CRITICAL REASONING

Verbal Strategy Guide

This unique guide illustrates how to deconstruct arguments using innovative diagramming techniques designed to build speed and improve accuracy. Understanding the underlying structures of arguments is the key to quick reading and precise analysis.

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Dear Student,

Thank you for picking up one of the Manhattan GMAT Strategy Guides—we hope that this book makes it easier for you to read, understand, and solve Critical Reasoning questions.

As with most accomplishments, there were many people involved in the various iterations of the book that you're holding. First and foremost is Zeke Vanderhoek, the founder of Manhattan GMAT. Zeke was a lone tutor in New York when he started the Company in 2000. Now, eight years later, MGMAT has Instructors and offices nationwide, and the Company contributes to the studies and successes of thousands of students each year.

These 4th Edition Strategy Guides have been refashioned and honed to reflect the continuing experiences of our Instructors and our students. We owe much of these latest editions to the insight provided by our students. On the Company side, we are indebted to many of our Instructors, including but not limited to Josh Braslow, Dan Gonzalez, Mike Kim, Stacey Koprince, Jadran Lee, Ron Purewal, Tate Shafer, Emily Sledge, Noah Teitelbaum, and of course Chris Ryan, the Company's Lead Instructor and Director of Curriculum Development.

At Manhattan GMAT, we continually aspire to provide the best Instructors and resources possible. We hope that you'll find our dedication manifest in this book. If you have any comments or questions, please e-mail me at andrew.yang@manhattangmat.com. I'll be sure that your comments reach Chris and the rest of the team—and I'll read them too.

Best of luck in preparing for the GMAT!

Sincerely,

Andrew Yang
Chief Executive Officer
Manhattan GMAT

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of
CRITICAL REASONING

ARGUMENT STRUCTURE

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ARGUMENT STRUCTURE

Critical Reasoning questions on the GMAT involve reading brief arguments (each argument is generally one to three sentences long) and answering questions relating to those arguments.

In order to analyze GMAT arguments, it is important to understand their basic structure:

Premises + (Assumptions) = Conclusion

In words, premises and assumptions lead to a conclusion.

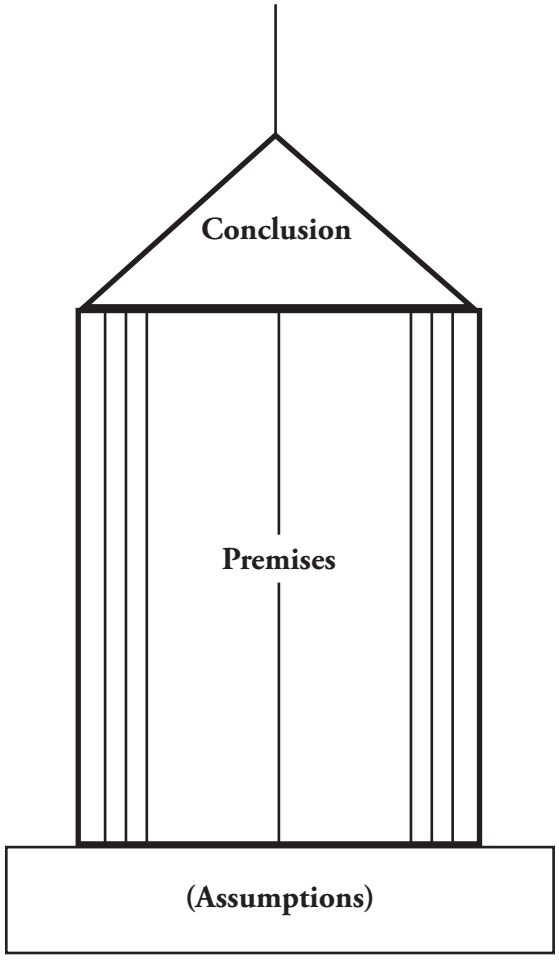
PREMISES are STATED pieces of information or evidence that generally provide support for the given conclusion. They may be facts, opinions, or claims. If they are opinions or claims, they will not be the overall claim the author is making; rather, they will be some intermediate claim the author is using to support the overall claim (or conclusion).

Premises present facts or claims that usually support the conclusion of the argument.

ASSUMPTIONS are UNSTATED parts of the argument that are NECESSARY to reach the given conclusion. In the formula above, the word **Assumptions** is put in parentheses to signal that assumptions are NEVER stated in the written argument.

The main point of the argument is the CONCLUSION, which is logically supported by the assumptions and premises. Conclusions are in the form of an opinion or a claim.

You can think of the conclusion of an argument as the top of a building, supported by the building itself (the premises) and the unseen underground foundation (the assumptions).



Identifying the Parts of an Argument

In order to do well on GMAT Critical Reasoning questions, you must be able to identify the parts of an argument quickly. Consider the following argument:

> Studying regularly is one factor that has been shown to improve one's performance on the GMAT. Melissa took the GMAT and scored a 500. If she studies several times a week, Melissa can expect to improve her score.

In analyzing an argument, **you should first look for the conclusion**, which is the main point of the argument. The conclusion is often the last sentence of an argument, but not always. Sometimes the conclusion appears as the first sentence.

The conclusion comes last logically, but does not necessarily appear last in the text of the argument.

Where is the CONCLUSION? The main point of this argument is the last sentence:

> If she studies several times a week, Melissa can expect to improve her score.

After finding the conclusion, look for the premises that lead to the conclusion. Premises include ALL the pieces of information written in the argument (except the conclusion). Premises provide evidence that usually supports, or leads to, the conclusion.

Where are the PREMISES? Since everything except the conclusion is considered a premise, each of the first two sentences is a premise.

> Premise: Studying regularly is one factor that has been shown to improve one's performance on the GMAT.
> Premise: Melissa took the GMAT and scored a 500.

Often, all you will need to find are the conclusion and the premises. Sometimes, however, the GMAT will ask you to identify an assumption.

Where are the ASSUMPTIONS? Assumptions are unstated parts of the argument. Therefore, you will NEVER find an assumption stated in an argument. However, assumptions are NECESSARY to reach the given conclusion. For example, one assumption in this argument is that studying several times a week qualifies as studying regularly.

Finding the Conclusion

Arguments on the GMAT are generally written so that the conclusion is fairly easy to identify. Most of the time, the conclusion is presented in one of three common ways. Since two of these ways involve the question, **you should read the question first when you approach any new Critical Reasoning problem.**

Most GMAT arguments provide clues about the location of the conclusion via keywords in the argument or in the question itself.

Type A: Question contains the conclusion.

> Some universities are changing the structure of financial aid awards given to students who cannot afford to pay full tuition. In the past, the largest proportion of financial aid distributed to students was in the form of federal, interest-deferred loans. Now, these institutions are awarding a higher proportion of grants, money that students do not need to pay back.
>
> If, on the basis of the evidence above, it is argued that the shift from loan to grant awards gives students the freedom to choose careers in less lucrative professions, which of the following, if true, would most seriously weaken that argument?

The CONCLUSION of this argument is given in the question: The shift from loan to grant awards gives students the freedom to choose careers in less lucrative professions. This assertion is the main point of the argument. (The question goes on to ask for a way to weaken the argument. We will discuss how to address this kind of question later in this guide.)

Type B: Question hints at the conclusion in the argument.

> A program instituted by a state government to raise money allows homeowners to prepay their future property taxes at the current rate. Even if the government were to raise the tax rate in a subsequent year, any prepaid taxes would allow the homeowner to maintain taxes at the lower rate, lowering the overall property tax burden over time. For this reason, homeowners should participate in the program.
>
> Which of the following is an assumption that supports the indicated rationale for homeowners participating in the program?

The CONCLUSION of this argument is hinted at in the question. The word *rationale* points us to the final sentence: For this reason, homeowners should participate in the program. *Reason* and *rationale* are synonyms.

Incidentally, the reason is located in the sentence prior to the conclusion: any prepaid taxes would allow the homeowner to maintain taxes at the lower rate, lowering the overall property tax burden over time. In essence, the question is asking us to determine an assumption that connects this premise and the argument's conclusion.

Type C: Argument contains an obvious conclusion.

> Transportation safety data indicate that trains are safer than cars, and that airplanes are safer than trains. Injuries and deaths per passenger-mile of airplane travel are less than one-tenth the figure for car travel. Therefore, buses must also be more dangerous than airplanes.
>
> Which of the following, if true, most significantly weakens the argument?

The question contains no specific reference to any information in the argument. In this case, for the majority of questions, the argument will contain a very clear signal word or expression that indicates the conclusion. In this case, the signal is the word *Therefore* at the beginning of the third sentence.

Read the question first to determine the conclusion efficiently.

Which type is this example?

> Certain genetic diseases are more prevalent among certain ethnic populations. For example, Tay Sachs disease, a usually fatal genetic condition caused by the build-up of gangliocides in nerve cells, occurs more frequently among Ashkenazi Jews than among the general population.
>
> Which of the following assertions can most properly be drawn from the above information?

Where is the conclusion? The question does not contain any clues; neither does the body of the argument.

In fact, the argument above does not contain a conclusion at all; both sentences present factual information rather than a claim. Some GMAT Critical Reasoning questions ask *you* to draw a conclusion, make an inference, or explain a situation using only a passage of premises. In these cases, the conclusion will be in the answer choices (though, as you will see in the "Draw a Conclusion" chapter, the correct conclusion will not look very much like the kinds of conclusions that other GMAT arguments usually present).

Common Signal Words for Argument Parts

As we discussed earlier, the conclusion of an argument is often preceded by certain signal words. You should be on the lookout for these conclusion signals:

Therefore	**So**
As a result	**Consequently**
Suggests	**Thus**
Indicates	**Hence**
Accordingly	**It follows that**

Conclusions can also be signaled by their strong tone, often marked by "opinion" words such as **should** ("This law **should** be enacted…").

When the conclusion is not obvious, first identify all claims, then determine which claim follows logically from all the others.

Likewise, certain other words signal premises. Here are the most common premise signals:

Since	**Because**
Due to	**Given that**
As a result of	**As**

An Alternate Way To Find the Conclusion

This section discusses what to do when the primary patterns for finding the conclusion do not apply.

As we discussed earlier, the primary patterns will appear the vast majority of the time. On a few minor and/or more difficult questions, however, we may need to work a little bit harder to find the conclusion.

You should not use this method unless the primary patterns do not apply, as this alternate method is more difficult and could lead you to the wrong conclusion.

First: Identify All Claims

In order to separate the conclusion from the premises, first identify all claims made in the argument. You should distinguish claims from facts, which can be proven true. Claims often contain one or more of the following three types of language:

A. *Predict the Future*. Look out for verbs or verb constructions that are in the future tense or that otherwise refer to the future. For example:

will, should, can be expected to, could result in, are likely to, etc.

Most statements that take place in the future are claims. For example:

- If she studies several times a week, Melissa **can expect to** improve her score.
- Homeowners **should** participate in the program in order to decrease their overall property tax burden over time.

B. *Subjective Opinion*. Anything that expresses an opinion is likely to be a claim. Similarly, anything that cannot be proven, only argued, is likely to be a claim. For example:

- The proposal to hire additional dogcatchers in Newtown is a mistake.
- Ballroom dancing is more of an art form than a sport.
- The mayor's plan is likely to fail.

C. *Cause and Effect*. Cause and effect statements are signaled by a number of key words:

- **If** X happens, **then** Y happens.
- **As a result of** *or* **because of** *or* **since** X, Y will happen.
- X happens, **so** Y will result.

A statement that **predicts the future**, **offers an opinion**, or **posits a cause and effect relationship** is a good candidate for the conclusion of the argument.

If you find only one claim, you are done—that is the conclusion! If you find more than one, move on to the second step.

Second: Use the "Therefore" Test

The conclusion of the argument is the FINAL claim. In other words, every other claim leads to the conclusion, which is logically last in the sequence of events.

If you have two claims, X and Y, ask yourself: Does X lead to Y? Or does Y lead to X? To apply the "Therefore" test, try saying the claims two ways:

(1) "X, **therefore** Y." If this works, Y is the conclusion.

(2) "Y, **therefore** X." If this works, X is the conclusion.

For example:

> Manager: the new manufacturing process should save us time in the end, even though the first step of the five-step process will take twice as long as it does under the old process. Far fewer of the components will be found defective and the sole purpose of steps two and three under the old process is to weed out defective components. As a result, we should be able to eliminate two of the five steps in the existing manufacturing process.
>
> Which of the following would be most useful in evaluating the claim made in the argument?

The question does not tell us what we should focus on as the conclusion. We have two major claims in this argument:

X: *The new process should save us time.*
Y: *We should be able to eliminate two of the five steps in the process.*

So we have two options: X, therefore Y. Or Y, therefore X.

X, therefore Y: *The new process should save us time;* ***therefore****, we should be able to eliminate two of the five steps in the process.*

Y, therefore X: *We should be able to eliminate two of the five steps in the process;* ***therefore****, the new process should save us time.*

Which way is right? In this case, Y leads us to X: first we need to eliminate two of the five steps, and then, as a result of that elimination, the new process saves time.

X is the final claim in the logical chain of events, so X is the conclusion. The deduction that takes place last *logically (or chronologically) in the sequence of events* is the conclusion. Note that the conclusion will not necessarily appear in the last sentence of the argument.

If the primary ways to find the conclusion do not work, use the "Therefore" test.

Also, notice that you could have been distracted by a signal expression in front of claim Y: *As a result.* These words tell you that the claim Y is a result of something else (in this case, other premises). But you should not assume that claim Y is the conclusion; in fact, it leads to another, even bigger claim (which is the conclusion).

To test the logical relationship of two claims, you can use other connectors besides *therefore.* Other words or expressions that work the same way include *so, thus,* and *as a result.* Any of these expressions can signal the conclusion.

Remember that you should only use the "Therefore" test if the question does not tell you what the conclusion is or does not give you keywords from the argument that point to the conclusion. If the question does provide such information, that information trumps the "therefore" test.

Problem Set

Now that you have completed your study of ARGUMENT STRUCTURE, it is time to test your skills on a variety of different arguments. The passages below exhibit a representative sampling of argument structures. For each argument, complete the following in a notebook:

(1) Find and write out the conclusion of the argument. The conclusion may be an entire sentence or part of a sentence. Try to be as accurate as possible in locating the exact words of the conclusion. Indicate how you found the conclusion:

(A) The question contains the conclusion.

(B) The question hints at the conclusion in the argument.

(C) The argument contains an obvious conclusion.

(D) An alternate method (for instance, you identified the claims and if necessary used the "Therefore" test).

(2) If the argument does not include a conclusion, indicate this with the words **no given conclusion**.

Note that you are not actually answering these questions! You are only identifying the conclusion of each argument. During the actual exam, of course, you will not have time to consider which strategy you are using or which type of argument you are facing—at that point, these ideas should be second nature to you. Finding conclusions is a skill that *must* be mastered in order to succeed in answering Critical Reasoning questions accurately.

1. The Chinese white dolphin is a territorial animal that rarely strays far from its habitat in the Pearl River Delta. In recent years, increasing industrial and agricultural runoff to the Delta's waters has caused many white dolphins to perish before they reach breeding age. Unless legislation is enacted to ensure there is no further decline in the Delta's water quality, the Chinese white dolphin will become extinct.

   Which of the following, if true, undermines the claim that the Chinese white dolphin will disappear without legislation to preserve water quality in the Delta?

2. A series of research studies has reported that flaxseed oil can have a beneficial effect in reducing tumor growth in mice, particularly the kind of tumor found in human post-menopausal breast cancer. Thus, flaxseed oil should be recommended as an addition to the diets of all postmenopausal women.

   Which of the following is an assumption upon which the argument depends?

1. Conclusion type A: the conclusion is given in the question. Third sentence: **Unless legislation is enacted to ensure there is no further decline in the Delta's water quality, the Chinese white dolphin will become extinct.**

2. Conclusion type C: Argument contains obvious conclusion. Second sentence: **Thus, flaxseed oil should be recommended as an addition to the diets of all post-menopausal women.**

3. No conclusion given.

4. Conclusion type B: the question hints at the conclusion. End of second sentence: **Pure Springs claims that the company produces the best tasting bottled water currently available.**

5. Conclusion type C: Argument contains obvious conclusion. Third sentence: **Thus, at least concerning the liver, it can be concluded that drinking alcohol is no more dangerous than abstaining from alcohol.**

6. No conclusion given.

7. Conclusion type B: the question hints at the conclusion. First sentence: **The cutback in physical education is the primary contributing factor to North High School's increasing failure rate on the high school graduation examination.**

8. Conclusion type C: Argument contains obvious conclusion. End of third sentence: **For this reason, individuals should sample a minuscule portion of each of these foods to determine whether a particular food allergy is present.**

9. Conclusion type A: the conclusion is given in the question. First sentence: **To increase the productivity of the country's workforce, the government should introduce new food guidelines that recommend a vegetarian diet.**

10. Conclusion type Alternate: the primary method does not apply, so we have to use the "Therefore" test. Second sentence: **This wall, however, will do little to actually reduce the number of illegal immigrants.**

Claim #1: **This wall, however, will do little to actually reduce the number of illegal immigrants.**

Claim #2: **individuals will simply develop other creative ways to enter our nation**

Try #1 leading to #2: the wall will not do much to reduce the number of illegal immigrants; therefore, people will find other ways to enter the country.

Also try #2 leading to #1: people will find other ways to enter the country; therefore, the wall will not do much to reduce the number of illegal immigrants.

The second version is correct. In this case, #2 leads to #1.