

The
Princeton
Review®

BETTER STRATEGIES. HIGHER SCORES.

www.ZabanBook.com

زبان بوک

Cracking the **GRE**®

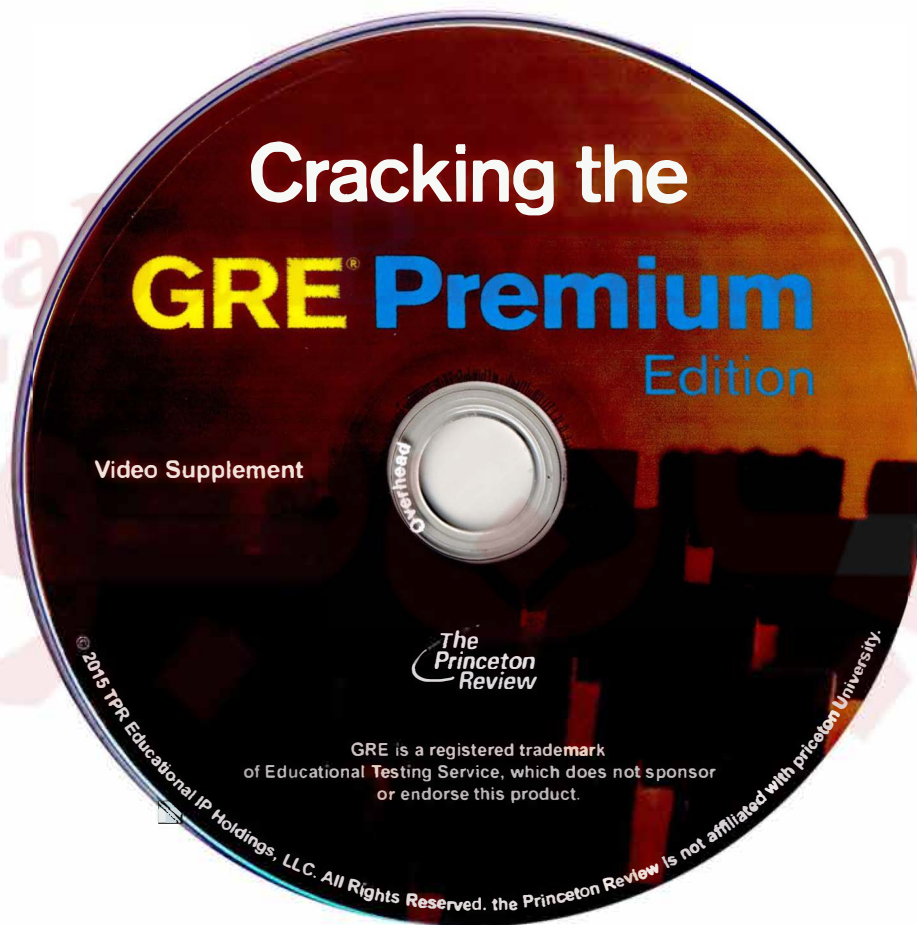
2017 Edition

**The techniques, practice, and review
you need for the score you want.**

- **4** full-length practice tests included (2 in the book & 2 online) with complete answer explanations
- Comprehensive reviews and techniques for every section of the GRE
- Drills and practice questions to help maximize your score

By the Staff of The Princeton Review

GRE is a registered trademark of Educational Testing Service, which is not affiliated with The Princeton Review.





Cracking the

GRE[®]

2017 Edition

The Staff of The Princeton Review

PrincetonReview.com

Penguin
Random
House

Contents

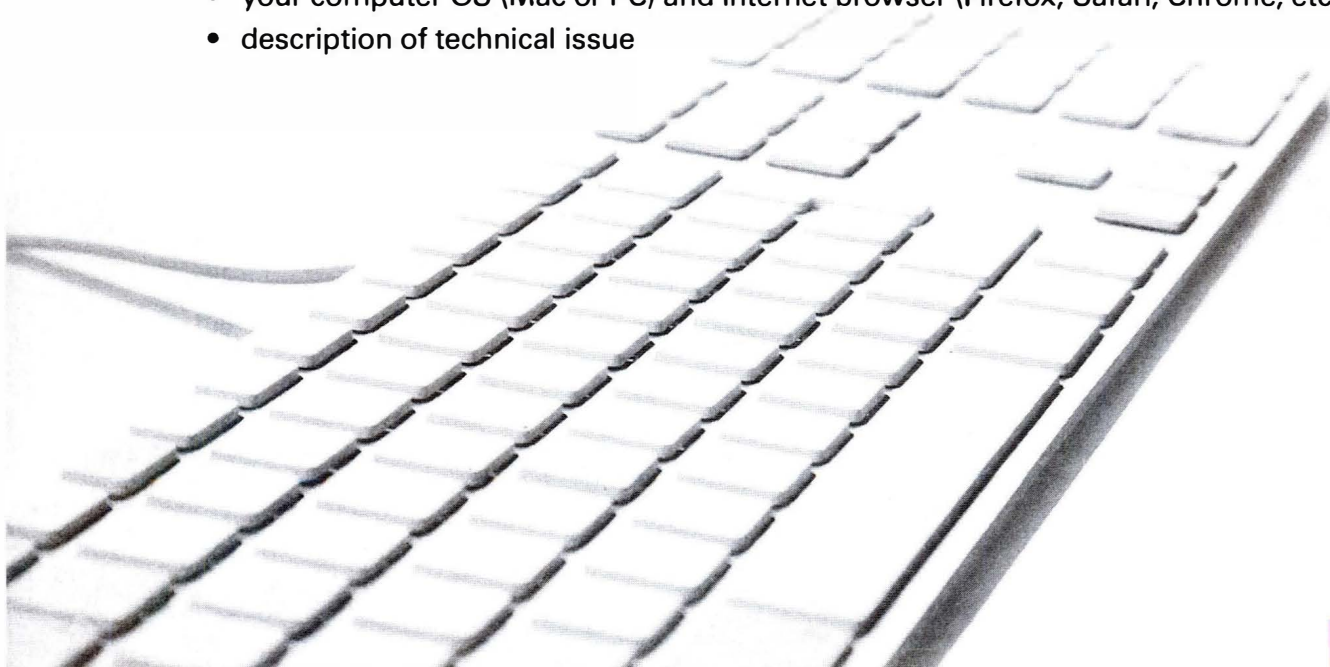
Register Your Book Online!	vi
Part I: Orientation	1
1 Introduction	3
2 General Strategy	19
Part II: How to Crack the Verbal Section	29
3 The Geography of the Verbal Section	31
4 Text Completions.....	43
5 Sentence Equivalence.....	67
6 Reading Comprehension.....	79
7 Critical Reasoning.....	109
8 Vocabulary for the GRE	139
Part III: How to Crack the Math Section	161
9 The Geography of the Math Section.....	163
10 Math Fundamentals	177
11 Algebra (And When to Use It).....	205
12 Real World Math.....	245
13 Geometry	273
14 Math Et Cetera	307
Part IV: How to Crack the Analytical Writing Section	333
15 The Geography of the Analytical Writing Section	335
16 The Issue Essay	345
17 The Argument Essay	369
Part V: Answers and Explanations to Drills and Practice Sets	383
Part VI: Practice Tests	411
18 Practice Test 1	415
19 Practice Test 1: Answers and Explanations	445
20 Practice Test 2	461
21 Practice Test 2: Answers and Explanations	485
Appendix: Accommodated Testing.....	501

Register Your

- 1** Go to **PrincetonReview.com/cracking**
- 2** You'll see a welcome page where you can register your book using the following ISBN: 9781101919712
- 3** After placing this free order, you'll either be asked to log in or to answer a few simple questions in order to set up a new Princeton Review account.
- 4** Finally, click on the "Student Tools" tab located at the top of the screen. It may take an hour or two for your registration to go through, but after that, you're good to go.

If you are experiencing book problems (potential content errors), please contact EditorialSupport@review.com with the full title of the book, its ISBN number (located above), and the page number of the error. Experiencing technical issues? Please e-mail TPRStudentTech@review.com with the following information:

- your full name
- e-mail address used to register the book
- full book title and ISBN
- your computer OS (Mac or PC) and Internet browser (Firefox, Safari, Chrome, etc.)
- description of technical issue



Book Online!

Once you've registered, you can...

- Take 2 full-length practice GRE exams
- Check to see if there have been any corrections or updates to this edition

Offline Resources

If you are looking for more review or practice, please feel free to pick up these books in stores right now!

- *Verbal Workout for the GRE, 5th Edition*
- *Math Workout for the GRE, 3rd Edition*
- *1,007 GRE Practice Questions, 4th Edition*
- *GRE Power Vocab*
- *Crash Course for the GRE, 5th Edition*

Look For These Icons Throughout The Book



Online Articles



Applied Strategies



Online Practice Tests



Study Break



Proven Techniques



More Great Books

The
Princeton
Review®

Chapter 1

Introduction

What is the GRE? Who makes the test? What's a good score? The answer to these questions and many others lie within this chapter. In the next few pages, we'll give you the lowdown on the things you need to know about the GRE.



Strategies Galore

In this book you'll find The Princeton Review's trusted test-taking strategies to help you crack the GRE.

CRACKING THE GRE

For a lot of people, taking a standardized test such as the GRE usually engenders a number of emotions—none of them positive. But here's the good news: The Princeton Review is going to make this whole ordeal a lot easier for you. We'll give you the information you will need to do well on the GRE, including our time-tested strategies and techniques.

A few years back, the GRE was rather significantly revised. This “new” version of the test supposedly allows graduate schools to get a better sense of an applicant's ability to work in a post-graduate setting—a goal that is unrealistic indeed, considering that the people who take the GRE are applying to programs as diverse as physics and anthropology.

However, it's safe to say that neither GRE—new or old—is a realistic measure of how well you'll do in grad school, or even how intelligent you are. In fact, the GRE provides a valid assessment of only one thing:

The GRE assesses how well you take the GRE.

Got it? Even so, you still want to do well on the GRE, because you want grad schools to take you seriously when they consider your application. With this in mind, you should cultivate several very important skills when you're preparing for the test; each of them is attainable with the right guidance (which we'll give you), a strong work ethic (which you must provide), and a healthy dose of optimism. Who knows? Maybe after working through this book and learning how to crack the test, you'll actually look forward to taking the GRE.

So what exactly *is* this test you've heard so much about?

WHAT IS THE GRE?

The Graduate Record Examination (GRE) is a 3-hour, 45-minute exam that's used to rank applicants for graduate schools. The scored portion of the GRE consists of the following sections:

- One 30-minute Analysis of an Issue essay
- One 30-minute Analysis of an Argument essay
- Two 30-minute Verbal Reasoning sections
- Two 35-minute Quantitative Reasoning sections

The Verbal Reasoning sections test your skills on three different types of questions:

- Text Completion
- Sentence Equivalence
- Reading Comprehension

The Quantitative Reasoning sections measure your prowess in four areas:

- Arithmetic and Number Properties
- Algebra
- Geometry
- Data Analysis

WHY DO SCHOOLS REQUIRE IT?

Even though you will pay ETS \$205 to take the GRE, it is important to note that you are not their primary customer. Their primary customers are the admissions offices at graduate programs across the United States. ETS provides admissions professionals with two important services. The first is a number, your GRE score. Everyone who takes the test gets a number. It is difficult for admissions committees to make a decision between a candidate with a 3.0 and a 3.2 GPA from drastically different schools and in two different majors. A GRE score, on the other hand, provides a quick and easy way for busy admissions offices to whittle a large applicant pool down to size.

Applicants could come from all over the world and will certainly have an enormous range in academic and professional experience. How does one compare a senior in college with a 32-year-old professional who has been out of college working in a different industry for the past 10 years? A GRE score is the only part of the application that allows for an apples-to-apples comparison among all applicants.

The second service that ETS provides is mailing lists. That's right; they will sell your name. You can opt out, but when you sit down to take the test, ETS will ask you a whole bunch of questions about your educational experience, family background, race, and gender, as well as other biographical data. All of this information goes into their database. In fact, ETS is one of the most important sources of potential applicants that many graduate programs have.

Another reason for the GRE is that it ensures that most applicants to graduate school are qualified. It helps to weed out the people who might be considering grad school, but who can't get their act together enough to fill out applications. When you ask a program how important the GRE score is to the application, they may say, "it depends" or "not very" and that may be true as long as your score is in the top half. If your score is in the bottom half, however, it may mean that your application never gets seen.

So the GRE may have little relevance to any particular field of study you might be pursuing, but as long as it helps graduate programs uncover potential candidates, and as long as it is the only tool available to compare a diverse candidate pool, the GRE is here to stay.

WHO IS ETS?

Like most standardized tests in this country, the GRE is created and administered by Educational Testing Service (ETS), a private company located in New Jersey. ETS publishes the GRE under the sponsorship of the Graduate Record Examinations Board, which is an organization affiliated with the Association of Graduate Schools and the Council of Graduate Schools in the United States.

ETS is also the organization that brings you the SAT, the Test of English as a Foreign Language (TOEFL), the National Teacher Examination (NTE), and licensing and certification exams in dozens of fields, including hair styling, plumbing, and golf.



What to Take to the Test Center:

1. Your registration ticket
2. A photo ID and one other form of ID
3. A snack

TEST DAY

The GRE is administered at Prometric testing centers. This company specializes in administering tests on computer. They administer citizenship exams, professional health certifications, dental exams, accounting exams, and hundreds of other exams on computer. As professional proctors, they are a particularly humorless lot. When you arrive at the center, they will check your ID, give you a clipboard with a form to fill out, and hand you a locker key. Despite the fact that they already have your information, you will be asked to fill out a long form on paper. This form includes an entire paragraph that you have to copy over—in cursive (they specify this)—that states that you are who you say you are and that you are taking the test for admissions purposes. This process will take you about 10 minutes, and you can

complete it while you wait for them to call you into the testing room. The locker is for all of your personal belongings, including books, bags, phones, bulky sweaters, and even watches. You are not allowed to take anything with you into the testing room.

When they call you into the testing room, they will first take a photo of you and, in some cases, fingerprint you before you go in. They will give you six sheets of scratch paper, stapled together to form a booklet, and two sharpened pencils with erasers. Then they lead you into the room where someone will start your test for you. The room itself will hold three or four rows of standard corporate cubicles, each with a monitor and keyboard. There will be other people in the room taking tests other than the GRE. Because people will be entering and exiting the room at different times, you will be provided with optional headphones.

Test Day Tips

- Dress in layers, so that you'll be comfortable regardless of whether the room is cool or warm.
- Don't bother to take a calculator; you're not allowed to use your own—just the one on the screen.
- Be sure to have breakfast, or lunch, depending on when your test is scheduled (but don't eat anything weird). Take it easy on the liquids and the caffeine.
- Do a few GRE practice problems beforehand to warm up your brain. Don't try to tackle difficult new questions, but go through a few questions that you've done before to help you review the problem-solving strategies for each section of the GRE. This will also help you put on your "game-face" and get you into test mode.
- Make sure to take photo identification to the test center. Acceptable forms of identification include your driver's license, photo-bearing employee ID cards, and valid passports.
- If you registered by mail, you must also take the authorization voucher sent to you by ETS.
- Stretch, drink some water, go to the bathroom, and do whatever you need to do in order to be prepared to sit for this four-hour test.

TEST STRUCTURE

While your test structure may vary, you should expect to see something like this when you sit down to take the exam:

The first section of the test collects all of your biographical information. If you fill this out, you will start getting mail from programs that have bought your name from ETS. In general, this is not a bad thing. If you don't want them to sell your name, or you don't want to spend the time answering their questions, you can click on a box that tells ETS not to share your information.



More Online

For tons of information about the GRE, check out PrincetonReview.com/grad/gre-information

A Note on the Paper-Based GRE

The computer-delivered GRE is the standard format for test takers. The paper-based GRE is far more rare and only offered up to three times a year. But if you want to learn more about the paper-and-pencil test, visit ETS.org.

Once all of that is done, you will begin your first scored section, the essays. Your two essays will be back to back. You have 30 minutes for each essay. Immediately after your second essay, you will get your first multiple-choice section. It may be math or verbal. You will have a 1-minute break between sections. Here is the structure of the test:

Section	Time	# of Questions
Biographical Information	+/- 10 minutes	–
Issue Essay	30 minutes	1
Argument Essay	30 minutes	1
Section 1	30 or 35 minutes	20
Section 2	30 or 35 minutes	20
Break	10 minutes	–
Section 3	30 or 35 minutes	20
Section 4	30 or 35 minutes	20
Section 5	30 or 35 minutes	20
Possible Research Section	Optional	Depends
Select Schools/Programs	5 minutes	Up to 4
Accept Scores	1 minute	–
Receive Scores	1 minute	–

Here are some things to keep in mind:

- You will see five multiple-choice sections, but only four will count. The fifth is an “experimental” section. It can come at any time after the essays. At the end of the exam, you will know, based on the number of math or verbal sections, if the experimental section was math or verbal, but you will not know which section will not count toward your score.
- Math sections are 35 minutes. There are 20 math questions in each section. If your experimental section is math, your test will be five minutes longer than someone whose experimental section is verbal.
- Verbal sections are 30 minutes. There are 20 verbal questions in each section.
- For the computer-delivered test, the optional 10-minute break comes after the second multiple-choice section. For the paper-based test, the 10-minute break comes after the second Analytical Writing section.

- You may or may not get a research section. If you do, it will come last; it does not count toward your score, and it is optional.
- You must accept your scores and, if you choose, send your scores to selected programs prior to seeing your scores.
- If you choose not to accept your scores, neither you nor any program will ever see them.
- You may choose to send your scores to up to four graduate programs on the day of the test. This service is included in your testing fee.

The Experimental Section

When most companies want to test a new product, they provide free samples, test it on animals, or pay for some user testing. Not ETS. ETS uses you as a guinea pig to test out new questions that they will later inflict on other test takers. You pay them to do their research and development, and you do it when you are at your most stressed. Thanks, ETS!

Research Section

At the end of the test, you may also have an unscored research section. At the beginning of this section, you will be told that it is an unscored research section, and that it will be used only to help develop and test questions for the GRE. If you want to skip it, you have the option of skipping it. You may be offered some sort of prize to induce you to take it, but by that point in the test you will probably be exhausted. If you're offered a research section, just go ahead and decline, get your scores, and go home.

The 10-Minute Break

You are given 1 minute between sections except for the second multiple-choice section, when you get a 10-minute break. Go to the bathroom, splash water on your face, wave your arms around. You want to re-oxygenate your brain. The goal, as much as it is possible, is to hit your brain's reset button. When you sit back down for the third multiple-choice section, you want it to be as if you are just sitting down at that computer for the first time that day. Your GRE test day is going to be a long and intense day, so be sure to take full advantage of break time.

Accepting Your Scores

Before you see your scores, you will be given the opportunity to cancel your scores. There are very few reasons to do so. First, if you cancel your scores, you will never see your scores and you will have to go through the whole experience again, including paying an additional \$205 to take the test again. Second, GRE scores are curved. Most people believe that they are doing worse while taking the test than they actually are. Third, you can make use of the GRE *ScoreSelect*® service.



Practice Like You Play

When tackling practice tests during your test preparation, be sure to mimic the real GRE and give yourself these timed breaks just like the real thing.

ScoreSelect®

ScoreSelect® allows you to select which scores get sent to which schools. Options for sending scores depend on whether you are sending scores on the day of your test or after your test day. On test day, you have the following options for sending scores:

- **Most recent.** This option sends the results of the test you just took.
- **All.** This option sends all your scores from the last five years.

If you send your scores to schools after test day, you have even more options. After test day, your options are:

- **Most recent.** This option sends the scores from the test you took most recently.
- **All.** As above, this option sends all your GRE scores from the last five years.
- **Any.** Send just the scores you want to send. You can send one score or multiple scores. For example, if you have taken the GRE three times and your second score is your best, you can send just that score.

When you use *ScoreSelect®* after your test day, the score report that is sent to schools shows only the scores that you choose to send. The report does not indicate how many times you have taken the GRE nor does it indicate which that you have sent, for example, the second of three scores on record.

ScoreSelect® is another reason to think twice before cancelling your scores. Provided that you send your scores after your test date, your schools will never know that you didn't do as well as you would have liked or even that you took the test more than once if you don't want them to know.

Sending Additional Score Reports

On the day of your test, you can send your scores to up to four schools using the *ScoreSelect®* test day options. These score reports are included as part of the \$205 fee that you pay to take the GRE. If you wish to send reports to additional schools, you'll need to request that these additional reports be sent after your test day. Each additional report costs \$27. The fastest way to send additional score reports is to order them online using your My GRE® account that you create when you register to take the test.

WHAT DOES A GRE SCORE LOOK LIKE?

Every GRE score has two components: a scaled score and a percentile rank. GRE scores fall on a 130–170 point scale. However, your percentile rank is more important than your scaled score. Your percentile rank indicates how your GRE scores compare to those of other test takers. For example, a scaled score of 150 on the GRE translates to roughly the 43rd percentile, meaning that you scored better than 43 out of every 100 test takers—and worse than the other 57 percent of test takers. A score of 152 is about average, while scores of 163 and above are very competitive. Get the latest reported scores and percentiles at PrincetonReview.com and at www.ets.org/gre, the official ETS website for the GRE.

The essays are scored a little differently than are the Verbal and Quantitative sections. All essays receive a scaled score of 0–6, in half-point increments. The corresponding percentiles are as follows:

Score	Analytical Writing Percentile
6.0	99
5.5	97
5.0	93
4.5	78
4.0	54
3.5	35
3.0	14
2.5	6
2.0	2
1.5	1
1.0	<1

In other words, a score of 5 on the essay portion of the GRE means you performed better than 93 percent of test takers.

How Much Does the GRE Matter?

Some programs consider the GRE very important, while others view it as more of a formality. Because the GRE is used for such a wide range of graduate studies, the relative weight it is given will vary from field to field and from school to school. A master's program in English literature will not evaluate the GRE the same way as a PhD program in physics, but it's hard to predict what the exact differences will be. A physics department may care more about the Math score than the Verbal score, but given that nearly all of its applicants will probably have high Math scores, a strong Verbal score might make you stand out and help you gain admission.



Grad School Info

Our Princeton Review homepage has tons of informational articles about graduate school. Head over to PrincetonReview.com/grad-school-advice and check them out!

SECTION 5: VERBAL REASONING

14 of 20

The Mayan pyramid of Kukulcan is more than just _____ edifice; this imposing structure was built to create a chirping echo whenever people clap their hands on the staircase. This echo sounds just like the chirp of the Quetzal, a bird which is sacred in the Mayan culture.

- ☐ a venerable
- ☐ a humble
- ☐ a beguiling
- ☐ an august
- ☐ a specious
- ☐ a prosaic

15 of 20

Some wealthy city-dwellers become enchanted with the prospect of trading their hectic schedules for a bucolic life in the countryside, and they buy property with a pleasant view of farmland—only to find the stench of the livestock so _____ that they move back to the city.

- ☐ bovine
- ☐ pastoral
- ☐ noisome
- ☐ atavistic
- ☐ olfactory
- ☐ mephitic

For each of Questions 16 to 20, select one answer choice unless otherwise instructed.

Questions 16 through 18 are based on the following reading passage.

Often the most influential developments initially appear to be of minor significance. Consider the development of the basic stirrup for example. Without stirrups horse and rider are, in terms of force, separate entities; lances can be used from horseback, but only by throwing or stabbing, and mounted warriors gain only height and mobility. In medieval times, a lance couched under the rider's arm, unifying the force of rider and weapon, would throw its wielder backwards off the horse at impact. Stirrups unify lance, rider, and horse into a force capable of unprecedented violence. This development left unusually clear archaeological markers: With lethality assured, lances evolved barbs meant to slow progress after impact, lest the weight of body pull rider from horse. The change presaged the dominance of mounted combat, and increasingly expensive equipment destroyed the venerable ideal of freeman warriors. New technology demanded military aristocracy, and chivalric culture bore its marks for a millennium.

16 of 20

The primary purpose of the passage is to

- ☐ discuss the influence of a recent archeological discovery
- ☐ explore the societal significance of a technological innovation
- ☐ assess the state of research in a given field
- ☐ lament the destruction of certain social ideals
- ☐ explicate the physics of combat artillery

SECTION 5: VERBAL REASONING

17 of 20

It can be inferred from the passage that the author believes which of the following about innovations in military technology?

- ☐ Their study merits additional research.
- ☐ They had more lasting influence than did those of the ancient world.
- ☐ Most of them had equally far-reaching repercussions.
- ☐ Prior to their application, the military value of horses was considered insignificant.
- ☐ Many of them are archaeologically ambiguous.

18 of 20

Select the sentence in the passage in which the author cites the physical effects of a technological innovation being discussed as an example of a previous generalization.

Questions 19 through 20 are based on the following reading passage.

Few mathematical constructs seem as conceptually simple as that of randomness. According to the traditional definition, a number is random if it is chosen purely as the result of a probabilistic mechanism such as the roll of a fair die. In their groundbreaking work regarding complexity and the limitations of formal systems, mathematicians Gregory Chaitin and A.N. Kolmogorov force us to consider this last claim more closely.

Consider two possible outcomes of throwing a fair die three times: first, 1, 6, and 2; second 3, 3, and 3. Now let us construct two three-member sets based on the results. Though the first set—{1,6,2}—intuitively seems more random than the second—{3,3,3}, they are each as likely to occur, and thus according to the accepted definition, must be considered equally random. This unwelcome result prompts Chaitin and Kolmogorov to suggest the need for a new standard of randomness, one that relies on the internal coherence of the set as opposed to its origin.

19 of 20

Which of the following best describes the organization of the passage as whole?

- ☐ A concept is introduced; a traditional definition is put forward; a thought experiment is described; a new definition is proposed; the traditional definition is amended as a result.
- ☐ A concept is introduced; a traditional definition is supported by authorities; a thought experiment is described; the implications of the experiment are discussed.
- ☐ A concept is introduced; a traditional definition is considered and rejected; a thought experiment is described; a new definition is proposed.
- ☐ A concept is introduced; a traditional definition is called into question; a thought experiment is described; the implications of the experiment are discussed.
- ☐ A concept is introduced; authorities are called in to reevaluate a definition; a thought experiment is described; the implications of the experiment are considered and rejected.

20 of 20

Consider each of the choices separately and select all that apply.

Which of the following is an inference made in the passage above?

- ☐ The results of the same probabilistic mechanism will each be as likely as the other to occur.
- ☐ According to the traditional definition of randomness, two numbers should be considered equally random if they result from the same probabilistic mechanism.
- ☐ Different probabilistic mechanisms are likely to result in similar outcomes.

SECTION 6: QUANTITATIVE REASONING

For each of Questions 1 to 7, compare Quantity A and Quantity B, using additional information centered above the two quantities if such information is given. Select one of the following four answer choices and fill in the corresponding circle to the right of the question.

- (A) Quantity A is greater.
 (B) Quantity B is greater.
 (C) The two quantities are equal.
 (D) The relationship cannot be determined from the information given.

A symbol that appears more than once in a question has the same meaning throughout the question.

1 of 20

$$\frac{x}{6} + 2 = \frac{6}{2}$$

$$\frac{y}{3} + 2 = \frac{9}{3}$$

Quantity A

$$\frac{(x-1)}{y}$$

Quantity B

$$\frac{(y-1)}{x}$$

- ☐ Quantity A is greater.
☐ Quantity B is greater.
☐ The two quantities are equal.
☐ The relationship cannot be determined from the information given.

2 of 20

Quantity A

The distance that Bob drives in 3 hours at an average speed of 44 miles per hour

Quantity B

The distance that Inez drives in 2 hours and 30 minutes at an average speed of 50 miles per hour

- ☐ Quantity A is greater.
☐ Quantity B is greater.
☐ The two quantities are equal.
☐ The relationship cannot be determined from the information given.

3 of 20

The height of a rectangular 3D figure is increased by p percent, its depth is decreased by p percent and its width is unchanged.

Quantity A

The volume of the new 3D figure if $p = 20$

Quantity B

The volume of the new 3D figure if $p = 40$

- ☐ Quantity A is greater.
☐ Quantity B is greater.
☐ The two quantities are equal.
☐ The relationship cannot be determined from the information given.

4 of 20

In $\triangle ABC$, $AB = AC$

Quantity A

The sum of the degree measures of angle B and angle C

Quantity B

90

- ☐ Quantity A is greater.
☐ Quantity B is greater.
☐ The two quantities are equal.
☐ The relationship cannot be determined from the information given.

5 of 20

12.5 percent of k is 80.
 k is y percent of 80.

Quantity A

y

Quantity B

650

- ☐ Quantity A is greater.
☐ Quantity B is greater.
☐ The two quantities are equal.
☐ The relationship cannot be determined from the information given.

SECTION 6: QUANTITATIVE REASONING

6 of 20

Set $P = \{a, b, c, d, e, f, g\}$

Set $Q = \{a, b, c, d, e, f\}$

$a, b, c, d, e, f,$ and g are distinct integers

Quantity A

Quantity B

Range of Set P

Range of Set Q

- ☐ Quantity A is greater.
- ☐ Quantity B is greater.
- ☐ The two quantities are equal.
- ☐ The relationship cannot be determined from the information given.

7 of 20

Series F is defined as $F_n = F_{(n-1)} + 3$ and $F_1 = 10$.

Quantity A

Quantity B

The sum of F_4
through F_{10}

The sum of F_6
through F_{11}

- ☐ Quantity A is greater.
- ☐ Quantity B is greater.
- ☐ The two quantities are equal.
- ☐ The relationship cannot be determined from the information given.

8 of 20

A number, n , is multiplied by 6. The product is increased by 24. Finally, the entire quantity is divided by 3. Which of the following expresses the final result in terms of n ?

- ☐ $\frac{n}{3} + 8$
- ☐ $\frac{n+24}{2}$
- ☐ $2n + 8$
- ☐ $3n + 24$
- ☐ $16n$

9 of 20

The average (arithmetic mean) of a and b is 10, and the average of c and d is 7. If the average of $a, b,$ and c is 8, what is the value of d ?

Click on the answer box and type in a number.
Backspace to erase.

10 of 20

In the coordinate plane, square $ABCD$ has vertices at $A(3, 7), B(3, 12), C(8, x), D(8, y)$. What is the area of $ABCD$?

- ☐ 16
- ☐ 20
- ☐ 25
- ☐ 30
- ☐ 36

11 of 20

Houses Sold in July		
Week	Peter	Dylan
Week 1	4	9
Week 2	6	3
Week 3	10	10
Week 4	4	2

The table above shows the number of houses sold per week for the month of July by two real estate agents, Peter and Dylan. What is the difference between the median number of houses sold per week by Dylan and the median number of houses sold per week by Peter?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 5
- ☐ 6

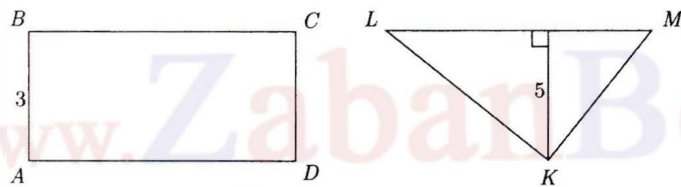
SECTION 6: QUANTITATIVE REASONING

12 of 20

At Flo's Pancake House, pancakes can be ordered with any of six possible toppings. If no toppings were repeated, how many different ways are there to order pancakes with three toppings?

- ☐ 20
- ☐ 40
- ☐ 54
- ☐ 120
- ☐ 720

13 of 20

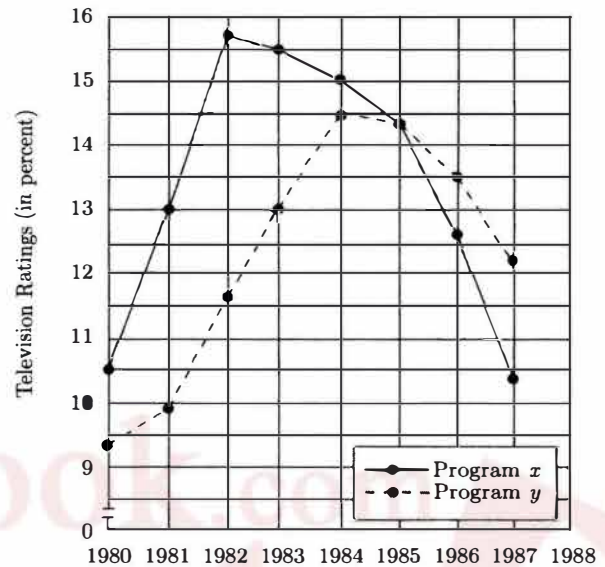


The area of triangle KLM is equal to the area of rectangle $ABCD$. If the perimeter of $ABCD$ is 16, what is the length of LM ?

- ☐ $\frac{3}{2}$
- ☐ 3
- ☐ $\frac{16}{5}$
- ☐ 5
- ☐ 6

Questions 14 through 16 refer to the following graph.

TELEVISION RATINGS* IN THE UNITED STATES
1980-1987



*Ratings equal the percent of television households in the United States that viewed the program.

14 of 20

For how many of the years shown did the ratings for Program y increase over the ratings for Program x the previous year?

- ☐ Two
- ☐ Three
- ☐ Four
- ☐ Five
- ☐ Six

SECTION 6: QUANTITATIVE REASONING

15 of 20

In 1995, there were 95 million television households in the United States. If, in 1983, there were 80 percent of the number of television households in 1995, then approximately how many television households, in millions, viewed Program y in 1983 ?

- ☐ 80
- ☐ 76
- ☐ 15
- ☐ 12
- ☐ 10

16 of 20

If there were 20 million television households in the United States in 1983, then the number of viewers of Program x is how much greater than the number of viewers of Program y in 1983 ?

Click on the answer box and type in a number.
Backspace to erase.

17 of 20

Each of the 576 houses in Tenantville is owned by one of the following landlords: Matt, Gavin, Angela, or Susan. Matt and Angela together own twice as many houses as Gavin and Susan own. If Gavin owns 100 more houses than Susan owns, and Matt owns 100 more houses than Angela owns, how many houses does Susan own?

- ☐ 46
- ☐ 142
- ☐ 146
- ☐ 192
- ☐ 242

18 of 20

One-quarter of the cars that an automobile manufacturer produces are sports cars, and the rest are sedans. If one-fifth of the cars that the manufacturer produces are red and one-third of the sports cars are red, then what fraction of the sedans is red?

Click on each box and type in a number.
Backspace to erase.

19 of 20

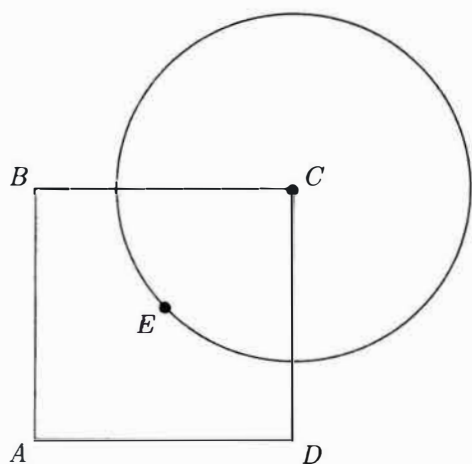
A candy jar has 4 lime, 10 cherry, 8 orange, and x grape candies. If Tom selects a candy from the jar at random and the probability that he selects an orange candy is greater than 20 percent, which of the following could be the value of x ?

Indicate all such values.

- ☐ 10
- ☐ 14
- ☐ 18
- ☐ 22
- ☐ 24
- ☐ 28

SECTION 6: QUANTITATIVE REASONING

20 of 20



Square $ABCD$ and a circle with center C intersect as shown. If point E is at the center of $ABCD$ and if the radius of circle C is k , then what is the area of $ABCD$, in terms of k ?

- ☐ $\frac{k^2}{2\pi}$
- ☐ $\frac{\pi k^2}{2}$
- ☐ πk^2
- ☐ k^2
- ☐ $2k^2$

Chapter 21 Practice Test 2: Answers and Explanations

INTERPRETING YOUR RESULTS

After you check your answers on the following pages, fill out this sheet to interpret your results.

Analytical Writing

To evaluate your performance on the Analytical Writing sections, compare your response to the advice and samples in the Analytical Writing chapter.

Verbal Reasoning

Refer to the explanations to check your answers. Count the number of questions you got correct in each Verbal Reasoning section, and calculate the total number correct. Find the section of the Interpretive Guide (below) that corresponds to your total to get an idea of how your performance compares to that of other test takers.

Test 2	# Correct
Section 3	
Section 5	
Total	

Quantitative Reasoning

Refer to the explanations to check your answers. Count the number of questions you got correct in each Quantitative Reasoning section, and calculate the total number correct. Find the section of the Interpretive Guide (below) that corresponds to your total to get an idea of how your performance compares to that of other test takers.

Test 2	# Correct
Section 4	
Section 6	
Total	

Interpretive Guide

The table below provides a guide for interpreting your performance based on the number of questions you got correct in each subject.

Subject	Above Average	Average	Below Average
Verbal Reasoning	30–40	22–29	1–21
Quantitative Reasoning	33–40	24–32	1–23

Section 3

1. inflection and utilized

For the first blank, the transition “more important” tells you to change direction from “actual words.” Also, *sarcastically* is an example of tone. Look for a choice that means tone. *Inflection* fits tone. *Pitch* is nonverbal, but it does not match the example of *sarcastically*. *Accuracy* does not fit. For the second blank, look for a word that means *conveyed* or *spoken*. *Utilized* is the best match. *Implied* and *repudiated* don’t fit.

2. expressive, relegated, and conflict with

Try working with the first blank first. The clue is *artistic*, and the transition *and* indicates the first blank should be a word that is the same as *artistic*. *Expressive* is the best choice; neither *tedious* nor *tiresome* works. *Though* changes the direction of the sentence—though the studio likes the creative/artistic aspect, something negative must be happening to creativity—it’s brought down to a secondary position. Eliminate *uplifted* and *compared* for blank (ii) because they are not negative, and choose *relegated*. Turning to the third blank, “organization and hierarchy” are in opposition to *creativity*, so *conflict with* makes the most sense.

3. axiomatic

You are given the clue that the beliefs “are in conflict” and “cannot all be correct.” Therefore, whatever goes into the blank must be synonymous with *correct* or something we can infer correctness from. The correct answer is *axiomatic*, which means self-evident or universally true. *Disputable* is the opposite of what the sentence requires, and *ubiquitous* and *historic* are not synonymous with self-evident. Although *empirical*, meaning derived from observation, might fit science, it is not a good fit for religion.

4. staved off, contributed to, and affliction

The clue “Although most preventative medical ointments commonly in use” tells you that most ointments would prevent an infection, but the one Helen used did not. Recycle the clue, and put a word that means prevent in the first blank; *staved off* is the best match. Work with the second and third blanks together. The ointment did not prevent an infection, and the clue “much to her dismay” tells you that something bad happened. The only pair that makes sense together is *contributed to* and *affliction* because they tell you that the ointment made her problem worse.

5. glib, spontaneity, and tepid

For the first blank, the clue is *offhand remarks*, so the blank means something like “offhand.” *Glib*, which means “superficial or showing a lack of concern,” is the closest match for this. Sticking to *prepared talking points* can result in a lack of “excitement” or “naturalness,” which *spontaneity* matches. For the last blank, you know the crowd’s responses are *lukewarm*, so the answer for that blank is *tepid*.

6. shallow

The clue is the entire clause that follows the semicolon: “its characters take trivial concerns seriously while thoughtlessly dismissing important ones.” Look for a word that means superficial or petty to go in the blank. The only one that fits is *shallow*.

7. B

The third paragraph states that if incorrect quantities of Haber nitrogen were applied, “the wheat crop would grow taller and thicker, eventually toppling over and rotting.” Losing a crop would be an undesirable effect, making (B) the correct answer. Eliminate (A) because the passage doesn’t compare the effects of Haber nitrogen on different kinds of crops. The passage doesn’t provide any information to support (C) and (D). Choice (E) contradicts the passage, which says the farmers were wary of the substance.

8. E

According to the first paragraph, there has been no sharp decline in the world’s population and, therefore, we can surmise that food production has been sufficient to allow for the existing population growth, as in (A). In the second paragraph, the author mentions the invention of the tractor as one of the factors that allowed more crops to be grown for human consumption. This reflects the technological innovation in (B). In the last paragraph, the author notes that the environmental movement has opposed efforts at genetic engineering. Thus, (C) is implied as well. The author notes that increases in crop production through the invention of the tractor and ammonia prevented Malthus’s predictions from being realized, and this rules out (D). The extent of the impact of genetic engineering is not clear. We don’t know that a Malthusian disaster would have been a *certainty* without genetic engineering. Therefore, the correct answer is (E) because it is not implied.

9. D

The first paragraph states that Malthus believed that “population increases in a geometric ratio, while the means of subsistence increases in an arithmetic ratio.” More simply put, Malthus argued that population growth happens at a significantly faster rate than food production. Only (D) demonstrates this.

10. E

The first paragraph presents Malthus’s prediction about what would happen if population growth were to outstrip food production. If there were too many people and not enough food, you would expect a significant or rapid population decline. Look for a word to replace *precipitous* that is similar to *significant* or *rapid*. *Sharp*, (E), is the best word.

11. B

The “rosy prospect” refers to the previous paragraph’s discussion of the booming tourism industry in Australia, which implies a positive future, and the “cloud on the horizon” refers to the conflict between the rights of the Aborigines and the need for the money from tourism, a potential problem. Choice (A) incorrectly interprets the quote as referring to a literal *horizon and prospect*. Choice (C) is also too literal, taking *prospect* to mean view. Choice (D) is incorrect because, although this may be true based on later information in the passage, it is not an accurate interpretation of this phrase. Choice (E) is too strong because the future is described as generally good, not hopeless.

12. A, B, and C

All three statements are given as sources of the conflict. Choice (A), economic hardships, is mentioned in the third paragraph. Due to financial difficulties, many regions are unwilling to give up the income derived from tourists visiting Aboriginal lands. Choice (B) is discussed in the second paragraph. The expansion of Western culture is the reason that the Aborigines have moved inland and abandoned other sacred sites. Choice (C) is mentioned in the first sentence. Tourism is described as particularly important due to the “dearth of natural resources.”

13. morose and dour

The first part of the clue is “mercurial character,” which means George’s moods change frequently. The second part of the clue is “one moment he was optimistic about his prospects,” and the transition is *the next he was*. Thus, the blank should be the opposite of optimistic; look for words that mean pessimistic. *Morose* and *dour* are both similar to pessimistic. *Hopeful* and *buoyant* have the opposite meaning, and *witty* and *immoral* are not related.

14. tyro and neophyte

The clue is that she “began her first job.” Also, the contrast of “wealthy suburb” and “llama caretaker on a rural farm” suggests that she’d feel out of place or lacking in experience at her first job. Look for words that mean beginner. *Tyro* and *neophyte* are the only words that mean beginner. *Agronomist* and *cultivator* are traps for people who focused too heavily on the farm. *Concierge* and *curator* are traps for people who focused too heavily on *caretaker*.

15. embellished and colored

The clue “King Duncan’s death at the hand of Macbeth comprises the play’s only historical truth” tells you that the version of events related in *Macbeth* was not very accurate. Does *anachronistic* mean inaccurate? No; cross it out. What about *effusive*? No. In contrast, *embellished* works well, but *prosaic* and *serpentine* do not. Finally, *colored*—which, like *embellished*, means *misrepresented* or *distorted*—fits the blank nicely.

16. thewy and sinewy

The word that goes into the blank describes superheroes, of whom the clue phrase states that “every detail of their musculatures would be visible through their clothing.” Clearly, something like *muscular* is called for, and both *thewy* and *sinewy* fit the bill. The other four words don’t fit: *Superfluous* means unnecessary, *pneumatic* means full of air, *flocculent* means covered in wool, and *atrophied* means shriveled due to disuse.

17. A and C

Choice (A) is correct because the passage states that “...without this mundane structure, every cell division would be a step into senescence, and the onset of old age would begin at birth.” Choice (B) is not correct because we have no information about what scientists used to think about telomeres. Choice (C) is correct because we are told that one function of telomeres is to mitigate the loss of DNA bases. If no bases are lost, then this role is not important any more.

18. A

The first paragraph says that without telomere buffers “every cell division would be a step into senescence, and the onset of old age would begin at birth,” and the last sentence of the passage states that “many ailments associated with normal old age begin only after the telomere buffer has been exhausted through years of cell division.” If the protection offered by the buffers didn’t exist, you could expect problems related to aging to start sooner, as (A) suggests. Choice (B) goes too far; though the passage speaks on the onset of old age at birth, we can’t be sure that almost no one would live past childhood. The passage provides no support for (C), (D), or (E).

19. B

The passage as a whole provides a short history of two types of early musical education, the rote method and the note method. Nowhere in the passage does the author come out in favor of either method, thereby

4. D

Draw the figure. Triangle ABC has two adjacent sides, AB and AC , that are equal in length. The angles that are opposite these sides, angles B and C , are also equal. One common triangle that has two equal sides is the $45 : 45 : 90$ triangle. If angles B and C were both 45 degrees, then their sum would be 90 and the answer would be (C). However, we know nothing about the third side of the triangle so it is possible that this is equal as well, which creates an equilateral triangle with angles of 60 . The sum of the angles in Quantity A is now 120 . You cannot determine which is greater, so the answer is (D).

5. A

Translate: $\frac{12.5}{100}k = 80$, so $\frac{1}{8}k = 80$, and $k = 640$. Use this information in the other equation:

$k = 640 = \frac{y}{100} \times 80$, and solve for y : $y = \frac{10}{8} \times 640 = 800$. Quantity A is greater than Quantity B.

6. D

Plug in values for each set. If $P = \{1, 2, 3, 4, 5, 6, 7\}$ and $Q = \{1, 2, 3, 4, 5, 6\}$, the range of Q is smaller. Eliminate (B) and (C). If you change P to $\{1, 2, 3, 4, 5, 7, 6\}$, and Q to $\{1, 2, 3, 4, 5, 7\}$, the range of Q is equal to that of P . Eliminate (A), and select (D).

7. A

One way to attack this problem is to list F_1 to F_{11} : $10, 13, 16, 19, 22, 25, 28, 31, 34, 37, 40$. Notice that F_6 through F_{10} are included in both quantities, so focus on what's different. Quantity A is $F_4 + F_5$ and Quantity B is F_{11} . Quantity A is $19 + 22 = 41$, and Quantity B is 40 . Alternatively, you know that F_4 has had 3 changes from F_1 . So, $F_4 = F_1 + 3(3) = 10 + 9 = 19$. F_5 has had 4 changes from F_1 , so $F_5 = F_1 + 3(4) = 10 + 12 = 22$. F_{11} has had 10 changes from F_1 , so $F_{11} = F_1 + 3(10) = 10 + 30 = 40$.

8. C

Plug in a number for n . Let $n = 5$. Because $5 \times 6 = 30$, the product is 30 . Add 24 to get 54 . Divide by 3 to get 18 as your target. If you plug in 5 for n in each answer choice, only (C) matches the target: $2n + 8 = 2(5) + 8 = 18$.

9. 10

If the average of a and b is 10 , then $a + b = 20$. Likewise, if the average of c and d is 7 , then $c + d = 14$. If the average of a , b , and c is 8 , then $a + b + c = 24$. Because $a + b = 20$, $c = 4$. If $c = 4$, then $d = 10$.

10. C

To find the area of a square, you need the length of a side. To find a side, find the distance between two vertices. If A is at $(3, 7)$ and B is at $(3, 12)$, then length of a side is equivalent to the difference in the y -coordinates: $12 - 7 = 5$. So, side AB has a length of 5 . Square this to find the area: $5^2 = 25$. The fact that there are variables for the y -value of points C and D is irrelevant to solving this problem.

11. B

Get Dylan's median by putting his weekly sales into increasing order and finding the middle value. Dylan's set is $\{2, 3, 9, 10\}$, and his median is the average of 3 and 9 , or 6 . Next, do the same thing for Peter's sales numbers. Peter's set is $\{4, 4, 6, 10\}$, so his median is the average of 4 and 6 , which is 5 . The difference between the medians is $6 - 5 = 1$.

Processing a request for accommodations takes time, so you should submit your request as early as possible (at least six weeks before you intend to take the test). The request must include the following:

- a completed Computer-Based Test (CBT) Authorization Voucher Request form and the proper test fee
- a completed Testing Accommodations Request Form
- a Certification of Eligibility: Accommodations History (COE), which verifies your use of accommodations at your college, university, or place of employment. In some cases, the COE is sufficient to document a disability and can be used in place of sending full documentation to ETS. If you are eligible to use the COE in this way, the documentation on file with the college, university, or employer must meet all ETS documentation criteria. Please see the Bulletin Supplement for details.
- documentation (unless you are using the COE as described above)
 - If you have a psychiatric disability, physical disability or health-related need, traumatic brain injury, or autism spectrum disorder, you must submit documentation.
 - Documentation must also be submitted if your disability has been diagnosed within the last twelve months, regardless of the accommodations you are requesting.

The documentation you submit must meet the following criteria:

- Clearly state the diagnosed disability
- Describe the functional limitations resulting from the disability
- Be current: within the last five years for a learning disability or autism spectrum disorder, last six months for a psychiatric or physical disability or a health-related need, or last three years for other disabilities. Documentation of physical or sensory disabilities of a permanent or unchanging nature may be older if it provides all of the pertinent information.
- Include complete educational, developmental, and medical history relevant to the disability
- Include a list of all test instruments used in the evaluation report and all subtest, composite, and/or index scores used to document the stated disability
- Describe the specific accommodations requested
- State why the disability qualifies you for the requested accommodations
- Be typed or printed on official letterhead and be signed and dated by an evaluator qualified to make the diagnosis. The report should include information about the evaluator's license or certification and area of specialization.



International Offices Listing

China (Beijing)

1501 Building A,
Disanji Creative Zone,
No.66 West Section of North 4th Ring Road Beijing
Tel: +86-10-62684481/2/3
Email: tprkor01@chol.com
Website: www.tprbeijing.com

China (Shanghai)

1010 Kaixuan Road
Building B, 5/F
Changning District, Shanghai, China 200052
Sara Beattie, Owner: Email: sbeattie@sarabeattie.com
Tel: +86-21-5108-2798
Fax: +86-21-6386-1039
Website: www.princetonreviewshanghai.com

Hong Kong

5th Floor, Yardley Commercial Building
1-6 Connaught Road West, Sheung Wan, Hong Kong
(MTR Exit C)
Sara Beattie, Owner: Email: sbeattie@sarabeattie.com
Tel: +852-2507-9380
Fax: +852-2827-4630
Website: www.princetonreviewwhk.com

India (Mumbai)

Score Plus Academy
Office No.15, Fifth Floor
Manek Mahal 90
Veer Nariman Road
Next to Hotel Ambassador
Churchgate, Mumbai 400020
Maharashtra, India
Ritu Kalwani: Email: director@score-plus.com
Tel: + 91 22 22846801 / 39 / 41
Website: www.score-plus.com

India (New Delhi)

South Extension
K-16, Upper Ground Floor
South Extension Part-1,
New Delhi-110049
Aradhana Mahna: aradhana@manyagroup.com
Monisha Banerjee: monisha@manyagroup.com
Ruchi Tomar: ruchi.tomar@manyagroup.com
Rishi Josan: Rishi.josan@manyagroup.com
Vishal Goswamy: vishal.goswamy@manyagroup.com
Tel: +91-11-64501603/ 4, +91-11-65028379
Website: www.manyagroup.com

Lebanon

463 Bliss Street
AlFarra Building - 2nd floor
Ras Beirut
Beirut, Lebanon
Hassan Coudsi: Email: hassan.coudsi@review.com
Tel: +961-1-367-688
Website: www.princetonreviewlebanon.com

Korea

945-25 Young Shin Building
25 Daechi-Dong, Kangnam-gu
Seoul, Korea 135-280
Yong-Hoon Lee: Email: TPRKor01@chollian.net
In-Woo Kim: Email: iwkim@tpr.co.kr
Tel: + 82-2-554-7762
Fax: +82-2-453-9466
Website: www.tpr.co.kr

Kuwait

ScorePlus Learning Center
Salmiyah Block 3, Street 2 Building 14
Post Box: 559, Zip 1306, Safat, Kuwait
Email: infokuwait@score-plus.com
Tel: +965-25-75-48-02 / 8
Fax: +965-25-75-46-02
Website: www.scorepluseducation.com

Malaysia

Sara Beattie MDC Sdn Bhd
Suites 18E & 18F
18th Floor
Gurney Tower, Persiaran Gurney
Penang, Malaysia
Email: tprkl.my@sarabeattie.com
Sara Beattie, Owner: Email: sbeattie@sarabeattie.com
Tel: +604-2104 333
Fax: +604-2104 330
Website: www.princetonreviewKL.com

Mexico

TPR México
Guanajuato No. 242 Piso 1 Interior 1
Col. Roma Norte
México D.F., C.P.06700
registro@princetonreviewmexico.com
Tel: +52-55-5255-4495
+52-55-5255-4440
+52-55-5255-4442
Website: www.princetonreviewmexico.com

Qatar

Score Plus
Office No: 1A, Al Kuwari (Damas)
Building near Merweb Hotel, Al Saad
Post Box: 2408, Doha, Qatar
Email: infoqatar@score-plus.com
Tel: +974 44 36 8580, +974 526 5032
Fax: +974 44 13 1995
Website: www.scorepluseducation.com

Taiwan

The Princeton Review Taiwan
2F, 169 Zhong Xiao East Road, Section 4
Taipei, Taiwan 10690
Lisa Bartle (Owner): lbartle@princetonreview.com.tw
Tel: +886-2-2751-1293
Fax: +886-2-2776-3201
Website: www.PrincetonReview.com.tw

Thailand

The Princeton Review Thailand
Sathorn Nakorn Tower, 28th floor
100 North Sathorn Road
Bangkok, Thailand 10500
Thavida Bijayendrayodhin (Chairman)
Email: thavida@princetonreviewthailand.com
Mitsara Bijayendrayodhin (Managing Director)
Email: mitsara@princetonreviewthailand.com
Tel: +662-636-6770
Fax: +662-636-6776
Website: www.princetonreviewthailand.com

Turkey

Yeni Sülün Sokak No. 28
Levent, Istanbul, 34330, Turkey
Nuri Ozgur: nuri@tprturkey.com
Rona Ozgur: rona@tprturkey.com
Iren Ozgur: iren@tprturkey.com
Tel: +90-212-324-4747
Fax: +90-212-324-3347
Website: www.tprturkey.com

UAE

Emirates Score Plus
Office No: 506, Fifth Floor
Sultan Business Center
Near Lamcy Plaza, 21 Oud Metha Road
Post Box: 44098, Dubai
United Arab Emirates
Hukumat Kalwani: skoreplus@gmail.com
Ritu Kalwani: director@score-plus.com
Email: info@score-plus.com
Tel: +971-4-334-0004
Fax: +971-4-334-0222
Website: www.princetonreviewuae.com

Our International Partners

The Princeton Review also runs courses with a variety of partners in Africa, Asia, Europe, and South America.

Georgia

LEAF American-Georgian Education Center
www.leaf.ge

Mongolia

English Academy of Mongolia
www.nyescm.org

Nigeria

The Know Place
www.knowplace.com.ng

Panama

Academia Interamericana de Panama
http://aip.edu.pa/

Switzerland

Institut Le Rosey
http://www.rosey.ch/

All other inquiries, please email us at
internationalsupport@review.com

IF IT'S ON THE TEST, IT'S IN THIS BOOK.

Techniques That Actually Work.

- Powerful tactics to help you avoid traps and beat the GRE®
- Pacing tips to help maximize your time
- Detailed examples of how to employ each strategy to your advantage

Everything You Need to Know to Help Achieve a High Score.

- Thorough reviews for every section of the exam
- Valuable practice with complex reading comprehension passages and math problems
- Extensive GRE vocabulary list featuring key terms and exercises

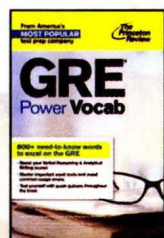
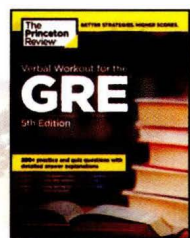
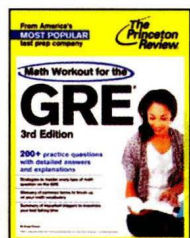
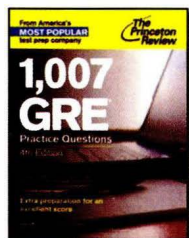
Practice Your Way to Excellence.

- **4 full-length practice tests** (2 in the book & 2 online) with detailed explanations
- Drills for each test section—Verbal, Math, and Analytical Writing
- Step-by-step guides for interpreting your practice test results
- In-depth score reports available for online practice exams

www.ZabanBook.com



Other books you might need:



Take the Next Step with The Princeton Review.

The Princeton Review offers classroom and online courses, as well as private and small group tutoring for all your test prep needs. To learn more, visit PrincetonReview.com or call us at 800-2Review (800-273-8439).



The Princeton Review is not affiliated with Princeton University.
© 2016 Penguin Random House LLC
Front and back cover art © Jonathan Pozniak
Cover design by Andrea Lau