



Homeland  
Security

# **U.S. Customs and Border Protection**

## **CBP Officer and Agriculture Specialist**

### *Preparation Guide for the Critical Thinking Skills Exercise*

**Personnel Research and Assessment Division  
Office of Human Resources Management**

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# PREPARATION GUIDE FOR THE CRITICAL THINKING SKILLS EXERCISE

Thinking skills, such as decision-making, problem solving, and reasoning, are of critical importance for successful performance in supervisory and managerial jobs at DHS. In this preparation guide, you will read useful information about applying thinking skills on the job and doing your best on the Critical Thinking Skills Exercise.

The questions in the Critical Thinking Skills Exercise are designed to measure your ability to understand complicated situations and to derive correct conclusions from them. The kind of thinking that these questions ask you to do is the kind of thinking that supervisors and managers have to do when planning and directing operations, dealing with emergencies, and handling personnel and budgetary matters.

The assessment asks you to make logical conclusions based on facts you are given about workplace situations. These conclusions need to be based only on the facts given about the situation. Therefore, answering correctly requires careful reading and focused thought about what information is given and what information is not given about the situation.

## About This Preparation Guide

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This preparation guide is intended to help you prepare for the Critical Thinking Skills Exercise. First, we will provide you with practice situations. Then we will provide you with the answers for the practice situations and explanations of the answers. Finally, we will provide you with tips for doing your best on the Critical Thinking Skills Exercise.

## Practice Situations

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Beginning on page 3, we provide you with practice situations for the Critical Thinking Skills Exercise. These situations are similar to those found in the actual Critical Thinking Skills Exercise. Each situation has five questions. Read the situation carefully and then record your answer to each question. Then turn to page 7 and compare your answers to the answers and explanations that we have provided for you. You will receive the most benefit from the practice situations if you first record your answers before examining the answers and explanations.

In the Critical Thinking Skills Exercise, you are asked to indicate whether each conclusion is true or false or whether you have insufficient information to make a determination. Selecting the “insufficient information” response is not a sign that you are unable either to be a leader, to make critical decisions, or to make decisions under fire. Choosing “insufficient information” means that you recognize that you would need to gather more information to know for sure if the conclusion is true or false. These types of situations occur frequently in real life. For example, you often have insufficient information to make a decision when you must first speak with your boss, check a database, call another agency, or check with Headquarters before you make an informed decision.

# PRACTICE SITUATIONS

## Situation 1

*The following passage describes a set of facts. The passage is followed by five conclusions. Read the passage and then decide whether each conclusion is:*

- A) **true**, which means that you can infer the conclusion from the facts given*
- B) **false**, which means that the conclusion cannot be true given the facts*
- C) **insufficient information**, which means that there is insufficient information for you to determine whether the conclusion is true or false.*

A van suspected of containing smuggled parrots crossed the border and traveled to the property of Mr. Vogel. The property, which was part personal residence and part commercial pet store, was completely fenced with barbed wire and had gates that allowed access to the property from two sides. There were several buildings in the compound, together with some permanent animal cages, but nothing other than the tops of the buildings was visible from the public roads.

Officer Ramirez led a team of officers who entered the property from the two gates, which were closed at the time they made their entry. Two officers went directly to the van, but found that the parrots had been removed already. Almost simultaneously, the other officers found two small cages that were being installed within the large permanent animal cages. The officers immediately seized the parrots and arrested Mr. Vogel.

The court found that the entry into Mr. Vogel's property was legal and found that the seizure of the birds was admissible as the result of an extended border search. Searches are classifiable as extended border searches if and only if the searches are conducted immediately following continuous surveillance from the border to the point of search and are otherwise legally conducted. The entry was deemed legal because DHS officers are permitted to carry out both vehicle searches and entry into lands, enclosures, and buildings in the discharge of official duties.

- 1) If Officer Ramirez went directly to the empty van, then Officer Ramirez did not discover the two small cages being installed within the large permanent animal cages.
- 2) The van was not under constant surveillance from the time it left the border until the time it entered the property of Mr. Vogel.
- 3) If the officers who searched the van had found the parrots in it, the seizure of the birds could not have been classified as the result of an extended border search.
- 4) It is not illegal for DHS officers to carry out vehicle searches in the discharge of official duties.
- 5) All the permanent cages located within the enclosure of Mr. Vogel's property were invisible from the public roads.

## Situation 2

The following passage describes a set of facts. The passage is followed by five conclusions. Read the passage and then decide whether each conclusion is:

- A) **true**, which means that you can infer the conclusion from the facts given
- B) **false**, which means that the conclusion cannot be true given the facts
- C) **insufficient information**, which means that there is insufficient information for you to determine whether the conclusion is true or false.

During the second week of March, there was a marked increase in reported cases of suspect air traffic activity along the southwest border. The second week alone accounted for 75% of the entire reported total of 120 suspect flight cases that month. There was also a dramatic increase in the amount of contraband seized in the border region. In fact, for the preceding six months, whenever there had been an increase in reported suspect flight activity, there had also been an increase in contraband smuggling and an increase in seizures. However, during the first week of April, when over 50% of the month's 180 suspect flight cases occurred, there were only a few seizures of contraband materials reported.

- 6) For the preceding six months, whenever there has been a decrease in reported suspect flight activity, there has also been a decrease in contraband smuggling and in seizures.
- 7) In May, there will be more than 180 suspect flights cases across the southwest border region.
- 8) During the second week of March, most of the suspect flight cases for the month occurred.
- 9) Reported cases of suspect air traffic activity increased throughout the month of March.
- 10) Past experience has shown that whenever there has been an increase in seizures of smuggled contraband, there has also been an increase in suspect flight activity.

### Situation 3

The following passage describes a set of facts. The passage is followed by five conclusions. Read the passage and then decide whether each conclusion is:

- A) **true**, which means that you can infer the conclusion from the facts given
- B) **false**, which means that the conclusion cannot be true given the facts
- C) **insufficient information**, which means that there is insufficient information for you to determine whether the conclusion is true or false.

A criminal act has various stages, including preparing for the crime and actually committing the crime. Sometimes a crime is prepared for and is attempted, but is not actually completed. One way in which a “person is guilty of the attempt to commit a crime” is formulated as follows: if the objective facts are such that beyond a reasonable doubt the crime would have been completed but for the intervention of an unforeseen physical event, then an attempt to commit the crime has occurred. A person is also guilty of attempt if the person takes a substantial step towards the commission of the crime.

A case study: two pilots for a foreign airline decided to purchase several guns in California and to take them back to their country without obtaining the required export license. The guns were purchased, stowed in the pilots’ luggage, and brought to the airport when the pilots reported for their scheduled flight.

Upon seeing that DHS was intensifying its searches of outbound flights, the pilots decided not to take the guns and called a friend to come to the airport and pick up the luggage containing the guns. The luggage was thereafter picked up and taken from the airport by the friend. The pilots, in the meantime, went to their aircraft, but were intercepted on the jetway by DHS officers and eventually arrested.

- 11) If the facts of the case prove that the crime would have been completed except for the intensifying of searches of outbound flights, then the pilots are guilty of attempting to export the guns without a license.
- 12) If the pilots are found not guilty of attempting to export the guns without a license, then the courts did not judge that the pilots took a substantial step towards the commission of the crime.
- 13) If the facts of the case do not prove that the crime would have been completed except for the intensifying of searches of outbound flights, then the pilots’ actions did not progress beyond preparation for the crime.
- 14) If the courts judge that purchasing, stowing, and bringing the guns to the airport constitute taking a substantial step towards the commission of the crime of exporting the guns without a license, then the pilots are not guilty of an attempt to export the guns.
- 15) If the pilots are found guilty of attempting to export the guns without a license, then the facts of the case prove that the crime would have been completed except for the intensifying of searches of outbound flights.

#### Situation 4

The following passage describes a set of facts. The passage is followed by five conclusions. Read the passage and then decide whether each conclusion is:

- A) **true**, which means that you can infer the conclusion from the facts given
- B) **false**, which means that the conclusion cannot be true given the facts
- C) **insufficient information**, which means that there is insufficient information for you to determine whether the conclusion is true or false.

At airport X, the supervisor is responsible for scheduling progress reviews for all 22 inspectors. To complete all reviews without depleting staff resources during the 4 p.m. shift, she will schedule all reviews to start between the hours of 8 a.m. and 2 p.m. while inspectors are on the day shift. For the next three months, half of the inspectors will be available for appointments during these hours. Inspectors Smith, Ruiz, and Jones are currently on details that will last for the next three months and will not be available during that time. At airport X, an inspector must be on an assigned regular tour of duty in order to be scheduled for a progress review. The supervisor has been able to schedule all progress reviews to be completed within six months.

- 16) At least fourteen inspectors are not available to be scheduled for progress reviews during the next three months.
- 17) Inspectors Smith, Ruiz, and Jones are not scheduled to work the day shift at any time during the three months after they have returned to regular duty at airport X.
- 18) One half of the inspectors at airport X are not currently assigned to the day shift.
- 19) All 22 inspectors at airport X will be on an assigned regular tour of duty at some point during the next six months.
- 20) It is not true that some reviews are scheduled to start before 8 a.m. or after 2 p.m.

# ANALYSIS OF PRACTICE SITUATIONS

## Situation 1

### 1. Correct Answer: A) True

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The second paragraph tells us that one group of officers investigated the van, while the other group of officers investigated the cages. Therefore, if an officer investigated the van, that officer could not be in the group of officers who investigated the cages. Conversely, if an officer investigated the cages, that officer could not be in the group of officers who investigated the van.

Question 1 states that if Officer Ramirez went directly to the empty van, then Officer Ramirez did not discover the two small cages being installed within the large permanent animal cages. Because any officer who investigated the van could not be in the group of officers who investigated the cages, question 1 is true.

### 2. Correct Answer: B) False

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The court found the parrot-smuggling case to be an extended border search. Therefore, according to the description of extended border searches in the last paragraph, two conditions must be true: (1) the search was carried out after constant surveillance of the van from the time it left the border and (2) the search was carried out according to the law (which authorizes DHS officers to carry out such searches).

Question 2 states that the van was not under constant surveillance from the time it left the border until the time it entered the property of Mr. Vogel. Because the seizure was classified as an extended border search and, therefore, was under constant surveillance, question 2 is false.

### 3. Correct Answer: B) False

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According to the court, the search that located the parrots was an extended border search. Therefore, the court concluded that the search was conducted following continuous surveillance of the van from the border until the smuggled parrots were found immediately after being unloaded from the van. Finding the parrots in the van prior to their being unloaded would have had an even more direct link to the continuity of the surveillance. Therefore, finding the parrots in the van would still be considered an extended border search.

Question 3 states that if the officers had found the parrots in the van, the seizure of the birds could not have been classified as being the result of an extended border search. Because finding the parrots in the van would still be an extended border search, question 3 is false.

#### **4. Correct Answer: A) True**

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The last paragraph tells us that DHS officers are permitted to perform many official duties, including vehicle searches. Therefore, it cannot be illegal for DHS officers to conduct vehicle searches in the discharge of official duties.

Question 4 states that it is not illegal for DHS officers to carry out vehicle searches in the discharge of official duties. Since it cannot be illegal for DHS officers to conduct vehicle searches in the discharge of official duties, question 4 is true.

#### **5. Correct Answer: A) True**

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According to the information in the first paragraph, nothing other than the tops of the buildings was visible from the public roads. The permanent cages are not part of the tops of the buildings, therefore, they must not be visible from the public roads.

Question 5 states that all the permanent cages located within the enclosure of Mr. Vogel's property were invisible from the public roads. Because only the tops of the buildings were visible from the road, question 5 is true.

### **Situation 2**

#### **6. Correct Answer: C) Insufficient Information**

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The paragraph does not tell us about what happens when there has been a decrease in reported suspect flight activity. Therefore, the statement that there has also been a decrease in contraband smuggling and in seizures whenever there has been a decrease in reported suspect flight activity cannot be evaluated. Question 6 should be answered Insufficient Information because there is insufficient information available to judge this statement as true or false.

#### **7. Correct Answer: C) Insufficient Information**

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The second sentence tells us that there were 120 suspect flight cases in March and the fifth sentence tells us that there were 180 suspect flight cases in April. However, no information is provided about flight cases in May. It is not possible to determine from the information provided that the suspect flight cases in May will be more than those in April.

Question 7 states that there will be more than 180 suspect flight cases in May. Since no information is provided about flight cases in May, there is insufficient information to decide if question 7 is true or false.

### **8. Correct Answer: A) True**

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The first two sentences tell us that 75% of the 120 suspect flight cases reported in March were reported during the second week of March.

Question 8 states that most of the suspect flight cases for the month occurred during the second week. Since 75% is more than 50%, it is true that most of the cases occurred during the second week.

### **9. Correct Answer: B) False**

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The second sentence tells us that 75% of the reported suspect flight cases in March occurred during the second week. Since more than half of the cases occurred during the first half of the month, it is not possible for the reported flight cases to have increased throughout the month of March. Since this is not possible, question 9 is false.

### **10. Correct Answer: C) Insufficient Information**

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The fourth sentence tells us that, in the preceding six months, whenever there has been an increase in reported suspect flight activity, there had also been an increase in contraband smuggling and an increase in seizures.

Question 10 states that whenever there has been an increase in seizures of smuggled contraband, there has also been an increase in suspect flight activity. The fourth sentence tells us about *all* instances in the past six months of reported increases in suspect flight activity, but only tells us about seizures of contraband when there was a reported increase in suspect flight activity. It is possible that there are instances of increased seizures of contraband when there was no corresponding increase in reported suspect flight activity. Therefore, there is insufficient information to draw the conclusion given in question 10.

## **Situation 3**

### **11. Correct Answer: A) True**

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According to the first paragraph, if facts demonstrate that a crime would have been completed except for the intervention of an unforeseen physical event, then an attempt to commit the crime has occurred. This question indicates that the searches stopped the crime from being completed. Accordingly, the pilots are guilty of attempting to commit the crime. Therefore, question 11 is true.

### **12. Correct Answer: A) True**

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According to the first paragraph, a person is also guilty of attempt whenever the person takes a substantial step towards the commission of a crime. Therefore, if a person is found not guilty of attempt, then the person could not have been found to take a substantial step towards the commission of a crime.

Question 12 states that if the pilots are found not guilty of attempting to export the guns without a license, then the courts did not judge that the pilots took a substantial step towards the commission of the crime. Because the pilots could not have been found to have taken a substantial step towards the commission of the crime if they were found not guilty of attempt, question 12 is true.

### **13. Correct Answer: C) Insufficient Information**

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Question 13 indicates that the pilots' actions did not progress beyond preparation for the crime if the facts of the case do not prove that the crime would have been completed except for the intensifying of searches of outbound flights. While there is no certain proof in the paragraph that the pilots' actions constitute an attempt to commit the crime, the possibility remains. Because it is not certain that the pilots' actions did not progress beyond preparation, question 13 is insufficient information.

### **14. Correct Answer: B) False**

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The first paragraph states that a person is guilty of attempt if the person takes a substantial step towards the commission of the crime. Applying that formulation to this case, if the court judges that the pilots' actions constitute taking a substantial step towards the commission of the crime of exporting the guns without a license, it follows that the pilots are guilty of attempting to export the guns.

Question 14 states that if the courts judge that purchasing, stowing, and bringing the guns to the airport constitute taking a substantial step towards the commission of the crime of exporting the guns without a license, then the pilots are not guilty of an attempt to export the guns. Because the pilots would be guilty of an attempt to export the guns in the case, question 14 is false.

### **15. Correct Answer: C) Insufficient Information**

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The first paragraph provides two conditions under which the pilots could be found guilty of attempting to export the guns without a license. The scenario does not say if either condition was considered by the court to be met. Therefore, if all we know is that the pilots are found

guilty of attempting to export the guns, we cannot yet determine which condition the court determined to be relevant in establishing the attempt.

Question 15 supposes that the pilots are found guilty of attempting to export the guns without a license. This supposition alone provides insufficient information to determine under which condition the court found the pilots to be guilty of attempting to export the guns. Therefore, question 15 is insufficient information.

## Situation 4

### 16. Correct Answer: B) False

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The first sentence tells us that there are 22 inspectors at airport X and the third sentence tells us that half of the inspectors will be available for appointments during the next three months. This means that 11 inspectors are available and 11 inspectors are not available for appointments during the next three months.

Question 16 states that at least fourteen inspectors are not available for appointments during the next three months. Since this is not true, question 16 is false.

### 17. Correct Answer: B) False

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Sentence 2 tells us that all reviews will be scheduled during the day shift. Sentence 5 tells us that an inspector must be on an assigned regular tour of duty in order to be scheduled for a progress review. Taken together, these statements mean that inspectors Smith, Ruiz, and Jones are not available for a review in the next three months. Statement 6 tells us that all reviews were scheduled in the next six months. This means that inspectors Smith, Ruiz, and Jones must be scheduled to work the day shift some time during the three months after they return to regular duty.

Question 16 states that inspectors Smith, Ruiz, and Jones are **not** scheduled to work the day shift any time during the three months after they return to regular duty. This must be false because, if it were true, then inspectors Smith, Ruiz, and Jones could not have been scheduled for progress reviews during the three months after they returned to regular duty.

### 18. Correct Answer: C) Insufficient Information

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The second sentence tells us that all reviews will be scheduled on the day shift. The first sentence tells us that there are 22 inspectors and the third sentence tells us that half of the inspectors will be available for appointments during the next three months. This means that 11 inspectors *are or will be* on the day shift during the next three months. We are not given information about how many inspectors are *currently* on the day shift.

Question 18 states that one half (11) of the inspectors are not currently assigned to the day shift. Since we cannot know this from the paragraph, there is insufficient information to conclude if question 18 is true or false.

### **19. Correct Answer: A) True**

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Sentence 5 tells us that all reviews will be scheduled while inspectors are on an assigned regular tour of duty. Sentence 6 tells us that all of the inspectors were scheduled for reviews within six months. Therefore, all inspectors will be on an assigned regular tour of duty during the next six months.

Since question 19 states that all inspectors will be on an assigned regular tour of duty at some point during the next six months, question 19 is true.

### **20. Correct Answer: A) True**

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Sentence 2 tells us that all reviews will be scheduled to start between the hours of 8 a.m. and 2 p.m. Since all of the reviews will be scheduled between 8 a.m. and 2 p.m., it cannot be the case that any of the reviews are before 8 a.m. or after 2 p.m.

Since question 20 states that it is *not* the case that some reviews are scheduled to start before 8 a.m. or after 2 p.m., question 20 is true.

# PREPARING FOR THE CRITICAL THINKING SKILLS ASSESSMENT

The following section will give you some suggestions about how to approach the Critical Thinking Skills Exercise and some information that will help you develop your thinking skills.

## Reading the Paragraph

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Every paragraph in the assessment is drawn from an incident that is relevant to supervisors or managers in DHS. There may be facts in a paragraph that do not actually apply to every part of the organization or that may not always be true everywhere. In any case, it is important for assessment purposes that you **accept every fact in the paragraph as true**.

Remember that, in this part of the assessment, you are not being judged on job knowledge but rather on your ability to reason on the basis of given facts.

## Reasoning About Groups

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Sometimes the decisions that you make are based on information concerning things that can be grouped or categorized and on your knowledge of how the groupings or categories themselves are related. The decision that you need to make may concern only two categories or may concern several categories. Below you will read about statements in which groups are related by the terms “all,” “none,” and “some.”

### What To Do With “All” Statements

A statement about two groups that begins with the words “all” or “every” gives you information about how the two groups are related. Such a statement tells you that this relationship consists of the total inclusion of one group in another. For example, in the statement, “All the books on this set of shelves are about fraud,” the group made up of “the books on this set of shelves” is totally included in the group made up of “books about fraud.”

When people jump to conclusions, they have most likely misinterpreted a statement beginning with “all.” For example, from the statement “All the books on this set of shelves are about fraud,” you might be tempted to conclude that all of the office library’s books on fraud were on that set of shelves, but this conclusion is unsupported and might be wrong. The books on those shelves might only be part of the entire group of books on fraud. The sentence does NOT provide information on whether or not there are other fraud books that are placed elsewhere in the office library. Therefore, you have insufficient information to determine whether or not all of the office library’s books on fraud were on that set of shelves.

Premise:	All the books on this set of shelves are about fraud.		
Conclusion:	All of the office's books on fraud are on that set of shelves.		
	A) True	B) False	C) <b>Insufficient Information</b>

*That all the members of one group are also members of a second group is NOT a sure sign that all the members of the second group are also members of the first group.* “Every officer at this meeting is on the midnight shift” is not a sure sign that “all the officers on the midnight shift are at this meeting.” “All the four-wheel-drive trucks in this sector are gasoline-powered” is not a sure sign that “all the vehicles in this sector that are gasoline-powered are four-wheel-drive trucks.”

Premise:	Every officer at this meeting is on the midnight shift.		
Conclusion:	All the officers on the midnight shift are at this meeting.		
	A) True	B) False	C) <b>Insufficient Information</b>

On the other hand, when all the members of the first group are members of the second group, at least *some* members of the second group must also be members of the first group. For example, based on the fact that all of the tables in my house are made of wood, it must be true that (at least) some pieces of furniture in my house that are made of wood are tables. Based on the fact that all of Office X's vehicles that are under repair are in this garage, it must be true that (at least) some of the vehicles in this garage are from the Office X. Based on the fact that all of Officer Brown's seizures occur in secondary inspection, it must be true that (at least) some of the seizures in secondary inspection are accomplished by Officer Brown.

Premise:	All of Officer Brown's seizures occur in secondary inspection.		
Conclusion:	Some of the seizures in secondary inspection are accomplished by Officer Brown.		
	A) <b>True</b>	B) False	C) Insufficient Information

It is also important to keep in mind that when all the members of one group are also members of a second group, it cannot be the case that some members of the first group are not members of the second group. It also cannot be the case that no members of the first group are members of the second group. If we know that “all new officers are trained to speak Spanish” we also know that the statements “some new officers are not trained to speak Spanish” and “no new officers are trained to speak Spanish” are false. If we know that “every pilot receives training in emergency procedures,” we also know that the statements “some pilots do not receive training in emergency procedures” and “no pilots receive training in emergency procedures” are false.

Premise:	All new officers are trained to speak Spanish.		
Conclusion:	Some new officers are not trained to speak Spanish.		
	A) True	B) <b>False</b>	C) Insufficient Information
Conclusion:	No new officers are trained to speak Spanish.		
	A) True	B) <b>False</b>	C) Insufficient Information

## What To Do With “None” and “Not” Statements

Learning that something is **NOT** true is useful information. For example, you may learn that one group or category of things is **NOT** part of another group or category of things. Here, you can draw conclusions about either group as it relates to the other since you can count on the fact that the two groups have no members in common. If you can say “no reptiles are warm-blooded,” you can **also** say “no warm-blooded creatures are reptiles” because you know that the first statement means that there is no overlap between the two groups. You can also say that the statements “all reptiles are warm-blooded,” “some reptiles are warm-blooded,” “all warm-blooded creatures are reptiles,” and “some warm-blooded creatures are reptiles” are all false. If you know that “none of those deported aliens were Mexican,” you also know that the statements “all of those deported aliens were Mexican” and “some of those deported aliens were Mexican” are false. As you can see from these examples, disproved facts provide a great deal of information.

Premise:	None of those deported aliens were Mexican.		
Conclusion:	All of those deported aliens were Mexican.		
	A) True	<b>B) False</b>	C) Insufficient Information
Conclusion:	Some of those deported aliens were Mexican.		
	A) True	<b>B) False</b>	C) Insufficient Information

Many investigations hinge on disproved or negative facts. As in real-life, in the Critical Thinking Skills Exercise, you will see phrases or terms such as “It is not the case that” or “Not all of the” or words that begin with the prefix “non-.” All of these phrasings are ways to say that a negative fact has been established. Pay special attention to the entire statement that establishes a negative fact. “It is not the case that those applicants are Mexican” means “none of those applicants are Mexican.” “It is not the case that *some* of those applicants are Mexican” also means “none of those applicants are Mexican.” However, “it is not the case that *all* of those applicants are Mexican” only means “*some* of those applicants are not Mexican” and provides insufficient information to determine whether or not the statement “none of those applicants are Mexican” is true.

Sometimes, our speech habits can cause us to jump to conclusions. Most people would not make a statement such as “Some of the pizza has no pepperoni” unless they are trying to suggest at the same time that some of the pizza **does** have pepperoni. By contrast, a detective might make a statement such as “some of the bloodstains were not human blood” simply because only part of the samples had come back from the laboratory. The detective is trying to suggest that *at least* some of the bloodstains were not human blood. The rest of the bloodstains might or might not be human; there is insufficient information to make a determination. As you take the assessment, think about each negative phrase or term you find. Take care to assume only as much as is definitely indicated by the facts as given, and no more.

## Reasoning About Parts of a Group

The quantifying term “some” refers to a subset or subgroup of a larger set or group. For

example, in the statement “some officers are taking that training course,” “some officers” refers to a portion of the set of all officers. You should note, however, that the fact that we know that “some officers are taking that training course” implies nothing about the remaining portion of the set of officers; other officers may or may not be taking the training course. From the statement that “some officers are taking that training course,” we simply cannot infer anything about the remaining officers. There is insufficient information to determine if all officers are taking the training course or if some officers are not taking the training course. Unless information is provided in the paragraph to the contrary, you should treat “some” as meaning “at least some.”

Statements that refer to a portion of a set may contain other quantifiers such as “most”, “a few,” “almost all,” or a percent, such as 70%. Also, as discussed in the previous section, they can be negative, as in “Many officers are *not* fluent in French.” Remember, from this statement you may be tempted to infer that there are at least a few officers who *are* fluent in French, but that would be jumping to a conclusion. From this statement alone, you do not know about the entire set of officers and whether or not they are fluent in French. In this and similar cases, you should remember that the quantifier restricts the given information to a part of the group and that from this information on part of the group you cannot infer anything about the rest of the group. Unfortunately, costly errors can be made by neglecting this principle of sound reasoning.

As we said earlier, when all the members of one group are also members of a second group, (at least) some members of the second group must also be members of the first group. It is also true that when a portion of the members of one group are also members of a second group, (at least) some members of the second group must also be members of the first group. For example, based on the fact that some of this office’s supervisors are in the meeting, it must also be true that some of the people in the meeting are supervisors from this office. If it is true that many of the award-winning officers are from this office, then it must also be true that some officers from this office were award winners. If it is true that almost all of the helicopters that are used at this office are Boeing MD 600N’s, then it must also be true that some Boeing MD 600N helicopters are being used at this station.

Premise:	Some of this office’s supervisors are in the meeting.		
Conclusion:	Some of the people in the meeting are supervisors from this office.		
	<b>A) True</b>	B) False	C) Insufficient Information

Sometimes statements about parts of a set are made using the term “only.” For example, “only some of the officers are fluent in French.” This statement means “some officers are fluent in French, and some are not.” When “only” is used in this way, you have information about both parts of the entire group of officers: the part that is fluent in French and the part that is not.

The use of percentages also describes all of the parts of a group. For example, the statement “of all officers, 30% are fluent in French” describes the complete set of officers. From this statement, you can conclude both that 30% of the officers are fluent in French and that 70% of the officers are not fluent in French. From the statement, “of all officers, *only* 30% are fluent in French,” you can still conclude that 30% of the officers are fluent in French and

70% are not. The use of percentages describes all the parts of a group whether or not “only” is used.

When you see a paragraph describing parts of a group, read the paragraph carefully to see if that description is based on knowledge of the entire group or only on knowledge of part of the group.

## Reasoning About Linked Events (“IF-THEN” Statements)

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We are all familiar with the idea of a *chain of events* in which one thing leads to another thing, which in turn leads to a third thing, and so on. For example, “if a person is convicted of possession of a gram of marijuana in Aker County, that person is guilty of a misdemeanor, and persons found guilty of a misdemeanor in Aker County are fined by the court.” A chain of events supports reasoning backward and forward along the chain. Reasoning forward means that when the first thing happens, the later events will follow. For example, if you learn that Bill is guilty of a misdemeanor in Aker County, you know that Bill will be fined by the court. Reasoning backward means that the absence of later events suggests that the earlier events did not occur. For example, if you know that Bill has never been fined by the court in Aker County, you know that he has not been found guilty of a misdemeanor there. Furthermore, by reasoning backward from the fact that Bill has not been found guilty of a misdemeanor in Aker County, you know that he has never been convicted of possession of a gram of marijuana there.

The wording we typically use to indicate this kind of linkage between events includes the simple “if-then” statement in which the one event that precedes the other is tagged by “if” and the one that follows is tagged by “then.” An example would be the sentence “if Officer Ramirez gets rescheduled for the next shift, then the next shift will need not additional officers.” We also use the same language to describe linked events that have occurred in the past. An example of that structure would be the statement “if there are tracks in the ground, then an alien passed through this area.” In this statement, the latter part describes an event that must have occurred in the past in order for the tracks to be present.

There is more than one way of wording the if-then relationship between statements. When a sentence starts with the word “whenever,” it means that a linkage of statements is being described: for example, “whenever I wear my uniform, I represent the Department.” The phrases “each time” or “every time” mean the same thing: for example, “every time there is a power surge, my computer switches off.”

You can infer important information by reasoning backwards. For example, from the statement “when someone gets convicted of a third DUI in Aker County, that person goes to jail,” you can determine the truth of the statement “a person who has not been sent to jail has not been convicted of a third DUI in Aker County.” The absence of the latter event (being sent to jail) is a sure sign that the first event (convicted of a third DUI in Aker County) did not happen.

Premise:	When someone gets convicted of a third DUI in Aker County, that person goes to jail.		
Conclusion:	If a person has not been sent to jail, that person has not been convicted of a third DUI in Aker County.		
	A) True	B) False	C) Insufficient Information

However, *the absence of the first event is NOT a sure sign that the latter event did not occur*; someone who has not been convicted of a third DUI could be sent to jail for some conviction other than a third DUI. If we only know that the first event did not occur, we have insufficient information to determine whether or not the latter event occurred. Moreover, *the presence of the latter event is NOT a sure sign that the first event occurred*; someone in jail could have been sent there for being convicted of something other than a third DUI. If we only know that the latter event occurred, we have insufficient information to determine whether or not the first event occurred.

Premise:	When someone gets convicted of a third DUI in Aker County, that person goes to jail.		
Conclusion:	If someone has not been convicted of a third DUI in Aker County, that person has not gone to jail.		
	A) True	B) False	<b>C) Insufficient Information</b>
Conclusion:	If someone has gone to jail in Aker County, that person has been convicted of a third DUI in Aker County.		
	A) True	B) False	<b>C) Insufficient Information</b>

We introduced if-then statements by talking about a chain of events because the idea of a chain of events helps to demonstrate how the if-then statement works. However, as you may have noticed, not all of the examples were about two events. For example, “an alien passed through this area” is a statement about an event, but “there are tracks on the ground” describes the present condition of the ground, it does not refer to an event. This brings us to an advanced point that will refine your thinking about if-then statements. If-then statements connect two statements together, not two events. The two statements may both be about events, but it may be the case that neither statement refers to an event. In order to master the if-then statement, you must understand how to reason forward and backward about statements that are connected by if-then.

Finally, it is extremely important to pay close attention to the use of the word “only.” Consider the sentence “the safe will open if this key is used.” The first statement is “this key is used,” and the latter is “the safe will open.” From this sentence it is true that “if Bill uses this key, the safe will open” (by reasoning forward) and that “if the safe does not open, Bill did not use this key” (by reasoning backward). Now consider the sentence “the safe will open *only if* this key is used.” Unlike the first sentence, here the first statement is “the safe will open,” and the latter is “this key is used.” From this sentence it is true that “if Bill does not use this key, the safe will not open” (by reasoning backward) and that “if the safe is open, Bill used this key” (by reasoning forward). Finally, a sentence such as “The safe will open *if and only if* this key is used” is a very strong sentence which means that there is just one way

to open the safe -- with this key. This sentence is actually just a condensed sentence of the following two sentences: “the safe will open *if* this key is used” and “the safe will open *only if* this key is used.”

## Reasoning With Probabilities

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Some of the questions in the Critical Thinking Skills Exercise require you to determine the probability that an event will occur. You can determine a probability when you have definite information about a group. For example, if you know that 60% of all first-line supervisors have taken the Leadership Development Center’s Basic Supervision course, then you can conclude that any particular supervisor has a 60% chance of having taken the course. You can also conclude that any particular supervisor has a 40% chance of *not* having taken the course. However, there is insufficient information about the entire set of people who have taken the course to determine either the probability that a person who has taken the course is a first-line supervisor or the probability that a person who has taken the course is not a first-line supervisor.

Premise:	Sixty percent of all first-line supervisors have taken the Basic Supervision Course.		
Conclusion:	If Baker is a first-line supervisor, then the chances are 60% that Baker has taken the Basic Supervision Course.		
	A) <b>True</b>	B) False	C) Insufficient Information
Conclusion:	If Baker is a first-line supervisor, then the chances are 40% that Baker has not taken the Basic Supervision Course.		
	A) <b>True</b>	B) False	C) Insufficient Information
Conclusion:	If a person has taken the Basic Supervision Course, there is a 60% chance that the person is a first-line supervisor.		
	A) True	B) False	<b>C) Insufficient Information</b>

Here is another example. If you know that 55% of the officers at this port are senior officers, then you can conclude that any particular officer at this port has a 55% chance of being a senior officer. You can also conclude that any particular officer at this port has a 45% chance of not being a senior officer.

Continuing with the above example, there is insufficient information about the entire set of officers to determine the probability that an officer who is a senior officer is a senior officer at this port. Therefore, a test question such as, “if Officer Jones is a senior officer, then Officer Jones is a senior officer at this port, with a probability of 55%” should be answered “insufficient information.”

## A Few Final Cautions About Wording

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There are assessment preparation classes offered by private firms in some parts of the country. In some of these courses, students are advised against choosing any answer in an assessment of thinking skills if the answer starts with the word “all” or the word “none.” This is supposed to be useful advice because it is believed that most correct answers strike a balance between extremes and usually do not cover subjects that can be summarized in sentences beginning with “all” or “none.” If you have heard this advice before, you should ignore it for this assessment. “All” and “none” are valid quantifiers that occur in real-life situations and, consequently, you will be asked to work with them in this assessment.

In general, you should pay special attention to any words that provide information on categories or on linked events. This includes a wide range of negative words (such as “seldom” or “never” or “illegal” or “prohibited”) and negative prefixes (such as “non-” “un-” or “dis-”). It also includes positive words (such as “all” or “some” or “most” or “always”). You should also watch for connectors, such as “whenever” or “unless” or “except,” since these words sometimes contain key information about the relationships among the facts given in the paragraph.

English is a language that ordinarily uses single negatives. The word “not,” by itself, does the job of making a formal English sentence into its opposite: the opposite of “That bird is an eagle” is “That bird is not an eagle.” When an English sentence has two negatives, the sentence has a positive meaning. For example, a sentence that reads “This applicant is *not unworthy*” means that the application *is* worthy. The statement “the bell rang” could be stated “it is *not* the case that the bell did *not* ring.” The statement “almost all of these convicts are able to be paroled” could be stated “almost none of these convicts are unable to be paroled.”

## Remember These Tips When Taking the Critical Thinking Skills Exercise

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1. Do NOT use any outside factual information to reach your conclusion. Work exclusively with the information provided.
2. If you run out of time, guess. No points are deducted for incorrect responses.
3. Ignore any patterns of A’s, B’s, or C’s on your answer sheet. These correct answer positions are chosen randomly and there is no way to improve your chances by guessing based on an answer sheet pattern.