



Academic Aptitude



Business Aptitude Test

BAT™ Module I – Academic Aptitude

Introduction and Practice Drills



Contents

INTRODUCTION – BAT Module I Format and Overview.....	3
SECTION I - Communication Analysis (CA).....	4
SECTION II - Critical Thinking (CT).....	6
SECTION III – Data Interpretation (DI)	9
SECTION IV - Data Analysis (DA).....	15
SAMPLE QUESTIONS - Answer Key.....	18



INTRODUCTION – BAT Module I Format and Overview

The Business Aptitude Test or BAT™ is a multi-module business school admissions evaluation test that evaluates candidates for business education programs based on the requirements and rigors of a modern executive education course.

BAT Module I (BAT-I) Format

Four MCQ Sections testing verbal, logical and numerical fluency

1. Communication Analysis	(CA)	15 questions	30 minutes
2. Critical Thinking	(CT)	15 questions	30 minutes
3. Data Interpretation	(DI)	15 questions	30 minutes
4. Data Analysis	(DA)	15 questions	30 minutes

Overview

BAT-I contains math problems that test your fluency with numbers, and ability to perform business mathematics as part of your job, and verbal problems that test your ability to zero in on the relevant content in logical and opinion pieces.

The test does NOT require you to spend time on extensive preparation for rule-based mathematics and English grammar correction that would not be used in a business context. You are suggested to simply familiarize yourself with the format of the test and refresh your verbal and quantitative skills by practicing the drill questions contained within this document.



SECTION I - Communication Analysis (CA)

The Communication Analysis (CA) section tests the candidate's ability to comprehend a passage, its components, and significant statements, as part of a wider Holistic Data Management skills evaluation. Passages will be between 300 – 400 words, accompanied by 5 questions. Candidates do not need (and should not consider) any information from outside the passage when answering the questions.

Sample Passage and questions

Directions: The following passages will be accompanied by relevant questions. After reading a passage, answer the corresponding questions based ONLY on information given or implied in the text.

Prior to *merdeka* (national independence) in 1957, Malaysia was a British colony known as Malaya. During the Japanese Occupation of Malaya from 1942-1945, some Malaysians carried out attacks on the Japanese from hidden jungle strongholds. Many of these guerrillas were ethnic Chinese members of the Malayan Communist Party (MCP), which refused to accept the return of Malaya to British control in 1945. With jungle warfare skills honed fighting the Japanese, the MCP guerrillas did not hesitate to use force in support of their campaign against British rule—British officials and businessmen as well as local residents identified with British interests were targeted for assassination by bands of communist fighters. As a result, the colonial government declared a State of Emergency on 18 June 1948.

The MCP insurgents depended on supplies taken voluntarily or otherwise from ethnic Chinese villagers living near the fringes of the Malayan jungle. Although few villagers were communists, many of these poor farmers had grievances against the Malayan government, which had failed to fulfill an earlier pledge to provide an easier path to full Malayan citizenship for ethnic Chinese residents. Moreover, any villager who refused to hand over food or money to communist guerrillas was likely to be executed on the spot.

Under these circumstances, Malaya Director of Operations Sir Harold Briggs formulated a plan that became the cornerstone of British strategy for dealing with the Emergency. The Briggs Plan had two interrelated aims—to provide a better

standard of living for rural Chinese Malaysians and to cut off the MCP from its source of supplies. To achieve these aims, some 400,000 rural Chinese were forcibly relocated into 450 “New Villages” surrounded by barbed-wire and guarded by police personnel. Some New Villagers complained of confinement in what they viewed as a concentration camp. Others appreciated the improved amenities provided for New Village settlements—including schools, shops, and dispensaries. From a military standpoint, the Briggs Plan was a resounding success: as the influence of the MCP gradually waned, the Malaysian government finally declared an end to the Emergency on 31 July 1960.

1. Which of the following titles best summarizes the contents of the passage?
 - A) The Path to *Merdeka*: The Negotiations leading to Malaysian Independence
 - B) Permanent Revolution: The Military Strategy of the Malayan Communist Party
 - C) Battling for Hearts and Minds: The Rise and Fall of a Malayan Insurgency Movement
 - D) Communist Ideology in Malaya: Communism as Disguised Anti-Colonialism
 - E) A Malayan Experiment in Self-Government: The Political Organization of New Villages



2. According to the passage, all of the following are true of the Briggs Plan EXCEPT:
 - A) It aimed to improve the quality of life for Chinese Malaysians living outside of urban areas.
 - B) It was an important part of the British response to the armed insurgency.
 - C) It attempted to prevent the MCP from gaining access to needed supplies.
 - D) It relocated only villagers who did not have legal title to their land.
 - E) It eventually achieved its military objectives.
3. The author mentions the timing of *merdeka* in order to emphasize which of the following points?
 - A) The Emergency originated while Malaya was still under colonial rule.
 - B) Many MCP guerrillas were ethnic Chinese.
 - C) Malaya was better off under British administration than it was during the Japanese Occupation.
 - D) Many rural villagers had grievances against the Malayan government.
 - E) The Emergency forced the British to accelerate the timetable for Malayan independence.
4. It can be inferred from the passage that
 - A) the MCP ceased guerrilla warfare operations as soon as *merdeka* was achieved.
 - B) the Emergency ended only after British Malaya gained national independence.
 - C) the membership of the MCP was comprised entirely of ethnic Chinese.
 - D) the Emergency would have ended sooner if the New Villages had not been established.
 - E) the MCP never posed a serious threat to British interests in colonial Malaya.
5. The passage implies that
 - A) some Chinese villagers were reluctant to hand over food or money to the guerrillas.
 - B) the majority of Chinese villagers were strong supporters of the MCP.
 - C) the majority of Chinese villagers were strong supporters of the British colonial government.
 - D) the majority of Chinese villagers had already been granted full Malayan citizenship before the Emergency began.
 - E) none of the Chinese villagers willingly assisted the MCP guerrillas.
6. According to the passage, the New Villages
 - A) did not offer facilities valued by many residents.
 - B) were viewed by most residents as concentration camps.
 - C) played only a minor role in ending the Emergency.
 - D) were heavily fortified compounds.
 - E) were regularly infiltrated by communist guerrillas.
7. Which one of the following is most analogous to the Briggs Plan?
 - A) A plan to control the spread of a highly infectious disease by separating people who have the disease from those who do not
 - B) A plan to minimize incidents of prison violence by arranging for members of several large criminal gangs to be housed in separate prisons
 - C) A plan to promote more effective learning outcomes by establishing separate classes for students of differing abilities
 - D) A plan to help the public identify unhealthy foods by requiring restaurants to display nutritional information about each item on the menu
 - E) A plan to prevent acts of terrorism by ensuring that all air travelers undergo a rigorous security check



SECTION II - Critical Thinking (CT)

The Critical Thinking (CT) section of BAT-I evaluates the candidate's ability to engage in practical reasoning to the standard required by a business school curriculum. Special training in formal logic (or any other subject matter) is NOT needed to answer the questions in this section.

Sample Questions

Directions: For the following question, do your best to analyze the argument/situation and pick the best possible answer choice.

1. The Australian Cricket Team will play exactly five test matches this summer. The opponent in each of these test matches will be Sri Lanka or the West Indies. Exactly one test match will be played in each of five cities: Adelaide, Brisbane, Hobart, Melbourne, and Sydney. The five test matches will be played in an order consistent with the following conditions:
 - Australia will play two consecutive test matches against the West Indies.
 - Australia's opponent in the second test match will be Sri Lanka.
 - Australia will play only two test matches against the West Indies.
 - The third test match will be played in Brisbane.
 - The fourth test match will be played in Hobart.
 - The fifth test match will be played in Adelaide.Given the above conditions, which one of the following must be true?
 - A) Australia's opponent in Sydney will be the West Indies.
 - B) Australia's opponent in Melbourne will be the West Indies.
 - C) Australia's opponent in Hobart will be the West Indies.
 - D) Australia's opponent in Brisbane will be Sri Lanka.
 - E) Australia's opponent in Adelaide will be Sri Lanka.
2. The Feudalberg Charter of Civil Rights guarantees citizens' freedom of expression. As a result, political expression (including both speech and symbolic conduct) is considered protected expression. However, seditious expression, defined as speech or conduct that aims to incite or is likely to cause the unlawful overthrow of the duly-elected government, has never been accorded any legal protection. Hence, despite the fact that burning the Feudalberg National Flag is symbolic conduct undertaken for political purposes, flag burning should not be classified as protected expression. The conclusion above depends upon which of the following assumptions?
 - A) The punishment for sedition is no less severe than the punishment for espionage under the Criminal Code of Feudalberg.
 - B) An overthrow of the duly-elected government is unlikely to result from the burning of the Feudalberg National Flag by a few unpatriotic demonstrators.
 - C) Burning the Feudalberg National Flag is more akin to sedition than to any kind of protected political expression.
 - D) Those who burn the Feudalberg National Flag do not in fact intend to overthrow the duly-elected government.
 - E) The Feudalberg Charter of Civil Rights protects not only political expression but also non-political expression.



3. All Presidential candidates in the Commonwealth of Clearwater are required to make public their income tax returns. Congressman Cagey, the current front runner in the Presidential campaign, released the required documentation just prior to the financial disclosure deadline three months ago. His opponents quickly pointed out that certain information contained in Cagey's tax returns appears to be inconsistent with previous public statements made by Cagey concerning his personal finances. Yet numerous polls taken at various times after the disclosure deadline indicate that Cagey supporters remain steadfastly enthusiastic in support of their candidate. Therefore, accusations that Cagey misrepresented his personal finances are unlikely to harm his Presidential candidacy.

Which of the following, if true, most strengthens the argument above?

- A) Some voters will refuse to vote for a candidate who is believed to have made misleading statements, even if those statements relate to personal matters rather than public policy.
- B) To date, Cagey is the only Presidential candidate to face questions about the true state of his personal finances.
- C) With the Presidential election still nine months away, a majority of voters are not paying attention to the Presidential campaign and have not yet decided which candidate to support.
- D) Undecided voters, who will determine the outcome of the Presidential election, are much less concerned about candidates' personal finances than about the dismal state of the Clearwater economy.
- E) The other leading Presidential candidates intend to continue asking questions about the apparent discrepancies between Cagey's tax

returns and his previous public statements.

4. According to a survey conducted by the Office of Career Services at Granderson University School of Business, most MBA students in the School plan to work for an investment bank immediately after graduation. So it is not true that most MBA graduates of Granderson work for a management consulting firm immediately after graduation.

The reasoning of the argument is flawed primarily because it fails to

- A) consider the long-term career objectives of students.
 - B) explain why many students prefer to work in an investment bank.
 - C) distinguish between intentions and career outcomes.
 - D) evaluate the career plans of undergraduate business students.
 - E) mention other career paths available to students.
5. There are more restaurants in Hollistown than in Deedsville. So, residents of Hollistown are more likely to eat at a restaurant than are residents of Deedsville.

Each of the following, if true, weakens the conclusion above EXCEPT:

- A) The seating capacity of a typical restaurant in Deedsville is greater than that of a typical restaurant in Hollistown.
- B) Restaurant customers in Hollistown are more likely to order take-away meals for home consumption than are restaurant customers in Deedsville.
- C) As a result of more favorable zoning regulations, it is easier to operate a restaurant in Hollistown than in Deedsville.



- D) Because most residents of Deedsville work in Hollistown, they often eat lunch and dinner at restaurants in Hollistown.
- E) The population of Hollistown is greater than that of Deedsville.

For Questions 6 and 7 the answer choices are as follows:

- (A) The information in statement (1) alone IS enough to answer the question, but the information in statement (2) alone IS NOT enough to answer the question.
- (B) The information in statement (2) alone IS enough to answer the question, but the information in statement (1) alone IS NOT enough to answer the question.
- (C) NEITHER the information in statement (1) alone NOR the information in statement (2) alone is enough to answer the question, but the information in statements (1) and (2) taken together is enough to answer the question.
- (D) The information in statement (1) alone IS enough to answer the question, and the information in statement (2) alone IS also enough to answer the question.
- (E) The information in statements (1) and (2) taken together IS NOT enough to answer the question.

6. The admissions process at Obermouth University gives special consideration to “legacy applicants” who are siblings or lineal descendants of Obermouth graduates. As a result, the acceptance rate for legacy applicants is higher than the acceptance rate for non-legacy applicants. Is Obermouth rejecting a larger percentage of legacy applicants this year than it did in the past?

Statement 1: This year the acceptance rate for non-legacy applicants to Obermouth was higher than it was at any time in the past.

Statement 2: Because of a rise in the total number of legacy applications, Obermouth rejected more legacy applicants this year than at any time in the past.

7. Tessensohn Bakery sells seven flavors of cheesecake. Each month Tessensohn offers a discount on exactly two of these flavors. The flavors discounted this month are last month’s best-selling and worst-selling flavors. Will Tessensohn offer a discount on blueberry cheesecake this month?

Statement 1: Last month Tessensohn’s sales of blueberry cheesecake were less than those of strawberry cheesecake.

Statement 2: Last month Tessensohn’s sales of blueberry cheesecake were greater than those of black forest cheesecake.



Information Completeness Format:

In order to see *whether* we can solve a problem, we have to first check whether there is enough data. An Information Completeness (IC) question tests the ability of a test taker to assess whether there is complete information to solve a question.

An Information Completeness question has three parts:

- (i) Question
- (ii) Fact Statements
- (iii) Answer Choices

Let's look at a question:

1. What is the value of $x - y$?

- (1) $x = 50$
- (2) $y = 20$

- A) The information in statement 1 alone is enough to answer the question, but the information in statement 2 alone is not enough to answer the question.
- B) The information in statement 2 alone is enough to answer the question, but the information in statement 1 alone is not enough to answer the question.
- C) NEITHER the information in statement 1 alone NOR the information in statement 2 alone is enough to answer the question, but the information in statements 1 and 2 taken together is enough to answer the question.
- D) The information in statement 1 alone is enough to answer the question, and the information in statement 2 alone is also enough to answer the question.
- E) The information in statements 1 and 2 taken together is NOT enough to answer the question.

Answer: C

Let's see how we worked that out:

A) Statement (1) gives the value of x but we still don't know the value of y .

B) Statement (2) gives the value of y but we still don't know the value of x .

C) Statements (1) and (2) together give us both the values of x and y , hence 'C' is the correct answer



Let's look at one more question:

2. What is the average (arithmetic mean) of the two numbers x and y ?

(1) $x + y = 100$

(2) $x = 80$

- A) The information in statement 1 alone is enough to answer the question, but the information in statement 2 alone is not enough to answer the question.
- B) The information in statement 2 alone is enough to answer the question, but the information in statement 1 alone is not enough to answer the question.
- C) NEITHER the information in statement 1 alone NOR the information in statement 2 alone is enough to answer the question, but the information in statements 1 and 2 taken together is enough to answer the question.
- D) The information in statement 1 alone is enough to answer the question, and the information in statement 2 alone is also enough to answer the question.
- E) The information in statements 1 and 2 taken together is NOT enough to answer the question.

Answer: A

Let's see how we worked that out:

The average (or arithmetic mean) of the two numbers is $(x+y)/2$

Statement (1) gives the value of $x+y (=100)$, if we divide this value by 2 we get the average.

Statement (2) gives the value of $x (=80)$ but we still don't know the value of y .

Hence the answer for this question is 'A' Statement (1) alone is sufficient but statement (2) alone is not sufficient.



Sample Questions

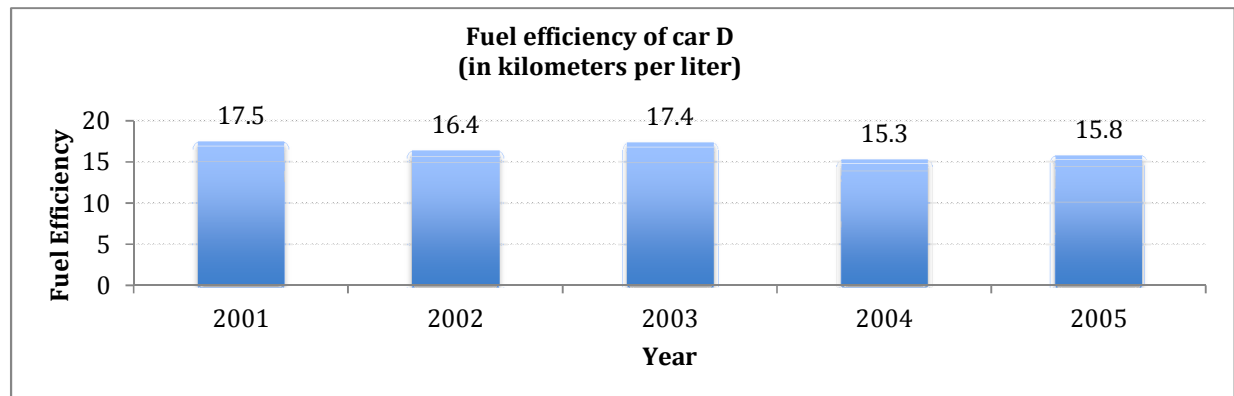
Directions: For the following questions, solve each question and indicate the best answer.

For Questions 1 – 5, refer to the following table and graph.

Table below gives the fuel consumed (in liters) and distance traveled (in kilometers) by four cars from 2001 to 2005.

Year		2001	2002	2003	2004	2005
Car A	Fuel	1800	1850	2100	1900	2000
	Distance	37800	39220	39900	37620	38800
Car B	Fuel	2100	2150	2200	2050	2150
	Distance	23520	23650	20900	24805	24080
Car C	Fuel	1750	1700	1600	1800	1650
	Distance	23625	23460	21120	23940	21120
Car D	Fuel	1500	1500	1250	1600	1400
	Distance	26250	24660	21775	24440	22060

The graph below gives the fuel efficiency (distance traveled per a liter of fuel consumed) of car D from 2001 to 2005.





1. The annual distance traveled by car C as a percentage of total annual distance traveled by the 4 cars is highest in which year?
 - A) 2001
 - B) 2002
 - C) 2003
 - D) 2004
 - E) 2005

2. By what percent did the total distance traveled by cars B and C change from 2002 to 2005?
 - A) 4.1 % decrease
 - B) 1.3 % decrease
 - C) 1.3 % increase
 - D) 4.1 % increase
 - E) 4.2 % increase

3. What is the average fuel efficiency of cars A, B, C, and D from 2001 to 2005?
 - A) 15.1 kilometers/liter
 - B) 14.9 kilometers/liter
 - C) 14.7 kilometers/liter
 - D) 14.3 kilometers/liter
 - E) 14.1 kilometers/liter

4. What is the average fuel efficiency of car D from 2001 to 2005?
 - A) 16.3 kilometers/liter
 - B) 16.4 kilometers/liter
 - C) 16.5 kilometers/liter
 - D) 16.6 kilometers/liter
 - E) 16.7 kilometers/liter

5. For car D, the average fuel consumed per 1,000 kilometers of distance traveled was the least in which year?
 - A) 2001
 - B) 2002
 - C) 2003
 - D) 2004
 - E) 2005



For Questions 6 and 7, the answer choices are as follows:

- A) The information in statement (1) alone IS enough to answer the question, but the information in statement (2) alone IS NOT enough to answer the question.
- B) The information in statement (2) alone IS enough to answer the question, but the information in statement (1) alone IS NOT enough to answer the question.
- C) NEITHER the information in statement (1) alone NOR the information in statement (2) alone is enough to answer the question, but the information in statements (1) and (2) taken together is enough to answer the question.
- D) The information in statement (1) alone IS enough to answer the question, and the information in statement (2) alone IS also enough to answer the question.
- E) The information in statements (1) and (2) taken together IS NOT enough to answer the question.

For Questions 6 and 7, refer to the following table.

The table below reflects the scores of five students across five Mathematics tests.

Student	Test 1	Test 2	Test 3	Test 4	Test 5
Sam	76	72	81	81	80
Tim	80	X	75	80	85
Darren	90	95	95	100	100
Julia	100	99	98	96	97
Natalie	84	88	Y	83	89

- 6. What is the average score of the five students across the five Mathematics tests?
 - (1) Test 2 accounts for 22.00 % of total marks secured by Natalie.
 - (2) Test 3 accounts for 15.29 % of total marks secured by the 5 students.
- 7. Sam takes 2 further Mathematics tests: test 6 and test 7. If his average for the seven mathematics tests was 69.86, how much more did he score in test 3 than in test 7?
 - (1) Sam scored 25 % more in test 6 than in test 7.
 - (2) Sam's average score of test 6 and test 7 was equal to the average of X and Y.



SECTION IV - Data Analysis (DA)

A Data Analysis question asks you to determine a certain value. You will have all the information within the question to determine the value. To solve certain questions, you may have to frame some equations using basic algebra.

Sample Questions

Directions: For the following questions, solve each question and indicate the best answer.

- If it costs C dollars to construct a road of length A kilometers, how many dollars does it cost to construct a similar road of length B kilometers?
 - BC
 - BA
 - $\frac{BC}{A}$
 - $\frac{BA}{C}$
 - $\frac{CA}{B}$
- A mixture of two candies, A and B , costs \$11.625 per kilogram. Candy A costs \$10.2 per kilogram while candy B costs \$14 per kilogram. What is the ratio $A:B$ in which the two candies are mixed?
 - 3:5
 - 5:3
 - 3:8
 - 5:8
 - 3:4
- The ratio of the present age of Ricky to the present age of Michael is 5:4. Six years later, the ratio will be 6:5. What was the ratio 9 years ago?
 - 4:3
 - 3:2
 - 7:5
 - 5:3
 - 5:2
- In a class of 80 students, 40% of the students play basketball, 50% play football and 30% play table tennis. If 5 students play both football and table tennis but not basketball, what is the maximum possible number of students that play both basketball and tennis?
 - 11
 - 19
 - 21
 - 24
 - 32
- Ashley had a certain amount of money which was more than \$1,000. If she were to equally distribute the money among 7 children, she would be left with \$6; if she were to equally distribute the money among 6 children, she would be left with \$5; if she were to equally distribute the money among 5 children, she would be left with \$4. What is the smallest amount of money that she could have had?
 - 1149
 - 1109
 - 1099
 - 1049
 - 1009



6. A table at a certain store normally costs \$50 per unit. During a sale, the store offers one free table with the purchase of every 4 tables. Janice wants to purchase 7 tables and Katelyn wants to purchase 8 tables. During the sale, how much money will Janice save if she purchased the tables with Katelyn instead of purchasing them alone?
- A) 20
B) 30
C) 50
D) 60
E) 70
7. Mike, Mark and Matt can individually build a house in 12, 16 and 24 days respectively. If Mark starts building the house and receives help from Mike and Matt every second day, in how many days will they complete building the house?
- A) 2
B) 4
C) 6
D) 8
E) 10
8. Tap 1 takes 1.5 hours to fill a certain tank with water. Tap 2 fills the same tank with water at a rate X times as fast as tap 1. Tap 1 and tap 2 together take 15 minutes to fill the same tank with water. Find the value of X.
- A) $\frac{1}{9}$
B) $\frac{1}{5}$
C) 5
D) 9
E) 45
9. In a bag, there are 55 balls of different colors such that there is 1 ball of the first color, 2 balls of the second color, 3 balls of the third color, and so on. If each ball is of only one color, what is the minimum number of balls that must be removed, without looking, from the bag to ensure that balls of 5 different colors are removed?
- A) 5
B) 15
C) 25
D) 35
E) 45
10. Andy and Brenda have a total sum of \$1330. If $\frac{3}{23}$ of Andy's amount is equal to $\frac{9}{26}$ of Brenda's amount, approximately what percent more money does Brenda need to have in order to have an amount equal to that of Andy?
- A) 26.5
B) 38
C) 52
D) 126.5
E) 165



Try to do the following calculations using a calculator:

1. $173 + 195 + 643 - 221$ (Answer: 311)
2. 12 % of 850 (Answer: 102)
3. $100 + 50/2 - 30 + 75$ (Answer: 170)
4. 8,000 is increased by 40 % (Answer: New Value is 11200)
5. 8,000 is decreased by 40 % (Answer: New value is 4800)

Note: There will NOT be similar simple calculation questions in the test; the purpose of these drills is to help you re-familiarize yourself with calculator use as you will be allowed to use a calculator during the test.



SAMPLE QUESTIONS - Answer Key

<u>Communication Analysis</u>		<u>Critical Thinking</u>		<u>Data Interpretation</u>		<u>Data Analysis</u>	
<u>Question #</u>	<u>Solution</u>	<u>Question #</u>	<u>Solution</u>	<u>Question #</u>	<u>Solution</u>	<u>Question #</u>	<u>Solution</u>
1	C	1	C	1	D	1	C
2	D	2	C	2	A	2	B
3	A	3	D	3	A	3	C
4	B	4	C	4	B	4	A
5	A	5	C	5	A	5	D
6	D	6	E	6	C	6	A
7	A	7	C	7	A	7	D
						8	C
						9	D
						10	E