering		2608 Spanish		4309 Leadership*	
0299 Biological Sciences—Other		1402 Materials Engineering		2699 Foreign Languages—Other		4303 Management Information Systems	
<b>Chemistry</b>		1403 Materials Science		<b>History</b>		4304 Marketing and Distribution	
0302 Analytical Chemistry		1404 Metallurgical Engineering		2701 American History		4305 Marketing Management and Research	
0301 Chemistry, General		1499 Materials Engineering—Other		2702 European History		4310 Public Policy—Business*	
0303 Inorganic Chemistry		<b>Engineering—Mechanical</b>		2703 History of Science		4311 Real Estate*	
0304 Organic Chemistry		1501 Engineering Mechanics		2799 History—Other		4312 Risk Management*	
0305 Pharmaceutical Chemistry		1502 Mechanical Engineering		<b>Philosophy</b>		4313 Supply Chain Management*	
0306 Physical Chemistry		1599 Mechanical Engineering—Other		2801 All Philosophy Fields		4314 Sports Management*	
0399 Chemistry—Other		<b>Engineering—Other</b>		<b>Humanities and Arts—Other</b>		4315 Strategy*	
<b>Computer and Information Sciences</b>		1601 Aerospace Engineering		2901 Classics		4316 Statistics and Operational Research*	
0401 Computer Programming		1602 Agricultural Engineering		2902 Comparative Language and Literature		4317 Transportation*	
0402 Computer Sciences		1603 Biomedical Engineering		2903 Linguistics		4399 Business—Other	
0403 Data Processing		1604 Engineering Physics		2904 Religious Studies		<b>OTHER FIELDS</b>	
0404 Information Sciences		1605 Engineering Science		2999 Humanities and Arts—Other		<b>Architecture and Environmental Design</b>	
0405 Microcomputer Applications		1606 Geological Engineering		<b>EDUCATION</b>		4401 Architecture	
0406 Systems Analysis		1607 Mining Engineering		<b>Education—Administration</b>		4402 City and Regional Planning	
0499 Computer Sciences—Other		1608 Naval Architecture and Marine Engineering		3001 Educational Administration		4403 Environmental Design	
<b>Earth, Atmospheric, and Marine Sciences</b>		1609 Nuclear Engineering		3002 Educational Supervision		4404 Interior Design	
0501 Atmospheric Sciences		1610 Ocean Engineering		<b>Education—Curriculum and Instruction</b>		4405 Landscape Architecture	
0502 Environmental Sciences		1611 Petroleum Engineering		3101 Curriculum and Instruction		4406 Urban Design	
0503 Geochemistry		1612 Systems Engineering		<b>Education—Early Childhood</b>		4499 Architecture and Environmental Design—Other	
0504 Geology		1613 Textile Engineering		3201 Early Childhood Education		<b>Communications</b>	
0505 Geophysics and Seismology		1699 Engineering—Other		<b>Education—Elementary</b>		4501 Advertising	
0507 Meteorology		<b>SOCIAL SCIENCES</b>		3301 Elementary Education		4502 Communications Research	
0508 Oceanography		<b>Anthropology &amp; Archaeology</b>		3302 Elementary Level Teaching Fields		4503 Journalism and Mass Communications	
0506 Paleontology		1701 Anthropology		<b>Education—Evaluation and Research</b>		4504 Public Relations	
0599 Earth, Atmospheric, and Marine Sciences—Other		1702 Archaeology		3403 Educational Psychology		4505 Radio, TV, and Film	
<b>Health and Medical Sciences</b>		<b>Economics</b>		3401 Educational Statistics and Research		4506 Speech Communication	
0601 Allied Health		1801 Economics		3402 Educational Testing, Evaluation, and Measurement		4599 Communications—Other	
0602 Audiology		<b>Political Science</b>		3404 Elementary and Secondary Research		<b>Home Economics</b>	
0603 Chiropractic		1901 International Relations		3405 Higher Education Research		4601 Consumer Economics	
0604 Dental Sciences		1902 Political Science and Government		3406 School Psychology		4603 Family Counseling	
0605 Environmental Health		1903 Public Policy Studies		<b>Education—Higher</b>		4602 Family Relations	
0606 Epidemiology		1999 Political Science—Other		3501 Educational Policy		4699 Home Economics—Other	
0607 Health Science Administration		<b>Psychology</b>		3502 Higher Education		<b>Library and Archival Sciences</b>	
0608 Immunology		2001 Clinical Psychology		<b>Education—Secondary</b>		4702 Archival Science	
0623 Kinesiology*		2002 Cognitive Psychology		3601 Secondary Education		4701 Library Science	
0609 Medical Sciences		2003 Community Psychology		3602 Secondary Level Teaching Fields		<b>Public Administration</b>	
0621 Medicinal Chemistry		2004 Comparative Psychology		<b>Education—Special</b>		4801 Public Administration	
0610 Nursing		2005 Counseling Psychology		3701 Education of Gifted Students		<b>Religion and Theology</b>	
0618 Occupational Therapy		2006 Developmental Psychology		3702 Education of Handicapped Students		4901 Religion	
0611 Optometry		2007 Experimental Psychology		3703 Education of Students with Specific Learning Disabilities		4902 Theology	
0612 Osteopathic Medicine		2008 Industrial and Organizational Psychology		3704 Remedial Education		<b>Social Work</b>	
0613 Pharmaceutical Sciences		2009 Personality Psychology		3705 Special Education		5001 Social Work	
0619 Physical Therapy		2010 Physiological Psychology		3799 Special Education—Other		<b>Other Fields</b>	
0614 Podiatry		2011 Psycholinguistics		<b>Education—Student Counseling and Personnel Services</b>		5101 Interdisciplinary Programs	
0615 Pre-Medicine		2016 Psychology		3801 Personnel Services		5102 Law	
0616 Public Health		2012 Psychometrics		3802 Student Counseling		5199 Any Department Not Listed	
0620 Speech/Language Pathology		2013 Psychopharmacology					
0617 Veterinary Medicine		2014 Quantitative Psychology					
0622 Veterinary Science		2015 Social Psychology					
0699 Health and Medical Sciences—Other		2099 Psychology—Other					

**Table 4: General Test Percentage Distribution of Scores Within Intended Broad Graduate Major Field  
Based on Seniors and Nonenrolled College Graduates**

(Based on the performance of seniors and nonenrolled college graduates\* who tested between July 1, 2003, and June 30, 2006)

INTENDED GRADUATE MAJOR	VERBAL						QUANTITATIVE						ANALYTICAL WRITING																	
	200-290	300-390	400-490	500-590	600-690	700-790	800	N	Mean	S.D.	200-290	300-390	400-490	500-590	600-690	700-790	800	N	Mean	S.D.	0	0.5 & 1	1.5 & 2	2.5 & 3	3.5 & 4	4.5 & 5	5.5 & 6	N	Mean	S.D.
LIFE SCIENCES	2.3	25.6	37.7	25.0	8.0	1.3	0.1	124,556	460	98	1.9	7.0	15.8	26.9	29.9	16.8	1.7	124,539	578	124	0.1	0.1	0.7	10.6	39.0	39.1	10.5	123,751	4.2	0.8
	2.8	25.9	38.0	25.5	6.9	0.8	0.1	9,493	455	95	1.4	5.5	14.6	28.9	32.0	16.1	1.4	9,491	583	116	0.1	0.1	1.3	12.6	40.5	36.6	8.7	9,385	4.1	0.8
	2.1	18.2	31.9	31.1	13.6	2.8	0.2	38,246	489	106	0.8	3.1	9.1	20.7	33.7	28.4	4.2	38,245	629	114	0.0	0.1	0.7	8.9	34.6	41.3	14.4	38,137	4.4	0.8
	2.3	29.2	40.5	21.9	5.3	0.7	0.0	76,817	446	90	2.5	9.1	19.3	29.8	27.7	11.1	0.6	76,803	551	121	0.1	0.1	0.6	11.1	41.0	38.2	8.7	76,229	4.2	0.8
PHYSICAL SCIENCES	5.1	20.7	25.8	29.2	15.5	3.5	0.2	52,291	486	120	0.3	1.3	3.6	10.3	24.7	43.9	15.8	52,296	694	102	0.0	0.1	1.6	12.7	34.8	36.8	14.0	52,149	4.2	0.9
	2.7	19.0	30.4	32.2	13.0	2.5	0.1	8,172	486	107	0.2	0.9	4.1	12.3	32.2	42.0	8.2	8,173	678	96	0.0	0.1	1.1	10.0	33.8	40.8	14.2	8,165	4.3	0.9
	8.8	27.5	22.1	24.1	14.1	3.2	0.2	21,202	462	129	0.5	1.7	3.7	9.3	22.8	46.1	15.9	21,204	696	106	0.0	0.2	2.6	18.3	37.1	30.8	10.9	21,129	4.0	1.0
	1.6	14.5	34.2	33.8	13.6	2.2	0.1	7,555	495	99	0.4	2.5	7.6	21.5	36.1	28.7	3.3	7,555	634	107	0.0	0.0	0.6	7.8	35.2	41.8	14.5	7,532	4.4	0.8
Natural Sciences – Other	3.3	17.5	25.7	31.5	17.2	4.6	0.3	8,390	501	118	0.1	0.3	1.4	4.7	17.4	49.2	26.9	8,391	732	80	0.0	0.1	1.0	9.6	32.7	40.3	16.3	8,363	4.4	0.9
	2.2	11.9	21.3	34.3	23.9	6.0	0.5	6,664	531	115	0.0	0.2	0.9	4.3	17.6	51.0	25.9	6,665	735	74	0.0	0.1	0.8	7.7	30.7	40.9	19.7	6,652	4.5	0.9
	2.9	18.8	40.3	26.9	9.7	1.3	0.0	308	470	99	1.9	3.6	11.7	31.2	31.5	16.9	3.2	308	596	115	0.0	0.0	0.6	7.8	39.0	36.7	15.9	308	4.3	0.8
	5.4	24.1	27.0	28.5	12.7	2.2	0.1	52,437	470	116	0.1	0.4	1.7	6.0	21.9	53.2	16.7	52,444	718	83	0.0	0.1	1.9	14.4	36.6	36.0	11.0	52,285	4.1	0.9
ENGINEERING	3.9	19.0	26.5	31.7	16.0	2.8	0.1	3,409	490	114	0.1	0.2	1.2	5.6	18.5	57.0	17.4	3,408	726	76	0.0	0.1	1.2	11.8	32.8	40.0	14.1	3,407	4.3	0.9
	4.6	24.4	34.4	27.4	8.0	1.0	0.0	6,897	458	103	0.1	0.5	2.3	8.5	29.0	50.8	8.9	6,898	698	84	0.0	0.2	1.5	13.7	38.5	36.3	9.8	6,859	4.1	0.9
	7.4	28.5	23.9	24.7	13.0	2.3	0.1	19,972	459	123	0.1	0.5	1.6	5.1	19.6	52.6	20.4	19,976	725	83	0.0	0.1	2.6	17.8	38.8	31.9	8.7	19,919	4.0	0.9
	7.2	33.3	27.1	21.3	9.7	1.3	0.0	2,825	440	113	0.3	0.8	2.9	8.6	23.4	46.4	17.5	2,825	705	96	0.1	0.1	1.8	16.9	41.4	30.8	8.8	2,805	4.0	0.9
Electrical and Electronics	2.9	18.8	26.2	32.9	16.0	3.1	0.2	1,849	493	113	0.1	0.2	1.3	4.6	20.2	55.5	18.1	1,849	726	76	0.0	0.0	1.2	11.6	33.7	39.1	14.3	1,848	4.3	0.9
	5.2	22.6	27.7	30.5	11.9	1.9	0.1	6,896	472	113	0.1	0.3	1.1	4.5	21.1	56.0	16.9	6,899	724	76	0.0	0.1	2.0	14.1	35.0	37.7	11.0	6,884	4.2	0.9
	2.7	16.8	27.8	34.9	15.0	2.7	0.1	10,589	495	107	0.1	0.4	1.7	6.5	23.1	54.4	13.9	10,589	714	81	0.0	0.1	1.0	9.3	32.6	41.8	15.2	10,563	4.4	0.9

\* Limited to those who earned their college degrees up to two years prior to the test date. Note: This table does not include summary information on the approximately 45,119 examinees whose response to the department code question was invalid (misgrids, blanks, etc.) or the approximately 12,880 examinees whose response was "Undecided."



**Table 4: General Test Percentage Distribution of Scores Within Intended Broad Graduate Major Field  
Based on Seniors and Nonenrolled College Graduates**

(Based on the performance of seniors and nonenrolled college graduates\*  
who tested between July 1, 2003, and June 30, 2006)

INTENDED GRADUATE MAJOR	VERBAL						QUANTITATIVE						ANALYTICAL WRITING																	
	200-290	300-390	400-490	500-590	600-690	700-790	800	N	Mean	S.D.	0	0.5 & 1	1.5 & 2	2.5 & 3	3.5 & 4	4.5 & 5	5.5 & 6	N	Mean	S.D.										
SOCIAL SCIENCES	1.9	18.9	32.7	30.7	13.2	2.6	0.1	103,088	487	105	3.0	9.2	17.5	26.4	26.6	15.2	2.1	103,066	563	132	0.0	0.0	0.4	6.9	30.8	42.6	19.1	102,729	4.5	0.8
	0.6	8.1	24.9	39.6	22.1	4.6	0.2	5,668	534	97	1.7	7.7	17.7	28.8	29.8	13.6	0.6	5,664	565	119	0.0	0.0	0.1	3.6	28.9	45.7	21.7	5,655	4.6	0.8
	3.3	18.1	24.5	29.8	18.6	5.2	0.4	7,279	504	121	0.3	0.8	2.3	8.5	23.2	46.8	18.1	7,285	708	94	0.0	0.0	0.7	7.5	30.5	39.2	22.0	7,258	4.5	0.9
	1.3	11.4	25.0	36.1	21.0	4.9	0.3	19,964	525	107	2.2	6.8	14.1	25.0	30.5	19.5	1.8	19,960	585	127	0.0	0.0	0.3	4.3	22.4	43.6	29.3	19,927	4.7	0.8
	1.7	21.6	37.1	28.9	9.3	1.3	0.1	54,701	471	97	3.1	10.5	19.9	28.9	26.1	10.9	0.6	54,686	544	125	0.0	0.0	0.3	7.4	33.4	43.1	15.6	54,493	4.4	0.8
HUMANITIES AND ARTS	1.7	18.5	31.8	31.8	13.5	2.6	0.1	4,404	489	105	3.6	11.2	20.0	26.5	25.1	12.4	1.2	4,404	545	132	0.0	0.0	0.5	7.0	30.3	41.9	20.2	4,382	4.5	0.8
	3.3	25.1	34.4	25.2	10.1	1.8	0.2	11,072	484	106	6.1	12.6	20.5	26.8	23.1	10.1	0.8	11,067	526	137	0.1	0.1	0.8	10.5	34.4	39.6	14.4	11,014	4.3	0.9
	1.0	8.3	21.5	36.0	25.1	7.5	0.6	51,031	545	107	2.8	8.5	17.4	27.0	28.3	14.8	1.3	50,986	564	128	0.0	0.0	0.3	4.4	23.7	43.2	28.4	50,935	4.7	0.8
	0.8	8.0	23.9	38.4	23.3	5.2	0.3	4,089	537	101	2.3	7.4	18.3	27.8	28.7	14.6	1.0	4,085	565	123	0.0	0.0	0.2	5.0	25.5	46.2	23.2	4,084	4.6	0.8
	2.6	17.2	32.2	32.3	13.2	2.3	0.2	7,269	489	105	3.8	9.1	19.3	28.0	25.9	12.8	1.1	7,266	551	130	0.0	0.1	1.0	10.0	36.4	38.6	13.8	7,244	4.3	0.9
EDUCATION	0.4	5.5	18.6	37.9	28.4	8.5	0.7	17,905	561	100	3.1	9.7	18.8	28.5	27.5	11.7	0.7	17,881	550	126	0.0	0.0	0.1	2.5	20.4	44.3	32.5	17,879	4.8	0.8
	2.7	12.3	20.3	33.1	23.1	7.9	0.6	4,125	532	120	3.4	7.3	15.8	25.4	30.4	16.4	1.4	4,125	571	131	0.0	0.0	0.7	6.6	25.9	42.7	24.1	4,117	4.6	0.9
	0.5	8.0	23.5	37.3	23.6	6.8	0.4	10,149	542	102	2.9	9.7	18.6	27.8	27.1	12.9	0.9	10,139	554	128	0.0	0.0	0.2	3.6	23.7	43.8	28.8	10,132	4.7	0.8
	0.2	3.2	12.8	34.2	35.6	12.5	1.5	3,667	590	98	0.5	2.6	9.3	20.0	32.8	30.2	4.6	3,666	635	113	0.0	0.0	0.1	1.8	13.9	41.2	43.0	3,661	5.0	0.8
	1.1	7.0	16.6	32.5	30.1	11.4	1.2	3,827	567	113	1.7	6.1	12.1	23.5	32.3	21.1	3.1	3,824	599	125	0.1	0.1	0.3	3.8	20.4	44.3	31.2	3,818	4.8	0.8
Early Childhood Elementary	2.5	28.8	38.3	23.4	6.2	0.8	0.0	44,050	449	94	3.8	11.8	22.2	28.7	23.0	9.8	0.8	44,041	533	128	0.1	0.1	0.6	10.1	36.8	40.0	12.3	43,673	4.3	0.8
	3.9	35.9	39.2	16.7	3.7	0.6	0.0	2,958	426	88	4.9	13.8	23.7	27.1	20.7	8.8	0.9	2,958	520	132	0.1	0.0	1.0	13.0	39.5	36.6	9.8	2,930	4.2	0.9
	1.9	26.8	36.5	26.0	7.7	1.0	0.0	2,727	459	96	2.8	10.5	21.5	29.0	24.2	11.0	1.0	2,724	543	125	0.2	0.0	0.5	8.5	37.3	40.6	13.0	2,702	4.3	0.8

\* Limited to those who earned their college degrees up to two years prior to the test date. Note: This table does not include summary information on the approximately 45,119 examinees whose response to the department code question was invalid (misgrids, blanks, etc.) or the approximately 12,880 examinees whose response was "Undecided."

**Table 4: General Test Percentage Distribution of Scores Within Intended Broad Graduate Major Field  
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(Based on the performance of seniors and nonenrolled college graduates\* who tested between July 1, 2003, and June 30, 2006)

INTENDED GRADUATE MAJOR	VERBAL						QUANTITATIVE								ANALYTICAL WRITING																
	200-290	300-390	400-490	500-590	600-690	700-790	800	N	Mean	S.D.	200-290	300-390	400-490	500-590	600-690	700-790	800	N	Mean	S.D.	0	0.5 & 1	1.5 & 2	2.5 & 3	3.5 & 4	4.5 & 5	5.5 & 6	N	Mean	S.D.	
Evaluation and Research	2.0	26.4	41.5	24.0	5.6	0.6	0.0	4,830	451	89	3.4	11.6	22.8	29.5	23.7	8.6	0.5	4,830	531	123	0.1	0.0	0.3	8.4	36.5	42.6	12.1	4,805	4.3	0.8	
Higher	1.9	22.8	39.5	27.4	6.9	1.4	0.0	3,111	464	94	3.3	10.2	19.1	29.2	26.2	11.3	0.7	3,111	547	127	0.0	0.1	0.3	6.4	31.5	43.2	18.5	3,104	4.5	0.8	
Secondary	1.1	17.6	36.4	32.2	11.0	1.6	0.0	9,072	484	96	2.3	7.4	16.4	26.0	28.1	18.1	1.8	9,069	576	128	0.0	0.0	0.4	6.6	30.9	44.9	17.2	9,026	4.5	0.8	
Special	3.1	36.3	37.7	18.7	3.9	0.4	0.0	3,987	430	88	5.1	15.7	26.1	29.2	18.3	5.2	0.3	3,987	502	123	0.2	0.1	0.9	12.1	42.2	35.3	9.2	3,945	4.1	0.8	
Student Counseling and Personnel Services	3.8	35.2	40.5	17.4	3.0	0.1	0.0	4,584	426	84	6.2	15.5	25.0	30.2	18.3	4.9	0.1	4,584	498	124	0.0	0.1	0.5	12.8	39.1	38.8	8.7	4,560	4.2	0.8	
Other	3.9	33.7	34.3	20.5	6.7	0.9	0.0	4,793	439	99	3.8	12.1	23.3	29.0	22.5	8.6	0.8	4,792	528	126	0.1	0.0	0.8	13.7	39.6	35.4	10.3	4,757	4.2	0.9	
BUSINESS																															
Accounting	5.4	31.5	33.9	21.4	6.6	1.2	0.0	8,495	440	103	4.0	7.9	13.6	21.4	24.0	22.5	6.7	8,494	591	149	0.2	0.2	1.8	14.8	38.9	34.1	9.9	8,345	4.1	0.9	
Banking and Finance	7.6	38.7	33.2	17.1	2.1	1.2	0.0	328	415	93	2.1	7.0	13.7	22.6	29.3	21.3	4.0	328	594	134	0.0	0.3	2.8	19.4	45.9	25.3	6.3	320	3.9	0.8	
Business	4.0	29.5	28.1	24.9	10.7	2.7	0.1	1,283	461	114	0.6	0.9	3.0	7.7	18.1	48.1	21.6	1,284	715	100	0.2	0.1	1.1	11.4	38.1	36.6	12.5	1,277	4.2	0.9	
Business Administration and Management	5.1	31.5	36.1	20.5	6.1	0.8	0.0	4,787	438	99	5.4	10.3	15.9	24.4	24.3	16.2	3.5	4,785	559	146	0.2	0.2	2.0	14.4	39.2	34.0	10.0	4,689	4.1	0.9	
Other	6.6	31.6	32.8	21.8	6.0	1.1	0.0	2,097	436	103	3.5	6.9	14.7	22.7	25.9	21.2	5.2	2,097	588	142	0.2	0.3	1.8	17.1	37.7	34.1	8.6	2,059	4.0	0.9	
OTHER FIELDS																															
Architecture and Environmental Design	2.7	21.9	33.7	29.1	10.8	1.8	0.1	8,876	474	104	1.0	4.1	11.3	25.3	34.2	22.1	1.9	8,873	606	114	0.1	0.1	0.8	11.1	36.4	39.0	12.5	8,832	4.3	0.9	
Communications	2.3	22.3	35.3	28.5	10.1	1.5	0.0	16,314	471	101	4.2	12.5	21.2	28.4	23.3	9.7	0.7	16,306	530	130	0.0	0.0	0.5	8.3	31.9	42.1	17.2	16,256	4.4	0.8	
Home Economics	3.7	31.4	39.9	21.5	3.4	0.1	0.0	1,113	434	87	5.1	16.4	26.1	29.6	17.5	5.2	0.1	1,113	499	123	0.2	0.1	0.6	11.9	40.0	38.9	8.2	1,107	4.2	0.8	
Library and Archival Sciences	0.9	8.5	23.3	36.8	24.7	5.5	0.3	3,596	537	103	2.8	11.2	20.6	28.7	25.1	10.8	0.8	3,595	541	126	0.0	0.0	0.3	5.2	33.0	43.4	17.9	3,585	4.5	0.8	
Public Administration	3.9	26.8	35.0	26.5	6.8	1.0	0.0	2,606	454	99	6.8	14.2	22.2	25.7	21.9	8.7	0.5	2,606	515	135	0.0	0.0	0.7	10.7	37.0	38.7	12.9	2,592	4.3	0.8	
Religion and Theory	0.8	7.8	22.3	38.0	24.9	5.9	0.3	2,672	542	102	2.1	6.6	14.1	24.1	30.8	20.5	1.8	2,668	587	128	0.0	0.0	0.3	3.9	20.2	44.0	31.6	2,667	4.8	0.8	
Social Work	6.3	33.9	34.6	19.9	4.8	0.5	0.0	9,592	429	97	11.5	21.1	24.2	24.7	14.4	3.9	0.1	9,582	465	134	0.0	0.2	1.6	15.1	40.0	34.0	9.1	9,531	4.1	0.9	
Other	-	-	-	-	-	-	-	19,601	-	-	-	-	-	-	-	-	-	-	19,601	-	-	-	-	-	-	-	-	-	19,476	-	-

\* Limited to those who earned their college degrees up to two years prior to the test date. Note: This table does not include summary information on the approximately 45,119 examinees whose response to the department code question was invalid (misgrids, blanks, etc.) or the approximately 12,880 examinees whose response was "Undecided."

**Table 5: Reliability Coefficients and Standard Errors of Measurement for Individual Scores and Score Differences**

Score	Reliability Coefficient <sup>a</sup>		Standard Error of Measurement				Size of Test Analysis Sample
			Individual Scores		Score Differences		
	Total Score	Subscore	Total Score	Subscore	Total Score	Subscore	
<b>GENERAL TEST<sup>b</sup></b>							
Verbal Measure	.91		34		49		
Quantitative Measure	.89		51		73		
Analytical Writing Measure <sup>c</sup>	.72		.47 <sup>d</sup>		.66		
<b>SUBJECT TEST<sup>e</sup></b>							
Biochemistry (Total Score)	.94		20		29		712
Biochemistry		.86		3.2		4.5	712
Cell Biology		.86		3.3		4.7	712
Molecular Biology and Genetics		.88		2.9		4.1	712
Biology (Total Score)	.95		22		31		2234
Cellular and Molecular Biology		.91		3.0		4.3	2234
Organismal Biology		.85		3.9		5.5	2234
Ecology and Evolution		.89		3.3		4.6	2234
Chemistry	.94		24		34		1047
Computer Science	.91		29		41		651
Literature in English	.95		19		27		1645
Mathematics	.92		32		46		1084
Physics	.94		33		47		1217
Psychology (Total Score)	.95		23		32		4563
Experimental Psychology		.90		3.1		4.4	4563
Social Psychology		.87		3.5		5.0	4563

<sup>a</sup> The reliability coefficients for the Subject Tests were computed by Kuder-Richardson formula (20) adapted for use with formula scores.

<sup>b</sup> The reliability for the Verbal and Quantitative measures of the General Test is based on the median of twelve recent computer-based pools. The reported Standard Error of Measurement is based on the pool that had the median reliability. Both reliability and Standard Error of Measurement are calculated using simulated data. The reliability estimates for the paper-based version of the measures are comparable to the values for the computer-based versions of the measures presented in the table.

<sup>c</sup> The reliability of the Analytical Writing measure total score was computed using data from a special study in which some examinees responded to two Issue prompts and some responded to two Argument prompts. The reliability was computed from the covariances of scores on prompts of the same type. This reliability is in the expected range of reliability for a two-essay test. These standard errors of measurement were computed using data from a research study.

<sup>d</sup> The standard error of scoring for the Analytical Writing measure total score is .22. This was computed using data from a research study.

<sup>e</sup> The reliabilities for the Subject Test total scores are each the median of five recent editions. The reported Standard Error of Measurement, sample sizes, and Subject Test subscore reliabilities (if applicable) are based on the test edition that had the median reliability.

**Table 6A: Conditional Standard Errors of Measurement at Selected Scores for General Test Measures\***

Measure	200	250	300	350	400	450	500	550	600	650	700	750	800
Verbal	13	21	25	29	35	37	38	35	34	35	35	32	20
Quantitative	28	46	55	60	62	62	59	57	49	45	38	28	9

**Table 6B: Conditional Standard Errors of Measurement of Difference Scores at Selected Scores for General Test Measures\***

Measure	200	250	300	350	400	450	500	550	600	650	700	750	800
Verbal	19	29	35	41	49	53	53	49	49	50	49	46	29
Quantitative	40	66	77	84	87	88	84	81	70	63	54	40	13

\* The computer-based pools used to compute the CSEMs and the CSEMs of difference scores are the same as those on which the reliability estimates in Table 5 are based. Conditional standard errors of measurement for analytical writing are not available at this time.



**Table 7: Average Correlations of the GRE General Test, the Subject Tests, and UGPA with Various Criterion Variables**

Criterion Variables	Predictors							
	Number of Participants	Number of Studies	V	Number of Participants	Number of Studies	Q	Number of Participants	Subject Test
First-Year Graduate GPA	45,615	1,231	0.34	45,618	1,231	0.38	10,225	0.45
Comprehensive Exam Scores	1,198	11	0.44	1,194	11	0.26	534	0.51
Faculty Ratings	4,766	35	0.42	5,112	34	0.47	879	0.50
Degree Attainment	6,304	32	0.18	6,304	32	0.20	2,575	0.39
V = GRE Verbal; Q = GRE Quantitative; UGPA = Undergraduate grade point average								

Table 7 shows that the GRE tests predict as well or better than does UGPA, particularly for comprehensive exam scores and faculty ratings. GRE Subject Tests predict even more highly than the General Test measures.

**Table 8: Average Correlations of the GRE General Test with Graduate First-Year Grade Point Average by Degree Level**

Criterion Variable	Master's Level				Doctoral Level			
	Predictors				Predictors			
	Number of Participants	Number of Studies	V	Number of Participants	Number of Studies	Q	Number of Participants	Number of Studies
Graduate First-Year GPA	2,204	47	0.32	2,204	47	0.26	1,323	25
V = GRE Verbal; Q = GRE Quantitative; GPA = Graduate grade point average								

Table 8 shows that the GRE General Test predicts about as well for master's students as for doctoral students.

**Table 9: Average Correlations of the GRE General Test, the Subject Tests, and UGPA with Graduate First-Year Grade Point Average by Sub-Discipline**

Sub-Discipline	Predictors							
	Number of Participants	Number of Studies	V	Number of Participants	Number of Studies	Q	Number of Participants	Subject Test
Humanities	6,152	180	0.40	6,152	180	0.35	1,317	0.42
Life Science	8,616	233	0.34	8,616	233	0.35	852	0.33
Math-Physical Science	8,076	329	0.24	8,076	329	0.37	2,621	0.47
Social Science	22,375	486	0.37	22,378	486	0.37	5,081	0.47
V = GRE Verbal; Q = GRE Quantitative; UGPA = Undergraduate grade point average								

Table 9 shows that GRE Subject Tests are better predictors of success than UGPA for most major fields. The Verbal measure is most predictive for the Humanities field; the Quantitative measure is most predictive for the Math-Physical Science field. Both Verbal and Quantitative measures are equally predictive for the Social Science field.

**Figure 1: Percent of students earning a 3.8 or better in biology departments by UGPA and GRE high and low quartiles.**

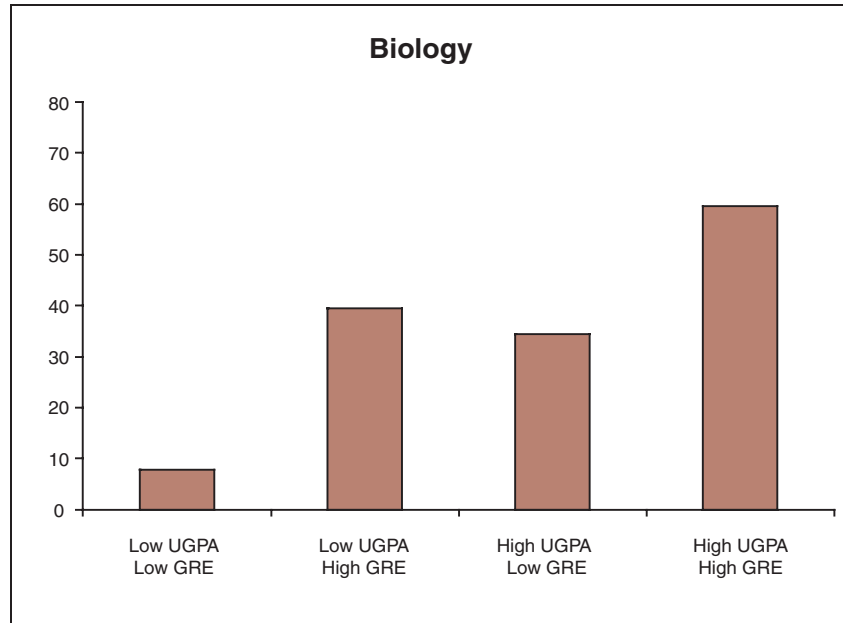


Figure 1 shows that for applicants with low UGPAs (the two left columns) and for applicants with high UGPAs (the two right columns), applicants with a high GRE score are markedly more successful than applicants with a low GRE score.

**Figure 2: Percent of students earning a 3.8 or better in English departments by UGPA and GRE high and low quartiles.**

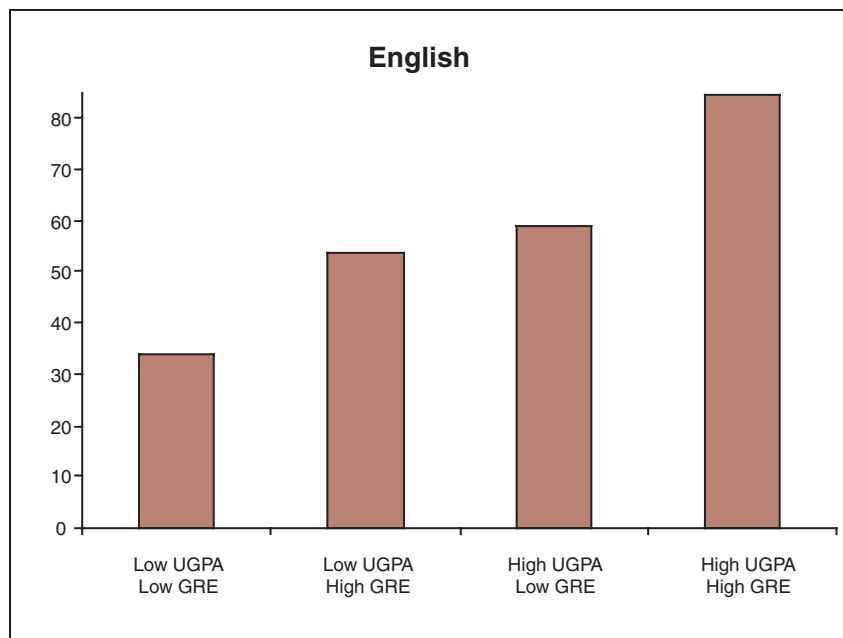


Figure 2 shows that for applicants with low UGPAs (the two left columns) and for applicants with high UGPAs (the two right columns), applicants with a high GRE score are markedly more successful than applicants with a low GRE score.

## SCORE LEVEL DESCRIPTIONS FOR THE ANALYTICAL WRITING SECTION OF THE GENERAL TEST\*

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Although the GRE Analytical Writing section contains two discrete analytical writing tasks, a single combined score is reported because it is more reliable than is a score for either task alone. The reported score, the average of the scores for the two tasks, ranges from 0 to 6, in half-point increments.

The statements below describe, for each score level, the overall quality of analytical writing demonstrated across both the Issue and Argument tasks. Because the test assesses critical thinking and analytical writing skills, the ability to reason, assemble evidence to develop a position, and communicate complex ideas weigh more heavily than the writer's control of fine points of grammar or the mechanics of writing (e.g., spelling).

**SCORES 6 and 5.5** – Sustains insightful, in-depth analysis of complex ideas; develops and supports main points with logically compelling reasons and/or highly persuasive examples; is well focused and well organized; skillfully uses sentence variety and precise vocabulary to convey meaning effectively; demonstrates superior facility with sentence structure and language usage but may have minor errors that do not interfere with meaning.

**SCORES 5 and 4.5** – Provides generally thoughtful analysis of complex ideas; develops and supports main points with logically sound reasons and/or well-chosen examples; is generally focused and well organized; uses sentence variety and vocabulary to convey meaning clearly; demonstrates good control of sentence structure and language usage but may have minor errors that do not interfere with meaning.

**SCORES 4 and 3.5** – Provides competent analysis of complex ideas; develops and supports main points with relevant reasons and/or examples; is adequately organized; conveys meaning with reasonable clarity; demonstrates satisfactory control of sentence structure and language usage but may have some errors that affect clarity.

**SCORES 3 and 2.5** – Displays some competence in analytical writing, although the writing is flawed in at least one of the following ways: limited analysis or development; weak organization; weak control of sentence structure or language usage, with errors that often result in vagueness or lack of clarity.

**SCORES 2 and 1.5** – Displays serious weaknesses in analytical writing. The writing is seriously flawed in at least one of the following ways: serious lack of analysis or development; lack of organization; serious and frequent problems in sentence structure or language usage, with errors that obscure meaning.

**SCORES 1 and .5** – Displays fundamental deficiencies in analytical writing. The writing is fundamentally flawed in at least one of the following ways: content that is extremely confusing or mostly irrelevant to the assigned tasks; little or no development; severe and pervasive errors that result in incoherence.

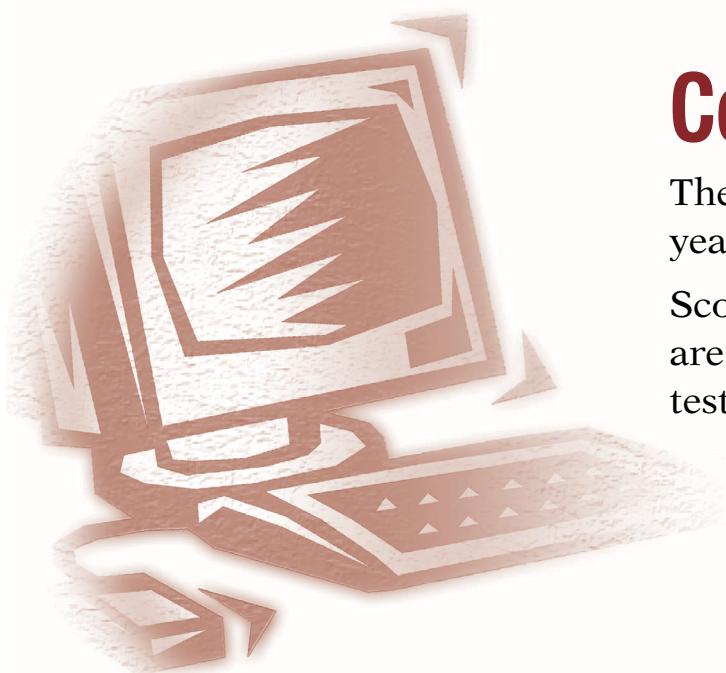
**SCORE 0** – The examinee's analytical writing skills cannot be evaluated because the responses do not address any part of the assigned tasks, are merely attempts to copy the assignments, are in a foreign language, or display only indecipherable text.

**SCORE NS** – The examinee produced no text whatsoever.

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\*These score level descriptions are also for the Writing Assessment that was discontinued in December 2002.

# 2007-2008 GRE Testing Calendar



## Computer-Based Testing

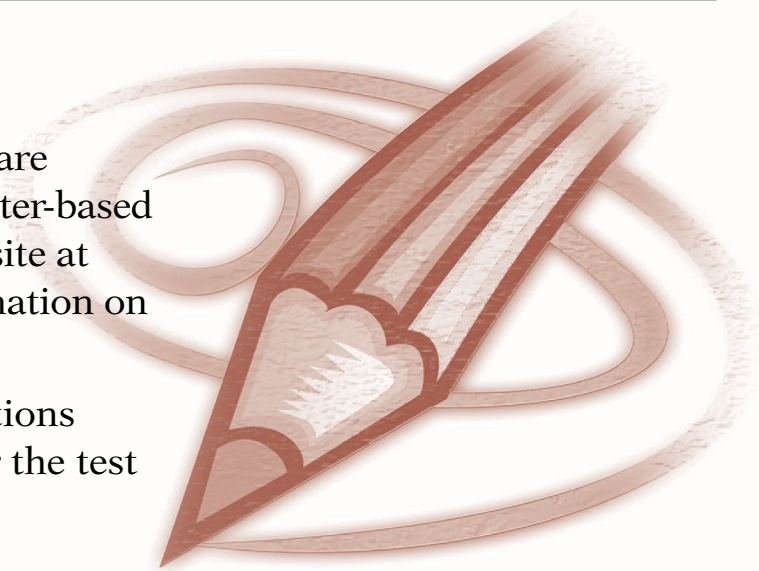
The computer-based General Test is administered year round in many areas of the world.

Score reports for computer-based administrations are released approximately 10–15 days after the test date.

## Paper-Based Testing

Paper-based General Test administrations are offered in areas of the world where computer-based testing is not available. Visit the GRE website at **[www.ets.org/gre/stupubs.html](http://www.ets.org/gre/stupubs.html)** for information on paper-based testing in these locations.

Score reports for paper-based administrations are released within four to six weeks after the test date (see below).



GENERAL TEST		SUBJECT TESTS	
Test Dates	Approximate Score Report Mailing Dates	Test Dates	Approximate Score Report Mailing Dates
October 27, 2007	December 7, 2007	October 6, 2007 <sup>c</sup>	November 16, 2007
February 2, 2008 <sup>a</sup>	March 14, 2008	November 3, 2007	December 14, 2007
June 7, 2008 <sup>b</sup>	July 18, 2008	April 12, 2008 <sup>c</sup>	May 23, 2008

<sup>a</sup> No testing in China (including Hong Kong), Korea, and Taiwan.

<sup>b</sup> Testing in China (including Hong Kong), Korea, and Taiwan only.

<sup>c</sup> No testing in India, China (including Hong Kong), and Taiwan.



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