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GRE

GRADUATE RECORD
EXAMINATION
GENERAL TEST

Thomas H. Martinson, J.D.

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ABOUT THE AUTHORS

Thomas H. Martinson has over 10 years experience preparing students for ETS exams. He has developed GRE, GMAT, and LSAT courses for one of this nation's leading test preparation centers. A graduate of Harvard Law School, Mr. Martinson is a member of the New York State and Washington, D.C. bars. He has also taught logic and argumentation at the university level.

Gino Crocetti, Ph.D., is a graduate of Columbia University. he has served as Program Director for Sexton Educational Programs, one of this country's leading test tutorial services. In addition to his writing for ARCO, he has lectured on standardized test preparation at colleges and universities across the nation. He also teaches courses in computer programming and operation in New York City.

In addition to this text, Martinson and Crocetti have coauthored Arco's most popular test preparation works including *GMAT—Graduate Management Admission Test* and *LSAT—Law School Admission Test*.

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PART FOUR: 6 FULL-LENGTH PRACTICE EXAMINATIONS

HOW THIS BOOK CAN HELP YOU GET A BETTER GRE SCORE

The book that you are now holding is different from other preparation books in several ways that can help you get a better GRE score.

First, it begins with an "Orientation" to the GRE. This is absolutely indispensable for those who are not thoroughly familiar with this particular exam, and it should also prove valuable as a "refresher" for those who already know something about the test. The "Orientation" discusses the format of the exam, providing examples of the nine subject areas with explanations. It also describes the procedure for scoring the test as well as addresses the problem of test anxiety and offers suggestions for reducing unnecessary anxiety and tension.

Second, this book contains our exclusive "Test Busters" strategies:

TEST BUSTERS

Test Busters show you the "inside" of the GRE and how to turn the common patterns and multiple-choice format of the test into additional points for a higher score. This book includes over 180 Test Busters plus a comprehensive review of the math you need for the GRE. To get an idea of just how powerful these Test Busters are, look at page 21

Third, this book contains *six* full-length practice exams that simulate the actual GRE as closely as possible. Each item is written to conform to test specifications such as level of difficulty, appropriateness of wrong as well as right answers, and overall format.

Fourth, following each of the six practice tests is an extensive discussion of each and every item that appeared on that test. This discussion not only explains why the correct answer is correct, but also explains why the wrong answers are wrong and gives suggestions for avoiding future errors.

As you can see, this is a book for serious students who really want the crucial advantage they can get from conscientious study with quality preparation materials.

ORIENTATION

The letters G-R-E stand for Graduate Record Examinations. The GRE Program is sponsored by the Graduate Record Examinations Board, an independent committee affiliated with the Association of Graduate Schools and the Council of Graduate Schools in the United States. The GRE Program sponsors a General Test plus a battery of achievement tests in particular fields. The GRE Program is administered by Educational Testing Service (ETS). To obtain registration materials for the GRE, write:

> Graduate Record Examinations Program
> CN 6000
> Princeton, NJ 08541-6000

This book treats the GRE General Test, so from this point on, we will use the term GRE to refer to the GRE General Test only (even though there are GRE Achievement Tests).

The purpose of the GRE is to provide a standard measure that will permit admission decisions to be based, at least in part, on an "objective" comparison of all candidates—no matter what their college or background.

The GRE generates three different scores: a verbal score, a math score, and an analytical score. To learn how your scores will affect your application, you should study the informational bulletins published by the schools to which you are applying. In particular, you should try to determine what weight is given to which scores and what scores you will need to be a competitive applicant.

THE FORMAT OF THE GRE

The GRE consists of seven separately timed, thirty-minute sections. Each section is devoted to a particular type of question: verbal, math, or analytical.

Verbal questions test the extent of your vocabulary and your ability to read. Math questions test your knowledge of arithmetic, basic algebra, and elementary geometry. Analytical questions test your ability to think carefully and logically.

VERBAL QUESTIONS

The GRE uses four different types of verbal questions: antonyms, analogies, sentence completions, and reading comprehensions.

Antonyms

An antonym item consists of a single, capitalized word followed by five answer choices. The basic idea is to pick the answer that has the meaning which is most nearly opposite that of the capitalized word.

> *Directions:*   The following question consists of a word printed in capital letters, followed by five (5) lettered words or phrases. Select the word or phrase which is most nearly opposite to the capitalized word in meaning.

WAIVE:

(A) repeat
(B) conclude
(C) insist upon
(D) improve on
(E) peruse

The best answer is **(C)**. To WAIVE means to forgo or to relinquish. A fairly precise opposite is "to insist upon."

Analogies

An analogy consists of one capitalized word pair followed by five answer choices (also word pairs). The idea is to select from among the choices a word pair that expresses a relationship similar to that expressed by the capitalized word pair.

> *Directions:*   The following question consists of a related pair of words or phrases in capital letters followed by five (5) lettered pairs of words or phrases. Choose the pair which best expresses a relationship similar to that expressed by the original pair.

MINISTER : PULPIT::

(A) doctor : patient
(B) student : teacher
(C) mechanic : engine
(D) programmer : logic
(E) judge : bench

The best choice is **(E)**. The PULPIT is the place where the MINISTER does his or her job, and the *bench* is the place where the *judge* does her or his job.

Sentence Completions

Sentence completion questios consist of a sentence, a part or parts of which have been omitted, followed by five letter choices that are possible subsitutions for the omitted parts. The idea is to select the choice that best completes the sentence.

Directions: The sentence that follows contains one or more blank spaces indicating that something has been omitted. It is followed by five (5) lettered words or sets of words. Read and determine the general sense of the sentence. Then choose the word or set of words which, when inserted in the sentence, best fits the meaning of the sentence.

Her desire for _____ soon became apparent when she adamantly refused to answer questions about her identity or mission.

(A) assistance
(B) anonymity
(C) success
(D) publicity
(E) recognition

The best completion is offered by **(B)**. The logic of the sentence requires that the missing element indicate a desire for something that can be achieved only by refusing to give information. If you don't give any information about your identity or your activities, you hope to insure that you remain *anonymous.*

Reading Comprehensions

Reading comprehension questions, as the name implies, test your ability to understand the substance and logical structure of a written selection. The GRE uses reading passages of various lengths, ranging from 200 to 550 words. A long passage will be the basis for as many as seven or eight questions while a shorter passage might support only three or four questions. The questions ask about the main point of the passage, about what the author specifically states, about what can be logically inferred from the passage, and about the author's attitude or tone. Here is an example of a shorter reading comprehension selection. (To avoid getting mired in discussion of particular questions, the passage is followed only by two questions, rather than the usual three or four.)

Directions: Below is a reading selection followed by a number of questions. Read the selection. Then based on your understanding of the selection, select the best answer to each question.

The international software market represents a significant business opportunity for U.S. microcomputer software companies, but illegal copying of programs is limiting the growth of sales abroad. If not dealt with quickly, international piracy of software could become one of the most serious trade problems faced by the United States.

Software piracy is already the biggest barrier to U.S. software companies entering foreign markets. One reason is that software is extremely easy and inexpensive to duplicate compared to the cost of developing and marketing the software. The actual cost of duplicating a software program, which may have a retail value of $400 or more, can be as little as a dollar or two—the main component being the cost of the diskette. The cost of counterfeiting software is substantially less than the cost of duplicating watches, books, or blue jeans. Given that the difference between the true value of the original and the cost of the counterfeit is so great for software, international piracy

has become big business. Unfortunately, many foreign governments view software piracy as an industry in and of itself and look the other way.

U.S. firms stand to lose millions of dollars in new business, and diminished U.S. sales not only harm individual firms but also adversely affect the entire U.S. economy.

1. In this passage, the author is primarily concerned to

(A) criticize foreign governments for stealing U.S. computer secrets
(B) describe the economic hazards software piracy poses to the United States
(C) demand that software pirates immediately cease their illegal operations
(D) present a comprehensive proposal to counteract the effects of international software piracy
(E) disparage the attempts of the U.S. government to control software piracy

2. The author's attitude toward international software piracy can best be described as

(A) concern
(B) rage
(C) disinterest
(D) pride
(E) condescension

The best answer to the first question is (B). This question, typical of the GRE, asks about the main point of the selection. (A) is incorrect. Though the author implies criticism of foreign governments, their mistake, so far as we are told, is not stealing secrets but tacitly allowing the operation of a software black market. (C) is incorrect since this is not the main point of the selection. You can infer that the author would approve of such a demand, but issuing the demand is not the main point of the selection you just read. (D) can be eliminated for a similar reason. Though the author might elsewhere offer a specific proposal, he does not do so in the selection you just read. (E) also is wrong since no such attempts are ever discussed. Finally, notice how well (B) does describe the main issue. The author is concerned to identify a problem and to discuss its causes.

The best answer to the second question is (A). This question asks about the tone of the passage, and concern very neatly captures that tone. You can eliminate (B) as an overstatement. Though the author condemns the piracy, the tone is not so violent as to qualify as rage. (C) must surely be incorrect since the author does express concern. He is not disinterested. (D) also is incorrect since the author specifically disapproves of the piracy. And finally, (E) is wrong because condescension is not the same thing as disapproval.

Although some minor variations in format are possible, the verbal sections of the GRE now have this structure:

Time—30 minutes

38 Questions

1–7	Sentence Completions
8–16	Analogies
17–27	Reading Comprehensions
28–38	Antonyms

MATH QUESTIONS

The GRE uses three different kinds of math questions: problem solving, quantitative comparisons, and graphs. The math sections test your knowledge of arithmetic, basic algebra, elementary geometry, and common charts and graphs.

Problem Solving

If you have taken any other standarized exams that included math questions (such as the SAT), then you have probably already seen examples of problem solving questions. These are your typical word problem questions. Some test arithmetic.

Betty left home with $60 in her wallet. She spent $\frac{1}{3}$ of that amount at the supermarket, and she spent $\frac{1}{2}$ of what remained at the drugstore. If Betty made no other expenditures, how much money did she have when she returned home?

(A) $10
(B) $15
(C) $20
(D) $40
(E) $50

A quick calculation will show that the correct answer is (C). Betty spent $\frac{1}{3}$ of $60, or $20, at the supermarket, leaving her with $40. Of the $40, she spent $\frac{1}{2}$, or $20, at the drugstore, leaving her with $20 when she returned home.

Other problem-solving items test your knowledge of basic algebra.

If $2x + 3y = 8$ and $y = 2x$, then what is the value of x?

(A) −6
(B) −4
(C) 0
(D) 1
(E) 4

The best answer is **(D)**. To answer the question, you need to solve for x. Since y = 2x, you can substitute 2x for y in the first equation:
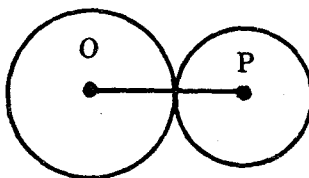
$$2x + 3(2x) = 8$$

Multiply: $\qquad 2x + 6x = 8$

Add: $\qquad\qquad 8x = 8$

Divide: $\qquad\qquad x = 1$

Problem-solving items also test your knowledge of elementary geometry.

In the figure above, circle O and circle P are tangent to each other. If the circle with center O has a diameter of 8 and the circle with center P has a diameter 6, what is the length of segment OP?

(A) 7
(B) 10
(C) 14
(D) 20
(E) 28

The correct answer is **(A)**. The segment OP is made up of the radius of circle O and the radius of circle P. To find the length of OP, you need to know the lengths of the two radii. Since the length of the radius is one-half that of the diameter, the radius of circle O is $\frac{1}{2}(8)$ or 4, and the radius of circle P is $\frac{1}{2}(6)$ or 3. So the length of OP is $3 + 4 = 7$.

Quantitative Comparisons

The second type of math question on the GRE is quantitative comparison. Quantiative comparisons are presented in an unusual format with special instructions. Without trying to understand all of the subtleties of the type, you can get the general idea of quantiative comparisons by reading a short summary of the instructions.

Directions: For each of the following questions two quantities are given, one in Column A and one in Column B. Compare the two quantities and mark your answer sheet with the correct lettered conclusion. These are your options:

A: If the quantity in Column A is the greater;
B: if the quantity in Column B is the greater;
C: if the two quantities are equal;
D: if the relationship cannot be determined from the information given.

Some quantitative comparisons test arithmetic, algebra, and geometry.

COLUMN A	COLUMN B
$6 - \frac{4}{2}$	$5 - \frac{4}{4}$

The correct answer is **(C)**. Column A is just $6 - 2 = 4$, and Column B is $5 - 1 = 4$. Both columns have the value of 4, so they are equal. Other quantitative comparisons test algebra.
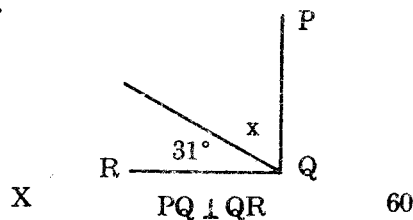
COLUMN A	COLUMN B
$x + 1$	$x - 1$

The correct answer is **(A)**. Whatever the value of x, the expression $x + 1$ is one more than x, and the expression $x - 1$ is one less than x. So no matter what the value of x, Column A is 2 larger than Column B. And some quantitative comparisons test geometry.

X	60
PQ ⊥ QR	

The correct answer is **(B)**. PQ is perpendicular to QR, so PQR is a 90 degree angle. Since one of the two angles making up the right angle is 31 degrees, the other must be 59 degrees. So x = 59, and column B (which is 60) is larger. Here is a final quantitative comparison to illustrate a relation that is indeterminable.

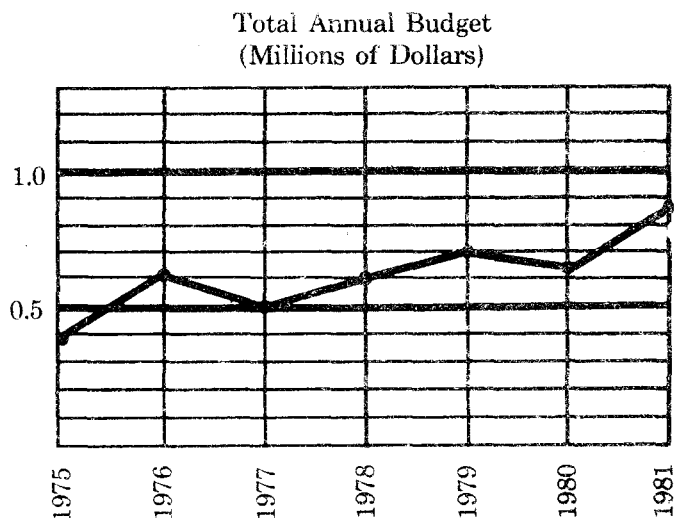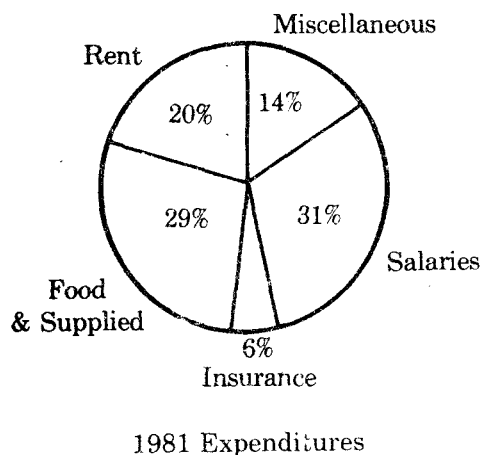| COLUMN A	COLUMN B
the price of a sweater that is marked 25% off	the price of a coat that is marked 20% off

The correct answer is **(D)**. You are asked to compare the *prices* of the two articles. Although you know the percent discount taken on each, you have no way of knowing the actual cost of the item. Since the comparison cannot be made on the basis of what is given, the correct choice is (D).

Graphs

Graph questions are like problem-solving items except that the information to be used in solving the problem is presented in pictorial form.

Rent

Miscellaneous

20%

14%

29%

31%

Salaries

Food & Supplied

6%

Insurance

1981 Expenditures

Total Annual Budget
(Millions of Dollars)

1.0

0.5

1975 1976 1977 1978 1979 1980 1981

HILLTOP DAY SCHOOL
FINANCIAL INFORMATION

1. The Total Annual Budget for Hilltop Day School increased by what percent from 1975 to 1981?

(A) 4%
(B) 8%
(C) 50%
(D) 125%
(E) 200%

How much money did Hilltop Day School spend for rent in 1981?

(A) $180,000
(B) $225,000
(C) $240,000
(D) $800,000
(E) $2,000,000

The two questions based on the graphs are essentially problem-solving questions, but the information needed to answer the questions is presented in graphic form.

The correct answer to the first question is (D). The operating budget increased form $0.4 million in 1975 to $0.9 million in 1981--an increase of $0.5 million. Expressed as a percentage increase: $(0.5 / 0.4) \times 100 = 1.25 \times 100 = 125\%$.

The correct answer to the second question is (A). From the graph on the right, we learn that the total budget for 1981 was $0.9 million. The graph on the left breaks down the budget for 1981. It shows that 20% of the 1981 budget went for rent: 20% of $0.9 million = $180,000.

The usual format of the math sections is:

Time—30 minutes

30 Questions

1–15	Quantitative Comparisons
16–20	Problem-solving items
21–25	Graph questions
26–30	Problem-solving items

ANALYTICAL QUESTIONS

The analytical sections use two different types of questions. One kind can best be described as logical games (or puzzles); the other can be termed verbal logic.

The logical games type involves a situation such as people standing in a row, or choosing items from a menu, or scheduling vacations. The questions then ask you to draw logical conclusions about the situation.

1. Five people, P, Q, R, S, and T, are standing single file in a ticket line. All are facing the ticket window.

Q is the second person behind P.

P is not the second person in the line.

R is somewhere ahead of S.

T could occupy all of the following positions in the line EXCEPT:

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

2. If R is the fourth person in line, which of the following must be true?

(A) T is the second person in line.
(B) Q is the second person in line.
(C) P is the third person in line.
(D) S is the third person in line.
(E) Q is the fifth person in line.

The correct answer to the first question is (C), as shown by the following reasoning. The initial conditions that set up the logical game establish that Q is behind P separated by one person, an arrangement that can be shown as Q ? P. And since P cannot be the second person in line, only two arrangements are possible for Q and P: