

GRE ANALYTICAL ABILITY GRE ANALYTICAL ABILITY

# GRE

郝绍伦 主编

## 分析精解

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电子科

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电子科技大学出版社

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## GRE ANALYTICAL ABILITY

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## 内 容 提 要

本书是在编者总结多年的教学经验和多次实考经验,对1980年ETS改变GRE题型以来的所有真题进行了深入的分析研究,针对GRE分析的特点及其发展趋势的基础上编写而成。本书在讲解基本逻辑知识和基本解题技巧方面,对GRE分析的各种问题分类进行了独到的剖析,提供了大量的分类练习和八套模拟测验题,使读者掌握应试策略和解题技巧,增强应试能力,以取得优异成绩,为获取奖学金创造条件。本书有关逻辑推理的讲解对GMAT考生具有同样的指导意义。

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主 编 郝绍伦

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## 前 言

近年来,考生单凭 TOEFL 成绩被国外大学录取的希望微乎其微,就更不用说拿奖学金了。美国几乎所有的大学在招收研究生时,都要求申请者提供 GRE 成绩。优秀的 GRE 成绩是申请者被录取并取得奖学金的必要前提。

GRE 由语文、数学、分析三部分构成。对于我国考生来说,语文是最困难的部分,好些考生在语文上费了九牛二虎之力,但收效甚微,很难突破 550 分;数学是最简单的部分,只要稍加复习,绝大多数考生轻而易举就能取得 750 分以上的高分;分析是可塑性最大的部分,是 GRE 能否突破 2100 分的关键,考生如果有得法的指导,掌握了解题技巧,进行大量的练习,就会取得 700 分以上的好成绩,否则就会考得一败涂地。《GRE 分析精解》正是针对 GRE 分析可塑性强这一特点而编写的。

编者总结了多年的教学经验和多次实考经验,对 1980 年 ETS 改变 GRE 题型以来所有的真题进行了深入的分析研究,针对 GRE 分析的特点及其发展趋势,编写了此书。此书对 GRE 分析的各种问题分类作了深入浅出的讲解,提供了大量的练习,以使考生能在尽量短的时间内掌握应试策略和解题技巧,增强应试能力。

第一章“概述”对 GRE 分析的基本逻辑知识和基本解题技巧作了介绍,并有一套样题以及该套样题的精解,以使考生对 GRE 分析有一初步的认识。第二章“逻辑推理”对找出假设、加强推理、削弱推理、提供结论、逻辑推导和推理方法六类问题分别进行了剖析;考生在认真阅读每类题的解题技巧,做完每类题的练习后,就会发现那些看似艰深的逻辑推理题其实并不难。第三章“分析推理”紧紧围绕如何加快解题速度,提高解题正确率这个核心,对空间序列、时间序列、分组组合和因果关系四类问题进行了精辟的讲解。第四章“模拟测验”的八套题共十六小节,具有极强的代表性和针对性。

本书注重精讲多练,力求使考生在 GRE 分析方面有突破性的进展。另外,由于 GMAT 的逻辑推理题和 GRE 的逻辑推理题雷同,因此该书对 GMAT 考生有同样的指导意义。

编者 谨识

# 目 录

第一章 概述.....	1
第一节 试题构成和试题范例.....	1
第二节 基本知识和基本技巧.....	9
第三节 时间控制和成绩计算 .....	19
第二章 逻辑推理 .....	21
第一节 找出假设类 .....	21
第二节 加强推理类 .....	30
第三节 削弱推理类 .....	36
第四节 提供结论类 .....	46
第五节 逻辑推导类 .....	51
第六节 推理方法类 .....	60
附：练习答案 .....	65
第三章 分析推理 .....	66
第一节 空间序列类 .....	66
第二节 时间序列类 .....	86
第三节 分组组合类.....	101
第四节 因果关系类.....	116
附：练习答案.....	129
第四章 模拟测验.....	131
模拟测验一.....	131
模拟测验二.....	140
模拟测验三.....	149
模拟测验四.....	158
模拟测验五.....	167
模拟测验六.....	176
模拟测验七.....	186
模拟测验八.....	195
附：模拟测验答案.....	204

# 第一章 概 述

GRE (Graduate Record Examination) 是由美国教育考试服务处 (Educational Testing Service) 提供的一种标准考试——研究生入学资格考试, 现已成为美国、加拿大等国大学衡量应试者水平, 确定是否录取, 是否给予奖学金的一种权威考试。因其对象主要是准备进入美国各大学研究生院学习深造的考生, 其中绝大部分为美国各大学本科毕业生, 所以其难度比 TOEFL 要大得多。那种单靠 TOEFL 就被录取的时代已经过去。现在, 几乎美国所有的大学在招收研究生时, 都要求提供 GRE 成绩。总分在 1800 以下, 被录取的希望简直是微乎其微, 而要想拿到奖学金, 低于 2000 分往往是不行的。

目前, GRE 包括语文、数学和分析三部分, 每个部分两个小节, 共六小节。每个小局限时半个小时, 六个小节三小时, 但做题前需要填表, 中途还有三分之一的休息, 所以, 整个一场 GRE 考试大约需要三个半小时。数学部分是我国考生的强项, 一般都在 750 分以上, 得满分 800 分的也比比皆是。语文部分是我国考生最难得分的, 一般在 450 至 550 之间, 能上 600 分的确是凤毛麟角。分析部分可塑性很大, 没有充分的练习, 缺乏适当的复习方法, 成绩很有可能在 500 分以下; 但若掌握解题技巧, 进行大量的练习, 成绩很有可能提高到 700 分以上。因此, 分析部分是否能取得满意的成绩, 便成为 GRE 能否取得 2100 分以上高分, 能否被录取并取得奖学金的关键之所在了。

## 第一节 试题构成和试题范例

每套 GRE 试题都有 2 小节 (Section) 分析能力 (Analytical Ability) 的测试, 每小节 25 个小题, 涉及分析推理 (Analytical Reasoning) 和逻辑推理 (Logical Reasoning) 两类问题。1993 年 10 月份以前, 每节中分析推理占 19 小题, 逻辑推理占 6 小题。从 1993 年 10 月起, GRE 从 7 小节变为 6 小节, 去掉了不计分只作 ETS 题库之用的“神秘小节”。相应地, 分析部分也有一定的变动: 2 小节分析能力测试中, 有 1 小节的逻辑推理从原来的 6 小题增加到 9 小题。逻辑推理题的增加对我国考生不利, 因为这类题比分析推理题的语言难度大。过去有些考生只重分析推理, 不重逻辑推理的做法是不可取的。

题中虽然没明确标注哪些是分析推理题, 哪些是逻辑推理题, 但要区分这两类题还是相当容易的。分析推理题往往是以题组的形式出现, 每个题组在说明共同的条件之后有 3 至 8 个小题, 这些小题都是独立地针对共同的条件提出的问题, 如以下试题范例中的 Questions 1—6, Questions 10—15, Questions 16—19 和 Questions 20—22。逻辑推理题在从一个或几个已知的前提条件推出结论的论证后, 针对其前提、结论、推理过程等提出的问题, 如以下试题范例中的第 7、8、9、23、24 和 25 题。

### 【试题范例】

## SECTION 1

Time—30 minutes

25 Questions

**Directions:** Each question or group of questions is based on a passage, graph, table, or set of conditions. In answering some of the questions, it may be useful to draw a rough diagram. For each question, select the best answer choice given.

### Questions 1—6

A five-member commission is being set up to settle labor disputes. It must be composed of two representatives of management, two representatives of labor, and one independent specialist in labor relations.

The management representatives must be chosen from among M, N, and O.

The labor representatives must be chosen from among P, R, and S.

Either J or K must be chosen as the independent specialist.

P cannot serve together with S.

O cannot serve together with P.

N cannot serve unless K serves at the same time.

1. Which of the following is a list of people who can serve together on the commission?

- (A) J, M, N, R, S
- (B) J, N, O, R, S
- (C) K, M, N, P, R
- (D) K, M, N, P, S
- (E) K, N, O, P, R

2. Which of the following persons must be chosen to serve on the commission?

- (A) J
- (B) M
- (C) N
- (D) P
- (E) R

3. If P and R are chosen to be the labor representatives, Which of the following statements must be true?

I. K is chosen to serve on the commission.

II. Both M and N are chosen to represent management.

III. J is chosen to serve on the commission.

- (A) I only
- (B) II only
- (C) III only
- (D) I and II only
- (E) I and III only

4. Which of the following is a list of four persons who can be chosen to serve together on the commission if J has been chosen?

- (A) M, N, P, R
- (B) M, N, R, S
- (C) M, O, P, R
- (D) M, O, R, S
- (E) N, O, R, S

5. If N, R, and S have been chosen as three members of the commission, which of the following statements about the remaining two members of the commission is accurate?

- (A) M and O are the only pair who can be chosen to complete the group.
- (B) K and O are the only pair who can be chosen to complete the group.
- (C) K and M are the only pair who can be chosen to complete the group.
- (D) Both the pair M and O and the pair K and O are possible choices for completing the group.
- (E) Both the pair K and M and the pair K and O are possible choices for completing the group.

6. If J must be chosen to serve on the commission, which of the following persons CANNOT be chosen to serve on the commission?

- (A) M
- (B) O
- (C) P
- (D) R
- (E) S

7. If the laws of biology are ultimately based on the laws of physics and chemistry, then the laws of

biology hold for living organisms wherever they may be found in the galaxy and the universe. The conclusion above logically depends on which of the following assumptions?

- (A) The science of biology is not as precise as the sciences of physics and chemistry.
- (B) The sciences of biology, physics and chemistry are ultimately a single science.
- (C) The laws of physics and chemistry explain a narrower range of phenomena than do the laws of biology.
- (D) The laws of physics and chemistry hold throughout the universe.
- (E) A scientific law is necessarily universal.

8. Hittite tablets corroborate many of the descriptions of ancient life that appear in the *Iliad* and even list Greek cities that reportedly sent ships to Troy. What this means is that the *Iliad* is not creative literature, as is commonly believed, and hence not a matter of literary discussion. It is history and should be examined by historical science.

The author of this passage above makes which of the following assumptions?

- I. A work cannot be classified as creative literature if that work records historical fact.
- II. The Hittite tablets record actual events rather than legends.
- III. Cities and events mentioned in the *Iliad* but not in the tablets are fictitious.

- (A) I only
- (B) II only
- (C) III only
- (D) I and II only
- (E) I and III only

9. It has been argued that the consumer has benefited from agricultural technology in the United States. Consumers are spending, on the average, a decreasing proportion of their income on food. But the demand for food, especially in prosperous countries, is virtually insensitive to income, so that as real incomes rise, the amount spent on food becomes a smaller proportion of expenditure. Therefore, in order to judge whether consumers have really benefited from agricultural technology, it is necessary to know \_\_\_\_\_

Which of the following is the most logical completion of the passage above?

- (A) incomes will continue to rise.

- (B) the proportion of income spent on food has declined more sharply than the rises in real income warrant.

- (C) technological costs constitute a substantial proportion of the cost of food production.

- (D) the quantity of food produced by American farmers has increased.

- (E) consumers will increase the proportion of their income spent on food as food prices rise.

#### Questions 10—15

Four couples, the Bascos, the Jeffersons, the Pardas, and the Roberts, are learning a new dance. The dancers must perform this dance in pairs. At the beginning of the dance, each of the married couples is such a pair, but there are three calls for partner changes—calls X, Y, and Z—with the following results:

When call X is made, Mr. Basco and Mr. Parda exchange partners.

When call Y is made, Mrs. Roberts and Mrs. Jefferson exchange partners.

When call Z is made, Mr. Jefferson and Mr. Parda exchange partners.

When more than one call is made, each change of partners is based on the arrangement of partners produced by the preceding call.

10. If, since the beginning of the dance, there has been one partner change, made in response to call X, which of the following must be a pair of partners?

- (A) Mr. Basco and Mrs. Parda
- (B) Mr. Basco and Mrs. Roberts
- (C) Mr. Jefferson and Mrs. Parda
- (D) Mr. Jefferson and Mrs. Basco
- (E) Mr. Roberts and Mrs. Jefferson

11. If, after the first two calls of the dance, each dancer is again partnered with his or her own spouse, the calls made could have been

- (A) X followed by Y
- (B) Z followed by X
- (C) X followed by X, or Y followed by Y, or Z followed by Z
- (D) X followed by X, or Y followed by Y, but not Z followed by Z
- (E) X followed by X, or Z followed by Z, but not Y followed by Y



12. If, since the beginning of the dance, two partner changes have been made, the first in response to call X and the second in response to call Y, which of the following must be true?
- (A) Mrs. Basco is partnered with Mr. Roberts.  
 (B) Mrs. Jefferson is partnered with Mr. Jefferson.  
 (C) Mr. Pada is partnered with Mrs. Roberts.  
 (D) Only two of the women are partnered with their husbands.  
 (E) No man is partnered with his wife.
13. If Mr. Basco is partnered with Mrs. Basco after the first two calls of the dance, and if the second call was Y, which of the following is true of the first call?
- (A) It must have been X.  
 (B) It must have been Y.  
 (C) It must have been Z.  
 (D) It could have been any of the three calls except X.  
 (E) It could have been any of the three calls except Z.
14. If Mr. Jefferson is partnered with Mrs. Basco after the first two calls of the dance, and if the second call was Z, which of the following is true of the first call?
- (A) It must have been X.  
 (B) It must have been Y.  
 (C) It must have been Z.  
 (D) It could have been any of the three calls except Y.  
 (E) It could have been any of the three calls except Z.
15. If the dance begins with the three calls Z, X, and Y, in the order given, it must be true that after the third call
- (A) Mr. Pada partners Mrs. Jefferson  
 (B) Mr. Pada partners Mrs. Roberts  
 (C) Mr. Basco partners Mrs. Basco  
 (D) Mr. Basco partners Mrs. Jefferson  
 (E) Mr. Basco partners Mrs. Roberts
16. Which of the following is a possible sequence of partners for W?
- (A) X, Z, Y, X, Y, Z  
 (B) Y, X, Z, X, Z, Y  
 (C) Y, Z, X, Y, Z, X  
 (D) Z, X, Y, Z, Y, X  
 (E) Z, Y, X, Y, X, Z
17. In order that all possible combinations of partners play one game each, how many games must be played?
- (A) 3  
 (B) 4  
 (C) 5  
 (D) 6  
 (E) 8
18. If each player has won at least one game, what is the minimum number of games that must have been played?
- (A) 1  
 (B) 2  
 (C) 3  
 (D) 4  
 (E) 5
19. At the first of the third game in the first series, which of the following must be true?
- (A) There is a player who has won two games and lost one game.  
 (B) There is a player who has won all three games.  
 (C) There is a player who has lost two or more games.  
 (D) There are three players who have lost exactly one game each.  
 (E) There are three players who have won exactly two games each.

#### Questions 16—19

Four players—W, X, Y, and Z—play a series of games. In each game the four form two pairs that play against one another; one pair wins and one pair loses.

When a pair wins or loses a game, both players are

#### Questions 20—22

A company owns exactly five delivery vans designated K, L, M, N, and O. At the end of the day, each of the vans must be parked in one of three parking lanes numbered 1, 2, and 3, which are each wide e-

nough for just one van and long enough for all five vans.

In lane 1, only vans K and L can be parked, but neither of these vans has to be parked in that lane.

N is always parked earlier than O is parked.

When parking a van, each driver enters one of the parking lanes from the rear and parks in the front-most available position.

No driver parks behind any more of the other vans than he has to at the same time.

20. Which of the following could be the parking pattern after all vans have been parked?

- (A) K in lane 1; first L, then M, then O in lane 2; N in lane 3
- (B) K in front of L in lane 1; no van in lane 2; first M, then N, then O in lane 3
- (C) K in front of L in lane 1; M in lane 2; O in front of N in lane 3
- (D) K in front of N in lane 1; L in lane 2; M in front of O in lane 3
- (E) L in front of K in lane 1; N in front of O in lane 2; M in lane 3

21. Each of the following could be true after all of the vans have been parked EXCEPT:

- (A) K is the only van parked in lane 2.
- (B) L is the only van parked in lane 1.
- (C) L and O are both parked in lane 3.
- (D) M and N are both parked in lane 2.
- (E) M and O are parked in different lanes.

22. If all five of the vans are parked, but none of them in lane 1, which of the following must be true?

- (A) K was parked earlier than L was.
- (B) N was parked earlier than M was.
- (C) O was the last van to be parked.
- (D) K and L were the first two vans to be parked.
- (E) M and O were the last two vans to be parked.

23. Recent Data from the Center for Disease Control indicate a decline in the reported instances of disease Q. This decline is surprising, because it follows a period in which the formerly obscure Q received a great deal of publicity in the news media.

Which of the following, if assumed by the author to be true, would provide the most logical explanation of the author's surprise at the re-

ported decline?

- (A) Increased public awareness of a disease usually stimulates efforts to eradicate the disease.
- (B) Increased public awareness of a disease usually leads to an increase in reported instances of the disease.
- (C) An obscure disease may sometimes receive a great deal of publicity even though doctors have begun to suspect that the disease no longer exists.
- (D) The center for Disease Control typically concerns itself only with diseases that are of public importance.
- (E) It is unusual for the reported instances of a disease to decline sharply after a long period of stability.

24. Husbands of wage-earning women spend, on the average, the same amount of time on housework as do husbands of women who do not earn wages; eleven hours per week. Husbands of wage-earning women perform household tasks on more occasions than do husbands of women who do not earn wages.

If the statements above are true, which of the following conclusions can be properly drawn?

- (A) The average time spent per occasion of performing individual household tasks is less for husbands of wage-earning women than it is for husbands of women who do not earn wages.
- (B) Husbands of wage-earning women report a higher rate of participation in household tasks than is actually the case, because they overestimate the number of times they do housework.
- (C) On the average, husbands of wage-earning women allocate a little more time to do housework per month than do husbands of women who do not earn wages.
- (D) There is no difference in the partners of time spent on household tasks by husbands of wage-earning women and by husbands of women who do not earn wages.
- (E) Husbands of wage-earning women participate more often in tasks that are completed in a short time than they do in tasks that take a long time to complete.

25. Most canvases used by artists in the preindustrial United States were imported from Europe, but the wooden stretches on which the canvas was mounted were always made from American wood. Retailers of art supplies, both in the United States and Europe, stamped blank canvases with their names and addresses. Completed paintings bought from Europe to America were frequently taken off their European stretchers for shipping and remounted on American stretchers after their arrival.

A cultural historian could legitimately use the information in the passage above in establishing that a painting of that era done on

(A) canvas sold by a European retailer and

mounted on a stretcher of American wood is probably an American painting.

(B) canvas sold by an American retailer and mounted on a stretcher of American wood is probably an American painting.

(C) canvas sold by an American retailer and not mounted on a stretcher is probably not an American painting.

(D) unmarked canvas mounted on a stretcher of American wood is probably an American painting.

(E) unmarked canvas that is not mounted on a stretcher is probably not an American painting.

### 【范例精解】

#### 问题 1—6

已知条件:

(1) 处理纠纷的五人委员会应由资方 M、N、O 中的两人和劳方 P、R、S 中的两人以及作为中间人的专家 J、K 中的一人组成。

(2) P 和 S 不能同时在该委员会工作。

(3) O 和 P 不能同时在该委员会工作。

(4) 只有当 K 在该委员会工作时, N 才能在该委员会工作。

1. (C) 答案(A)和(B)与条件(4)不符, (D)与条件(2)不符, (E)与条件(3)不符。

2. (E) 如果 R 不被选入委员会, 则必然选 P 和 S, 而这与条件(2)不符。所以必须选 R, 答案(E)正确。

3. (D) 假如劳方 P、R 被选, 资方就不能选 O, 因为条件(2)规定 P 和 S 不能同在该委员会, 所以只得选 M、N。由条件(4)可知, N 在该委员会时, K 必然也在该委员会。所以 I 和 J 成立。

4. (D) 如果选了 J, 则不能选 K。由条件(4)可知, 没有选 K 就不能选 N, 资方只能选 M 和 O。由条件(3)可知, 选了 O 时就不能选 P, 劳方只能选 R 和 S。

5. (E) 如果选了 N, 由条件(4)得知, 就必须选 K, 所以答案(A)和(D)不对。当 N、R、S、K 选定, 只差一名资方代表时, O、M 中的任意一位入选都不违背已知条件。所以已选了 N、R、S 时, 既可选 K、O, 也可选 K、M, 答案(E)正确。

6. (C) 如果 J 入选该委员会, 由条件(1)可知, K 就不能入选。K 没有入选, 由条件(4)可知, N

就不能入选, 那资方就只能选 M 和 O。当 O 入选时, 由条件(3)可知, P 就不能入选, 故答案(C)正确。

7. (D) 该题大意: 如果生物学的定律从根本上说是基于物理学和化学定律的, 那生物学的定律对宇宙中的一切生物都适用。

该题要求找出能从前提可靠有效地推出结论的假设。单从“生物学的定律从根本上说是基于物理学和化学定律的”这个前提是不可能得出“生物学的定律对宇宙中的一切生物都适用”这个结论的。作者必然要靠些没有明确陈述的前提, 即假设, 才能得出以上结论。如果在原有前提“生物学的定律从根本上说是基于物理学和化学定律的”的基础上加上假设“物理学和化学的定律在整个宇宙中都适用”, 那就可以可靠有效地得出结论“生物学的定律对宇宙中的一切生物都适用”。所以答案(D)正确。

8. (D) 该题大意: 赫梯碑证实了《伊利亚特》中关于古代人生活的诸多描述, 甚至还列出了派船到特洛伊去的希腊城市名。这就意味着, 《伊利亚特》不是创造性的文学, 它是历史, 应由历史学来研究。

该题要求找出作者在论证过程中所作的假设。作者从赫梯碑与《伊利亚特》有许多吻合, 得出《伊利亚特》是历史的结论时, 使用了假设“赫梯碑记录的是真实事件而不是传奇”, 赫梯碑是历史的记载, 所以 I 成立。作者从“《伊利亚特》不是创造性的文学”推出“它是历史”, 言下之意是说, “记载历史事实

的作品不能归入创造性的文学的范畴”，所以 I 成立。作者在论证过程中没有说赫梯碑记录下所有的历史事实，所以碑上没有记载而《伊利亚特》中有描述的不一定就不是历史事实，因此 II 不成立。

9. (B) 该题大意：有人认为，农业技术给消费者带来好处。消费者在食品上的开支在收入中所占的比例越来越小。但实际上，特别是在富裕的国家，人们对食物的需求并不怎么随收入的波动而波动，所以在实际收入增加时，食品开支在总开支中的比例变小。因此，要正确判断农业技术是否给消费者带来好处，很有必要了解哪一点？

该题要求你根据已知的陈述，作出合乎逻辑的推导。该段文字说，人们对食物的需求量相对稳定，也就是说物价稳定的情况下，在食品上的开支金额也应该是相对稳定的。例如：1990 年每天收入 \$100 时，每天食用 2 公斤食品，花去 \$50，占收入的 50%；到 1995 年，每天收入上升到 \$200 时，每天仍食用 2 公斤食品，在价格不变的情况下，仍花去 \$50，占收入的 25%。从 1990 年到 1995 年食品开支在收入中所占的比例降低了 25%。如果降低的幅度大于了 25%，而收入、每天食用量又仍分别是 \$200 和 2 公斤的话，那就可以判断是食品价格降低所致，而食品价格的降低可以作为农业技术给消费者带来了好处的证明；所以，要判断农业技术是否给消费者带来好处，很有必要了解“花在食品上的收入比例的下降幅度比收入增长造成的该比例应该的下降幅度大。”

#### 问题 10—15

已知条件：

- (1) B (Bascos)、J (Jeffersons)、P (Pardas)、R (Roberts) 四对夫妇跳舞，首先，每对夫妇为一组开始跳，然后按 X、Y、Z 三个信号的规定交换舞伴。

- (2) X 信号发出时，B 先生和 P 先生交换舞伴。  
(3) Y 信号发出时，R 夫人和 J 夫人交换舞伴。  
(4) Z 信号发出时，J 先生和 P 先生交换舞伴。

10. (A) 开始时的四对是 B 先生和 B 夫人、J 先生和 J 夫人、P 先生和 P 夫人、R 先生和 R 夫人。X 信号发出后，B 先生和 P 先生交换舞伴，组成新的四对：B 先生和 P 夫人、J 先生和 J 夫人、P 先生和 B 夫人、R 先生和 R 夫人。只有答案 (A) 正确。  
11. (C) X 信号发出后形成的四对 B 先生和 P 夫人、J 先生和 J 夫人、P 先生和 B 夫人、R 先生和 R 夫人，在 X 信号再次发出时，B 先生和 P 先生又交换舞伴，使 B 先生又和 B 夫人为一

对，P 先生又和 P 夫人为一对。X 信号发出后再发出 X 信号，使四对舞伴恢复到开始跳舞时的配对。Y 信号后再发出 Y 信号、Z 信号再发出 Z 信号，都有同样的结果。

12. (E) X 信号发出后形成的四对是：B 先生和 P 夫人、J 先生和 J 夫人、P 先生和 B 夫人、R 先生和 R 夫人。然后，在 Y 信号发出时，J 夫人和 R 夫人交换舞伴，形成新的四对：B 先生和 P 夫人、J 先生和 R 夫人、P 先生和 B 夫人、R 先生和 J 夫人，没有一个先生跟他的夫人为一对舞伴。

13. (D) 如上题所示，X 信号发出后再发出 Y 信号，B 先生和 B 夫人不可能是一对舞伴。如果第一和第二个信号都是 Y，B 先生和 B 夫人是一对舞伴。如果另一个信号是 Z，第二个信号是 Y，组成的四对中仍有一对是 B 先生和 B 夫人。所以答案 (D) 正确。

14. (A) X 信号发出后形成的四对 B 先生和 P 夫人、J 先生和 J 夫人、P 先生和 B 夫人、R 先生和 R 夫人，在 Z 信号发出时，J 先生和 P 先生交换舞伴，形成新的四对：B 先生和 P 夫人、J 先生和 B 夫人、P 先生和 J 夫人、R 先生和 R 夫人。如果第一个信号是 Y 或 Z，第二个信号是 Z，都不可能有 J 先生和 B 夫人为一对舞伴。

15. (E) Z 信号发出后形成的四对是 B 先生和 B 夫人、J 先生和 P 夫人、P 先生和 J 夫人、R 先生和 R 夫人。之后，X 信号发出，再形成的四对是 B 先生和 J 夫人、J 先生和 P 夫人、P 先生和 B 夫人、R 先生和 R 夫人。再后，Y 信号发出，形成的四对是 B 先生和 R 夫人、J 先生和 P 夫人、P 先生和 B 夫人、R 先生和 J 夫人。

#### 问题 16—19

已知条件：

- (1) 四个运动员 W、X、Y、Z，两人一组，组成两组，在这两组间举行比赛。一组赢，另一组输。

- (2) 一组赢或输时，该组的两个运动员都要记上赢或输。

- (3) 每局终时，进行新的分组组合。所有的分组组合都配搭完后，开始新的比赛时，按原来的组合的顺序继续进行。

16. (C) W 分别和其他三个运动员配搭组合完后，开始新的比赛，须按原来组合的顺序配对，这是条件 (3) 的要求。

17. (A) W、X、Y、Z 分成两组的组合只有 3 种，即 W、X ↔ Y、Z，W、Y ↔ X、Z，和 W、Z ↔ X、Y。

18. (C) 一局有两人赢，两局至多有多人赢过，三局才能让所有的四人每人都至少赢过一局。

19. (C)  $W, X \leftrightarrow Y, Z, W, Y \leftrightarrow X, Z$ , 和  $W, Z \leftrightarrow X, Y$  3 种组合中, 肯定有一人输两、三局。

### 问题 20—22

已知条件:

- (1) 五辆车 K、L、M、N、O 可停放于三个车道 1、2、3。每个车道只有一辆车宽, 但长可容纳五辆车。
- (2) 只有 K、L 才能停放在 1 车道, 但 K、L 可不必停放在该车道。
- (3) N 总比 O 停放得早。
- (4) 每辆车从后面开进去, 尽量往前靠。
- (5) 每辆车都尽量停放在尽少的车后面。

20. (E) 答案(A) 与条件(5)不符, (B) 也与条件(5)不符, (C) 与条件(3)不符, (D) 条件(2)不符。

21. (A) 如果 K 在 2 车道, 由条件(2)可知, 最多只有 L 在 1 车道, 3 车道至少要停放 3 辆车, 这违背条件(5)的规定。

22. (D) K 和 L 可不必停放在 1 车道, 但如果 2 车道和 3 车道已分别停有一辆车的话, 由条件(5)可知, K 和 L 中的一辆或两辆都会停放在 1 车道; 如果 2 车道或 3 车道只停放了一辆车的话, 由条件(5)可知, K 和 L 将一辆停放在 1 车道, 另一辆停放在空着的 3 车道或 2 车道。所以, 当 1 车道空着, 五辆车都停放在 2、3 车道时, K 和 L 必然是最早停放的。

23. (B) 该题大意: 最近的统计资料表明, 对疾病 Q 病例的报道减少。这发生在新闻媒介对该病

进行大量的宣传之后, 令人惊奇。

该题要求解释作者的惊奇。因为作者认为公众对该病越了解, 报道的该病病例就会越多。所以, 当报道的病例减少时, 作者会觉得惊奇。(B) 正确。

24. (A) 该题大意: 平均来看, 妻子有工作的男人和妻子没有工作的男人花在家务上的时间相等, 但前者比后者做家务的次数多。

该题要求得出合乎逻辑的结论。因为在总时间相等的情况下, 做家务次数多的人往往每次时间短, 而次数少的人往往每次做家务的时间长。所以(A) 正确。

25. (B) 该题大意: 工业化前, 美国的艺术家使用的画布大多数是从欧洲进口的, 但支撑画布的木架总是用美国木料做成的。美国和欧洲的艺术器具零售商经常在空白画布上印上其名称和地址。从欧洲买到美国的画, 交货时通常要把它从欧洲产的木架上取下, 到达时再把它装到美国产的木架上。该题要求根据上段文字作出合乎逻辑的推导。答案(A) 所说的那幅画有可能是欧洲画才对。答案(C) 应该是有可能美国画才对。上段文字对没印零售商名称的画布没作说明, 所以, 无法作出是否有可能美国画的推导, 答案(D)、(E) 不对。答案(B) 所说的那幅画不但画布是美国零售商所售, 而且装画的木架也是美国产的, 所以很可能是幅美国画。

## 第二节 基本知识和基本技巧

你可能会以为,ETS 的各种命题——TOEFL, GRE, GMAT, SAT 等——都是由美国大学或美国各界知名的教授或专家所为, GRE 的题库之大或试题之科学, 可以考出你语文、数学和分析的真实水平。然而, 真实情况并非如此。ETS 各种考试的命题人极其有限, 其中有些不是什么专家教授, 而是一般的公司职员或大学生。ETS 的题库也是非常有限的, 今年考过的某道题, 说不定过一段时间还会再考, GMAT 中的有些题在 GRE 或 SAT 中很有可能出现。\* GRE 分析部分有一定的规律可循, 因此, 通过了解基本的逻辑知识, 掌握基本的解题技巧, 勤做大量的练习, 在短时间内达到一定的水准, 获取 700 分以上的高分也是不难的。

### 一、基本的逻辑知识

GRE 分析部分不要求考生具备逻辑课程教授的艰深知识, 也不需要掌握 Syllogism (三段论)、Law of Identity (同一律) 之类的逻辑术语, 但一般的分析推理、逻辑常识却是每一个考生必须具备的。

#### (一) 关于充要条件

##### 1. 充分条件

A occurs if B occurs.
B occurs.
Therefore, A occurs.

这是个充分条件的推理, 即: 如果 B 则 A, 一旦 B 发生, A 必然发生! 例如:

(1) Robert is scheduled for Monday if Alice is scheduled for Saturday.

(2) Alice is scheduled for Saturday.

我们可以根据以上两个前提得出结论: Robert is scheduled for Monday. 如果前提(2)是 Robert is scheduled for Monday, 我们不能推出 Alice is scheduled for Saturday 的结论。如果前提(2)是 Alice is not scheduled for Saturday, 我们不能推出 Robert is not scheduled for Monday 的结论。如果前提(2)是 Robert is not scheduled for Monday, 我们可以可靠地得出 Alice is not scheduled for Saturday 的结论。

充分条件的推理如下所示:

如果 B 则 A: 一旦 B 发生, A 一定发生。
如果 B 则 A: 一旦 A 发生, B 不一定发生。
如果 B 则 A: 一旦 B 不发生, A 不一定不发生。
如果 B 则 A: 一旦 A 不发生, B 一定不发生。

\* Marts, George, John Katzman, and Adan Robinson. *Cracking the System: the GMAT*. Villard Books, New York. 1989 p. 9.

## 2. 必要条件

A occurs only if B occurs.
A occurs.
Therefore, B occurs.

这是个必要条件的推理,即:只有 B 才 A,一旦 A 发生,B 必然发生。例如

(1) Robert is scheduled for Monday only if Alice is scheduled for Saturday.

(2) Robert is scheduled for Monday.

我们可以根据以上两个前提得出结论: Alice is scheduled for Saturday. 如果前提(2)是 Alice is scheduled for Saturday, 我们不能推出 Robert is scheduled for Monday 的结论。如果前提(2)是 Robert is not scheduled for Monday, 我们不能推出 Alice is not scheduled for Saturday 的结论。如果前提(2)是 Alice is not scheduled for Saturday, 我们可以可靠地得出 Robert is not scheduled for Monday 的结论。

必要条件的推理如下所示:

只有 B 才 A: 一旦 A 发生, B 一定发生。
只有 B 才 A: 一旦 B 发生, A 不一定发生。
只有 B 才 A: 一旦 A 不发生, B 不一定不发生。
只有 B 才 A: 一旦 B 不发生, A 一定不发生。

注意:

A does not occur unless B occurs 相当于 A only if B, 而和 A if B 是两回事。例如:

Robert is not scheduled for Monday unless Alice is scheduled for Saturday. 意为:

Robert is scheduled for Monday only if Alice is scheduled for Saturday. 所以,

A does not occur unless B occurs. = A occurs only if B occurs.
----------------------------------------------------------------

## 3. 充要条件

A occurs if and only if B occurs.
B occurs.
Therefore, A occurs.

这是个充要条件的推理,即:当且仅当 B 才 A,一旦 B 发生,A 一定发生。例如:

(1) Robert is scheduled for Monday if and only if Alice is scheduled for Saturday.

(2) Alice is scheduled for Saturday.

我们可以根据以上两个前提得出结论: Robert is scheduled for Monday. 如果前提(2)是 Robert is scheduled for Monday, 我们可以推出 Alice is scheduled for Saturday 的结论。如果前提(2)是 Alice is not scheduled for Saturday, 我们可以推出 Robert is not scheduled for Monday 的结论。如果前提(2)是 Robert is not scheduled for Monday, 我们可以推出 Alice is not scheduled for Saturday 的结论。

充要条件的推理如下所示:

当且仅当 B 才 A:一旦 B 发生,A 一定发生。

当且仅当 B 才 A:一旦 A 发生,B 一定发生。

当且仅当 B 才 A:一旦 B 不发生,A 一定不发生。

当且仅当 B 才 A:一旦 A 不发生,B 一定不发生。

## (二)关于演绎推理和归纳推理

逻辑推理(Logical Reasoning)在 GRE 分析部分中所占的比重有增大的趋势,所以考生只有充分认识这类题的重要性,充分了解这类题的解答方法,做大量的练习,克服语言理解方面的困难,才能取得高分。这类题尽管不出现逻辑方面的专业词汇,但一般的推理知识却是必然要涉及的。

推理一般由前提(Premises)、假设(Assumptions)、结论(Conclusion)以及推理方法(Reasoning Method)四部分构成,如:

In the past 10 years, advertising revenues for the magazine *True Investor* have fallen by 30%. The magazine has failed to attract new subscribers, and newsstand sales are down to an all-time low. Thus, sweeping editorial changes will be necessary if the magazine is to survive.

此例中的前提是 Advertising revenue is down; there are no new subscribers; 和 very few people are buying the newspaper at the newsstand. 假设是没有明确陈述出来的,但要得出结论,往往都要借助于这样那样的假设,此例中的假设是 it was the old editorial policy that caused the problems the magazine is now encountering, 只有在具有这个假设的基础上,才能有效地得出这样的结论: Thus, sweeping editorial changes will be necessary if the magazine is to survive. 此例使用的推理方法是由前提和假设得出结论的归纳推理。

推理方法从不同的角度有不同的划分,这里主要谈一下 GRE 分析部分可能考到的演绎推理和最常考到的归纳推理。

### 1. 演绎推理

演绎推理是从已知前提推出必然结论的推理,如:

All Marx Brothers movies are comedies. "Duck Soup" is a Marx Brothers movie. Therefore, "Duck Soup" is a comedy.

结论"Duck Soup" is a comedy 由两个前提 All Marx Brothers movies are comedies 和 "Duck Soup" is a Marx Brothers movie 推出。但要注意下例中的 man 在两个前提中的涵义不一致,在第一个前提中,man 指人类整个群体,而在第二个前提中,man 指 John 一个人,所以,结论不正确。

Man is only one million years old.

John is a man.

Therefore, John is only one million years old.

这类题往往是要你找出哪一个词的内涵、外延或用法不对。命题人要想从演绎推理中给出五个选项让你选,如果不是针对某个概念的话,实属不易。当然,命题人也可以给出些前提,让你选择结论。这种情况下,要找出正确结论也较容易,因为只要不混淆前提使用的概念,正确答案往往是必然的,唯一的。基于以上原因,ETS 的命题人极少出这类题。



## 2. 归纳推理

归纳推理就和演绎推理不一样了,即使前提全对,但得出的结论只能说是可能的。也就是说,归纳推理的结论不具有必然唯一性。归纳推理在 GRE 中往往以数据论证、类比论证和因果论证三种形式出现。

数据论证往往使用数据来证明某一点,如:

Four out of five doctors agree; The pain reliever in Sinutol is the most effective analgesic on the market today. You should try Sinutol.

此例的结论 you should try Sinutol 是基于前提 four out of five doctors found the pain reliever in Sinutol is the most effective 得出的。前提中的 five doctors 有可能全是该药品公司的董事。作者之所以能得出 you should try Sinutol 的结论是在前提的基础上加以假设 four out of every five doctors will find Sinutol to be wonderful. 所以, you should try Sinutol 的结论只能是可能正确,而不是必然正确。在遇到此类推理时,最好问下自己:这些数据是否具有代表性?

类比论证是由两个或两类事物属性的对照比较,进而推出某个事物也可能有与另外一个事物相类似的性质的思维过程,如:

Studies indicate that use of this product causes cancer in laboratory animals. Therefore, you should stop using this product.

此例的结论是 you should stop using this product 是基于前提 the product causes cancer in laboratory animals 得出的。这个结论显然是使用了假设 since this product causes cancer in laboratory animals, it will also cause cancer in humans 得出的。这个推理把 laboratory animals 的某些特性和 humans 类比。在遇到类比论证时,最好问一下自己:这两种事物或两种情形是否具有可比性?

因果论证是知道原因后,推出结果或在知道结果后,推导该结果发生的原因,如:

Every time I wear my green suit, people like me. Therefore, it is my green suit that makes people like me.

此例的结论 it is the green suit that makes people like him 是基于前提 every time he wears it, he has observed that effect 得出的,但这个结论只有使用了假设 there is no other cause for people liking him 才能得出。假如他在穿绿衣服时,打着条漂亮的领带,而人们喜欢的是领带,而不是衣服,那这个结论就不对了。所以,在遇到这类推理时,问一下自己:是否还有其他原因可能导致这样的结果?

## 二、基本的解题技巧

掌握基本的解题技巧可以加快作答速度,提高答题的正确率。本节将介绍以下七种基本的解题技巧:

### (一)先做分析推理题,后做逻辑推理题

对于我国考生来讲,分析推理题的作答比逻辑推理题的作答容易。分析推理题的条件陈述文字简单,层次清楚易辨,而逻辑推理题的表述却较复杂;分析推理题的一段条件陈述涉及到 3 至 8 题的解答,而逻辑推理题长长的一段文字陈述只供你解答一两道题之用。我国考生的数学、分析能力强,对于分析推理题,只要掌握方法多练,要全部做对是很有可能。而逻辑推理题语言较难,而语言又是我国考生的难点之所在,所以,为扬长避短,笔者在此极力主张先做分析推理题,后做逻辑推理题。

然而,即使把分析推理题全部做好,而不做逻辑推理题,想拿 700 分以上的高分是不可