

## Critical Thinking Exam Practice Booklet

This booklet will have sample critical thinking questions similar to those on the Critical Thinking Proficiency exam. This booklet will cover five sections:

1. Inferences
2. Assumptions
3. Deduction
4. Interpretation
5. Arguments

The purpose of this booklet is to introduce you to the concepts of crucial thinking. Completing this booklet does not guarantee that you'll pass the test. It is NOT a cheat sheet; take the time to complete as many practice questions as you can. Rehearsal is the way to improve performance with any test.

The Academic Success Center provides **free** resources for Critical Thinking Exam preparation:

- Learning Specialists are available for assistance during regular hours. Receive one-on-one help for critical thinking skills in addition to verbal reasoning and test preparation skills.
- Tutors for the Critical Thinking exam are available. See walk-in tutoring hours for Philosophy, available at the ASC front desk.

Academic Success Center hours:

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## Tips for Inferences

Base inferences on facts given as much as possible. Examine the conclusions to see if they can be adequately supported.

The students wandered around the library a few minutes until they found the classroom.

What can you infer for from the above statement?

- The students were without a teacher.
- The classroom was in the library.
- The students didn't know where the classroom was.

What can you NOT infer from the above statement?

- The students were laughing and joking around.
- The classroom was hard to find.
- The teacher was in the classroom.
- The students were stupid.

In the first statements that were correct inferences, the conclusion can be supported by some information provided by the statement. In the last three, there is no direct support. For instance, you would assume that if there is a classroom and students, that a teacher would be there, but that cannot be supported by statement, is only an assumption. BUT you can infer that the students were lost by the words, "wandered" and "found".

## Inferences – Practice Exercise

There is a tribe on the island of New Guinea known as the Cargo Cult. For decades these people have been waiting for a great bird to swoop down from the clouds and drop riches and magical gifts on them. Their whole lives revolve around complicated ceremonies to make this happen. They are waiting for happiness to drop from the sky.

They're not as crazy as they seem. During World War II, huge airplanes did drop boxes of food and magical gifts ranging from mirrors to jeeps. Sometimes they dropped bombs. After the war, a tribal headman made the decision to recreate the wartime conditions and lure back the first big bird. So at every harvest, these people burn almost all their crops. Periodically they destroy their villages, too. Most of the men refuse to work at all, keeping a constant vigil.

Now this decision has been followed by an entire tribe of people for over forty years. And the Cargo Cult isn't just an oddity, either; it's a monumental headache to the government of Papua New Guinea – sometimes the cult members get frustrated and burn other tribes' crops and villages as well as their own. Reasonable explanations make no impression whatsoever. They continue to wait and burn. They are not known to be happy people.

Put a check mark next to the three statements that are correct inferences (Answers on next page).

1. \_\_\_\_ During the war, bombs destroyed some of the Cargo Cult's crops.
2. \_\_\_\_ Most of the women also refuse to work.
3. \_\_\_\_ The Cargo Cult members are neighborly.
4. \_\_\_\_ Cult members prefer the gifts they hope will fall from the sky to the sure benefits of work.
5. \_\_\_\_ The cult members feel they need jeeps to survive in the modern world.
6. \_\_\_\_ Waiting for something to bring them happiness has not made the Cargo Cult members happy.

Answers for Inferences exercise on Page 3:

1. Correct
2. Incorrect
3. Incorrect
4. Correct
5. Incorrect
6. Correct

Explanations:

The paragraphs mention recreating the war by burning crops and bombs were dropped on New Guinea. It is safe to infer then that bombs destroyed the crops.

The paragraph states that the most of the **men** did not work; there is **no** reference to women at all, so you **cannot** infer anything about women and working. Since certain things in the village must be done like cooking and planting, it would be safe to assume that women are doing the bulk of the work.

There is no statement in the paragraph that refers to the relationship of cult members to their neighbors, on that they burn and destroy villages which is **not** a neighborly gesture.

This is a correct inference since the paragraph describes the (male) cult members spending more time with the rituals to receive gifts than actually working.

Answer choice #5 is not a correct inference since the cult members think airplanes are great birds. Therefore, they would not know what jeeps are since we can infer that they do not know anything about modern machinery or vehicles.

This is a correct inference because the paragraph does state that the cult members are not happy people **and** the rest of the paragraph describes their efforts to receive gifts as unsuccessful.

**Remember:**

Your inferences must be supported by the statements. Don't make opinion based assumptions from your experiences of try to make and "extra leap" from the given facts. Everything you infer must be **directly** supported in the statement of passage.

## Assumptions

Assumptions are conclusions based on weak premises without proof or demonstration. An assumption draws from personal opinions that are outside the scope of the facts presented. It is important to distinguish between facts and opinions if you want to avoid making incorrect assumptions. Sometimes assumptions are necessary, but when reading critically for correct information, it is never sage to make a judgment just on your opinion alone.

What are assumptions?

Assumptions are unstated beliefs that influence observations. Assumptions must test the soundness of an argument and its conclusions. Two things you should consider about assumptions:

- Are the reasons true?
- Do they support the conclusion?

The reasons may be valid **but** must prove themselves sound.

- Are the reasons factual?
- Do the reasons support the conclusion?

Example: Melvin should be allowed to borrow Mom's new sport's car because;

1. He's never had an accident
2. He makes A's and B's
3. He has taken the trash out all week

What are the assumptions of Melvin's argument?

- That not having an accident means he is a responsible driver
- Good grades means you are a responsible person therefore a safe driver.
- Taking out the trash all week means he's responsible enough to drive the sports car.

The first reason, never having an accident, is valid in regards to driving. The last two, regarding grades and taking out the trash are not. Therefore, as a whole, Melvin's argument is unsound.

## Assumptions – Practice Exercise

For each statement, list the reason, conclusion, and assumption (answers on next page).

1. This is a boring class. I can't understand what the professor is saying.

Conclusion \_\_\_\_\_

Reason \_\_\_\_\_

Assumption \_\_\_\_\_

2. Health clinics in high schools could also provide information on birth control, which is good since the number of teenage pregnancies is increasing dramatically.

Conclusion \_\_\_\_\_

Reason \_\_\_\_\_

Assumption \_\_\_\_\_

3. Businesses should be allowed to fire people if they smoke cigarettes. Studies show that employees who smoke are sick more often than those who do not.

Conclusion \_\_\_\_\_

Reason \_\_\_\_\_

Assumption \_\_\_\_\_

4. Anyone who wants a job can get one; look at all the want ads in the newspaper.

Conclusion \_\_\_\_\_

Reason \_\_\_\_\_

Assumption \_\_\_\_\_

Answers for Assumptions Exercise, Page 6:

Exercise #1

- Conclusion – Professor is boring.
- Reason – Professor is difficult to understand.
- Assumption – Interesting classes have instructors who are easy to listen to.

Exercise #2

- Conclusion – Health clinics in high schools will reduce teenage pregnancies.
- Reason – Health clinics can give information about birth control.
- Assumption – If high school students receive birth control information, teenage pregnancies will drop.

Exercise #3 –

- Conclusion – Businesses should be allowed to fire cigarette smokers.
- Reason – Cigarette smokers are sick more often than non-cigarette smokers.
- Assumption – Being sick more often means you are a poor employee.

Exercise #4

- Conclusion – Anyone who wants a job can get one.
- Reason – There are many want ads in the newspaper.
- Assumption – There are enough jobs for everyone since there are many want ads.

## Deductive Reasoning

In deductive reasoning, a conclusion can be followed with certainty from the premises, as compared to inductive reasoning in which a conclusion can be drawn based on probability and not certainty.

## **Inductive Reasoning**

- Specific to general
- Purpose is to reach a conclusion for testing and application.
- Thinking guided by theories, observation, research, and investigation. Insights and discoveries from data can be formed.
- Tests verify measure of truth in terms of reliability, accuracy, applicability, replicability.
- Conclusion is a hypothesis or statement of probability.
- Indicator words: probably, improbable, plausible, implausible, likely, unlikely, reasonable.
- Even if premises are true, conclusion can still be false. More testing could be required.

## Deductive Reasoning

- General to specific
- Purpose is to research conclusion that cannot be false.
- Applies known law to specific circumstances
- Truth of premises is assumed or determined by reasoning.
- Conclusion is final and definitive.
- Indicator words: necessarily, certainly, absolutely, definitely.
- If the premises are true, or assumed to be true, and the reasoning valid, the conclusion cannot be false - it must be true.

## Deductive Reasoning – Exercise

Examine why these two set or reasoning are deductive and inductive.

### Deductive

- All public trains are faster than car transport.
- I want faster-than-car transport.
  - (Therefore)
  - I will take public trains.

### Inductive

- The public trains at this station are fast.
- The public trains are faster than cars.
  - (Therefore)
  - It's always better to take public trains.

## Answers for Deductive and Inductive Reasoning:

### Deductive

- All public trains are faster than car transport.
- I want faster-than-car transport.
  - (Therefore)
  - I want to take public trains.

Given that the first two statements (or premises) are true, the conclusion is final, especially since it is derived from the premises. The conclusion is also a general statement made from two specific facts.

### Inductive

- The public trains at this station are fast.
- The public trains are faster than cars.
  - (Therefore)
  - It's always better to take public trains than cars.

You cannot say whether it's "always" better to take public trains than cars, since it would have to be proven. It could "probably" be better, but it would be necessary to support that conclusion with facts and solid observations.

### **Deductive Reasoning – Exercise**

For the following deductive arguments, put "C" if the conclusion is correct, "I" if it's incorrect. (Answers on bottom of page.)

1. \_\_\_\_\_            If the two parties agree, then there is not a strike.  
                                 The two parties agree.  
                                 Therefore, there is no strike.
  
2. \_\_\_\_\_            If the two parties agree, then there is not a strike.  
                                 There is not strike.  
                                 Therefore, the two parties agree.
  
3. \_\_\_\_\_            If the two parties agree, then there is no strike.  
                                 The two parties do not agree.  
                                 Therefore, there is a strike.
  
4. \_\_\_\_\_            If the two parties agree, then there is not a strike.  
                                 There is a strike.  
                                 Therefore, the two parties do not agree.

## Interpretation

Interpretation requires a combination of inference and inductive reasoning skills. Interpretations are based on “beyond a reasonable doubt,” based on the facts given and usually suited for research. It requires developing a hypothesis through emerging evidence.

Also, there can be many different interpretations for one observation. Observation and interpretation can happen almost at the same time since there are words and symbols that have an immediate meaning for us.

It is important to remember that interpretations can change if they don't prove true. For example, if a baby is crying, a parent may interpret that as, “The baby wants me to rock her.” If the parent rocks the baby and the baby is still crying: “She has gas,” or “She has a diaper rash.”

### **Interpretation – Exercise**

For each statement, determine whether it is an observation or interpretation by marking “O” or “I”. ( Answers at the bottom of page.)

1. \_\_\_\_\_ The dress is red.
2. \_\_\_\_\_ That is a nice shirt.
3. \_\_\_\_\_ Statistics is a difficult course.
4. \_\_\_\_\_ Bill Clinton was an excellent president.
5. \_\_\_\_\_ Bill Clinton's presidency received scrutiny by the press.
6. \_\_\_\_\_ Cheetah's are fast animals.
7. \_\_\_\_\_ Wayne State University is an urban university.
8. \_\_\_\_\_ SUVs are very dangerous to drive.

## Evaluation of Arguments

An argument is an assertion of a particular viewpoint made up of statements. Arguments are strong or weak depending on how well they are supported by the available evidence. Strong arguments have conclusions that are directly linked by the supporting details. It helps to identify the conclusion of the argument and then look at how the argument is supported by the reasons. Reasons for an argument can be opinion, statements, or facts, but they all must have direct support for the conclusion of the argument.

Example:

Conclusion: There should be no drinking on college campuses.

1. Drinking lowers the intelligence of the student body.
2. Drinking could lead to other irresponsible behavior like date rape and drunk driving.
3. You're not ready to drink until you get a degree.

Premise #1 is very weak since it must be proven as a fact and makes an assumption about drinking. Premise #3 is also weak since it is making a generalization. Premise #2 is a strong argument since drinking increases the probability of drunk driving and can be directly related to incidents such as date rape.

### Evaluating Arguments – Exercise

Evaluate the following premises that could serve as an argument for the conclusion, putting “S” for strong and “W” for weak. (Answers on bottom of page.)

1. \_\_\_\_\_ It will only give degrees to lazy people.
2. \_\_\_\_\_ It costs too much money.
3. \_\_\_\_\_ It doesn't solve the problem of inadequate education.
4. \_\_\_\_\_ It requires special programs for minorities.
5. \_\_\_\_\_ It is unfair to mainstream students.
6. \_\_\_\_\_ It doesn't directly solve the problem of discrimination in this country.

1. W, 2. W, 3. W, 4. S, 5. S, 6. S