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Essential
High-Yield
Strategies
for the GMAT
Critical Reasoning



a comprehensive overview of strategies and
problem-by-problem walkthroughs



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GMAT Strategies for Critical Reasoning Problems Introduction

In this guide, we will cover the critical reasoning question types that you will encounter, devise strategies for attacking each of these questions, and identify pitfalls that you should avoid when taking the test. Critical reasoning gives test-takers the opportunity to showcase their mastery of logical thinking. The GMAT is testing whether you can draw conclusions, find assumptions, and identify logical fallacies. This guide is something that will be helpful to read through before diving into practice problems. The strategies should inform your methods of study and also serve as a reference should more difficult question types arise.

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I. Getting Started

1. **You never want to read the question more than once.**

This comes up in several of the sections on the exam, but is of particular importance in critical reasoning due to the length and complexity of the passages. But how can you avoid reading and re-reading? Diagrams. Make sure to take simple notes as you read the passage and attempt to identify trends, assumptions, and conclusions. Often this diagram will help you identify the correct answer better than reading the passage several times.

2. **Rephrase the question.**

Critical reasoning questions are intentionally worded in such a way as to mislead and confuse the reader. For this reason, it is crucial to rephrase awkwardly worded questions to make them more manageable. There are a few ways to rephrase:

- **Remove the word not.** Consider this: "Which of the following does not support the author's conclusion?" Again, rephrase this as "Which weakens the conclusion?"
- **Remove the word except.** If a question is written as "All of the following strengthen author's argument except:" then rephrase it in your heads "Which weakens the argument?" The revision is concise, to the point, and most importantly, not confusing.
- **Use simpler vocabulary.** If the question asks you "Which of the following, if true, is the most likely explanation for the discrepancy described above?" then rephrase this as "How can this be?" Again, this is a much simpler construction that is unlikely to cause problems for you as you find an answer

3. **Beware of the cause and effect fallacy.** There are several fallacies that make arguments appear logical even if they are fundamentally flawed. However, the most frequent of these to appear on the exam is the cause and effect.

Consider the following example:

Three years ago, music was introduced into the curriculum at School A. Since then, grades have risen by more than 10% overall. School B, however, has seen grades decline over the same time period. It is logical, therefore, that school B should introduce music into its curriculum in order to raise students' grades.



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Which of these statements, if true, would most seriously weaken the author's argument?

(a) The music program at School A was started by a group of gifted students from School C after the two schools merged.

Let's not bother with other answer choices here, but instead think about what answer choice (a) is telling us. Drawing a diagram of the author's argument, we can say something like:

music ↑ so grades ↑

However, choice (a) says that School A merged with School C, and afterwards the school both founded a music program and saw its grades increase. It is very logical that instead of one causing the other that instead School C was full of gifted students who both enjoyed music and got good grades. This is called the cause and effect fallacy. While an argument may seem to logically imply that one event implies another, there is often a third event that actually caused both.

II. Question Types

There are many different types of questions on this section. The most common are:

- Find the assumption
- Draw a conclusion
- Strengthen the conclusion
- Weaken the conclusion

After this very common set, there are two that appear somewhat frequently, which we will also address and provide examples of below:

- Explain an event/discrepancy
- Evaluate the conclusion

Lastly, there are several question types that rarely come up, but it is good to recognize them and understand the directions in case they do:

- Analyze the argument structure
- Resolve a problem
- Provide an example
- Restate the conclusion
- Mimic the argument



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III. Essential Strategies

Now that we've gotten some of the basics of the section out of the way, let's talk through the general strategy that is applicable to all question types.

- Identify the question type
- Diagram the argument
- Pinpoint the ask
- Hypothesize the answer
- Narrow down the choices

1. Identify the question type

This first step in the process is typically the easiest. Before beginning to read the passage, make sure to understand what type of question it is so that you can frame your reading accordingly. If you are looking to draw a conclusion, you will end up reading the passage somewhat differently than if you are looking for a flaw in the author's argument. The question type appears at the end of the passage, and if you do enough practice, you will realize that there are only a few different ways that each question type may be worded.

Diagram the argument

As discussed previously, you never want to read the passage more than once. For this reason, it is essential to take down notes of the most important points. A diagram is one of the easiest ways of doing this. Let's say, for example, that a company's sales are going up but its profits are going down. The author may draw a conclusion that the company's price is too low or that the sales are growing in the wrong geographies. A diagram of this argument should include shorthand (that you understand) and arrows:

Sales ↑ Profits ↓ → Price too high

Now that we have a diagram, we don't have to read the, often lengthy, prompt again. Instead, we can begin to look right at the answer choices. Suppose one of the answers said that supply of raw materials has contracted greatly, driving up the cost of these inputs. If raw material costs are going up, this would be a plausible reason for declining profits despite rising sales. This is likely to be the answer if the question asks about weakening the conclusion.



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2. Pinpoint the ask

This is likely the most difficult step in the solution process. However, it is also the most important. It is impossible to answer a question well unless two things are true: (1) you fully understand what the question is asking, and (2) you fully understand the facts on which the question is based. Let's talk about some ways in which we can better pinpoint what a question is asking:

- *Rephrase the question.* Per discussion above, eliminating difficult vocabulary and confounding words like *except* and *not* will help give some clarity to the question.
- *Focus on boundary phrases.* Boundary phrases limit the scope of a question. Some common ways this is achieved is to limit in number (e.g. using percentages or qualifiers like *some*), to limit in meaning (e.g. incorporating the phrase *...provided that it is not...* or something similar), or to limit in time (e.g. focusing on the short run, long run, next year, etc.). Look out for clues that provide bounds on a question accordingly.
- *Focus on extreme words in the argument.* Words such as *always*, *never*, *everyone*, etc. often inherently weaken an argument. Just because crime in a city has declined does not mean that crime never occurs, or that nobody is a victim of crime. These extreme words should signal a red flag that the arguments presented may be flawed. In many cases, the opposite of *never* is *sometimes* or even *once*. If a conclusion is made that something never happens, then an anecdote about it happening just once seriously undermines that conclusion.

3. Hypothesize the answer

Now that we fully understand what the question is asking, we can hypothesize what the answer might be. As you are reading through the passage and diagramming the argument, try to think about what the answer might be. Let's say the argument can be summarized as "it did not rain for the entire month of April, but Town A did not experience a drought." What could be some possible reasons for this? Well, maybe it rained a lot in March. Or maybe it rained in nearby Town B, which is the actual location of the reservoir for Town A.

By spending up to 10-15 seconds brainstorming possibilities, two things can happen. One, you could realize that one of the answer choices is an exact match to your hypothesis. This is great, and you are likely to be done with that question. Two, if you are not so lucky, then you have at least spent some time thinking about what the answer choices may look like. If the actual answer is something along the lines of "It was an unseasonably cold April and there was at least twelve feet of snow," you will be able to more easily identify this as a possible answer.



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4. Narrow down the choices

Look for answers that are similar to your hypothesis; you would be surprised how often you can correctly predict the answer to a critical reasoning question. If you are not able to, however, use process of elimination and focus on boundary conditions in order to find the correct answer.

For Strengthen the Conclusion and Weaken the Conclusion questions, there is an extra step you can take to make the elimination process even easier. On a sheet of paper, write down the answer choices A-E. Then, next to each letter, write down whether the fact strengthens, weakens, or does neither to the conclusion. Doing so will help to keep the answer choices organized and may lead to fewer errors choosing an answer choice that goes the wrong way or is out of scope.

Let's practice this procedure with some examples of different question types.

IV. Question Types and Examples

Question Type: Find the Assumption

Find the assumption questions fall perfectly into the procedure outlined above. Before you can find the assumption, however, you must find the conclusion. Here's an example:

For several years, Nighttime News attracted fewer viewers than World News, which broadcasts its show at the same time as Nighttime News. Recently, the producers of Nighttime News added personal interest stories and increased coverage of sports and weather. The two programs now have a roughly equal number of viewers. Clearly, the recent programming changes persuaded viewers to switch from World News to Nighttime News.

Which of the following is an assumption on which the author relies?

- (A) Viewers are more interested in sports and weather than in personal interest stories.
- (B) The programming content of Nighttime News is more closely aligned with the interests of the overall audience than is the content of World News.
- (C) Some World News viewers liked the Nighttime News programming better than they liked the World News programming.



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(D) There are other possible causes for an increase in the number of viewers of Nighttime News, including a recent ad campaign that aired on many local affiliates.

(E) The quality of World News will remain constant even if Nighttime News improves.

Step 1: We first identify the question type. As implied by the category header, this is a “Find the Assumption” question and we are looking for a logical gap in the author’s argument.

Step 2: We can continue by diagramming the argument:

New programming → viewership ↑

Step 3: Hypothesize. Here, we can be creative in analyzing the argument and come up with some ideas of what could be wrong.

In this case, the argument is cause & effect, a good indicator of potential fallacy issues. Every time a question defines this relationship, think of it as a red flag and try to look for other possible causes for the “effect”. For example, maybe the new programming changes were decided upon by a new widely-liked news anchor. In this case, the new anchor may have caused both the new programming and the viewership increase, and a cause and effect relationship between these events is flawed. Also, perhaps World News got much worse over the same time period. This would be a clear reason for viewers to shift, having nothing to do with the new programming.

Step 4: Narrow down the answer choices and hone in on the solution

Looking through each of the answer choices, there may be no clear standout. However, if you look at answer choice E, it states exactly what our hypothesis before did, that World News could have gotten worse. Therefore, the author must be assuming that World News remained the same to suggest that the viewership switch was due to a quality change in Nighttime News. This is the correct answer.

While this may not always find the solution to the question, using cause & effect as a red flag will often lead you in the right direction in find the assumption questions.

Question Type: Draw a Conclusion

These types of questions ask the reader to look at a series of statements and draw an appropriate conclusion. If the passage said “All apples are fruits and Sarah likes all fruits,” then an appropriate conclusion could be “Sarah likes apples.” This is a



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very basic example, but it illustrates some of the common pitfalls in these question types.

Watch out for answer choices that are out of scope. In the apple example, such conclusions could be as simple as “Sarah likes broccoli,” which is clearly out of the scope of the passage. Another conclusion could be “Sarah is a healthy eater” or “Sarah’s favorite fruits are apples.” While somebody who eats a lot of fruit may eat other healthy things as well, and apples may very well be Sarah’s favorite fruit, these conclusions are still not directly supported by the statements. What about “Sarah likes bananas?” While this may not seem relevant, the passage does say that Sarah likes all fruits, so this too would be a logical conclusion to draw.

Often these questions are worded in a tricky way, and the test makers provide answer choices that draw exactly the opposite conclusion but seem very relevant upon first glance. Doing a simple rephrase, as described above, is a good way to not fall into this trap.

Let’s do an example:

Of all of the high schools in the United States, Judd Academy is the one with the largest number of alumni serving in the Air Force. Knoxworth High School, however, is the school with the most graduates serving in the military as a whole, including the Army, Navy, Air Force, Marines, and Coast Guard.

Which of the following, if true, is most clearly supported by the statements above?

- (A) Knoxworth is the most patriotic town in the nation.
- (B) Judd Academy has fewer graduates serving in the Navy than does Knoxworth High School.
- (C) Judd Academy has a higher percentage of alumni serving in the Air Force than does Knoxworth High School.
- (D) Some graduates of Knoxworth High School are serving in the military but not in the Air Force.
- (E) Knoxworth High School is the school with the second highest number of alumni serving in the Air Force.

Following the same procedure, we want to identify the question type, diagram the argument and hypothesize some answers. However, the more interesting part of this question comes in the fourth step: narrowing down the answer choices.



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This one is a little tough, but we can go through carefully and eliminate out of scope and opposite conclusion choices. Clearly (A) is a giant leap that is similar to “Apples are Sarah’s favorite fruit;” while it may be true, there is no clear evidence to support it. (B) and (E) are similar – though they seem appealing as answer choices, they are drawing conclusions that do not have to be true. (C) is an interesting choice because it sounds very similar to the statements. However, look at the boundary phrase *percentage*. While we know that in absolute terms the school has more Air Force alumni, we do not know that this represents a higher percentage of the school’s alumni. This mismatch means the answer choice is incorrect, and we know that the right answer is (D).

Since Knoxworth has more alumni serving in the military overall, but fewer in the Air Force, there must be some that served in other branches. Note here that the conclusion is a very weak and obvious one. It does not have strong words like *all* or *absolute*, but instead has the word *some*. Answer choices with weak language are often good solutions to draw a conclusion questions because it is easy to back them up with the provided statements.

Question Type: Strengthen the Conclusion

There are two similar question types – one that asks for a piece of information that strengthens a conclusion and one that asks for one that weakens it. Again, the first thing to do is to find what the conclusion is. Once this is done, repeat the process outlined above, but add one additional step. Instead of going through and just evaluating each of the answer choices, consciously decide whether each answer choice strengthens, weakens, or is irrelevant to the conclusion. Doing so will ensure that you do not make little mistakes or misinterpret the information. You should even take it a step further and write down “S”, “W”, or “-” next to the A-E on your paper. Then, if there are multiple answer choices that strengthen or weaken, look for the one that does so most obviously.

An example:

Advertising executive: More than 10 million American households now own digital video recorders which can fast-forward over television commercials; approximately 75% of these households fast-forward over at least one commercial per 30-minute program. Television commercials are now much less cost-effective as they are not as widely watched as they used to be.

Which of the following, if true, strengthens the claim that television commercials are less cost-effective than they used to be?

- (A) Product placement within television programs is a viable alternative to traditional television commercials.



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- (B) The television programs preferred by consumers without digital video recorders are similar to those preferred by consumers with the devices.
- (C) Prior to the advent of digital video recorders, very few television viewers switched channels or left the room when commercials began.
- (D) The cost-effectiveness of television advertising is based less upon how many people watch a particular commercial and more upon the appropriateness of the demographic.
- (E) Due to an imperfect sampling system used to measure the number of viewers, many companies find it difficult to determine the return on investment for television commercials.

It is helpful to diagram the argument here:

DVR → Fast forward commercials → Commercials less cost-effective than years ago

It can be helpful in these question types to find some assumptions that the author is implicitly making at each step. DVR → Fast forward seems like a clear link, supported by data, but the second link does not seem as clear. First of all, the statements say nothing about cost. Maybe commercials cost much less now because of the ability to fast forward through them and they are therefore equally or even more cost-effective than they used to be. Additionally, the author is assuming that people used to not be able to fast forward through commercials. This is absolutely true (the technology did not exist then), but maybe they were able to skip commercials by leaving the room or changing the channel. If people used to never watch commercials and they still don't, then there is no change in the cost-effectiveness.

Now that we found some logical flaws and inherent assumptions (hypothesizing the answer), we can look at the choices. Luckily, answer choice C presents exactly the same logical flaw that we hypothesized. This is the correct answer. Of course this will not always be the case with hypotheses, but you would be surprised how often this does happen.

Question Type: Weaken the Conclusion

This question type is similar to strengthen the conclusion. One trick with these questions, however, that exam makers like to use is to present both an argument and a counter-argument, asking for something that weakens one or the other. Make sure to diagram, keep the arguments straight, and take organized notes. We can jump straight into an example:



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Company Spokesperson: Over the past several years, our company has more than doubled its revenues within the credit card division. However, over the same period, the division's profits have steadily declined, largely as a result of a rapid increase in default rates on credit card loans among our customers. It is time to recognize that our previous strategy was flawed, since we failed to increase the average annual percentage rate (APR) charged on outstanding balances to compensate for the higher default rates. According to our estimates, increasing the interest charged on outstanding balances from APR of 9.5% to an APR of 12% will be sufficient to compensate for the current rate of defaults and bring the division back to profitable growth.

Which of the following statements would most seriously undermine a plan to increase interest rates in order to spur profitable growth?

- (A) Many other companies have experienced a similar trend in their default rates.
- (B) The company's operating expenses are above the industry average and can be substantially reduced, thus increasing margins.
- (C) The rapid increase in default rates was due to a rise in unemployment, but unemployment rates are expected to drop in the coming months.
- (D) The proposed increase in the APR will, alone, more than double the company's operating margins.
- (E) An increase in the APR charged on credit card balances often results in higher rates of default.

Begin with a diagram:

Revenues \uparrow Profits \downarrow \rightarrow increase APR

Notice that this looks pretty similar to the diagram at the beginning of this document. If revenues are up but profits are down, we have an indication of a cost problem. Raising the price of our product (in this case, raising the APR) will not necessarily solve the issue. This could potentially have two unintended consequences: 1) we could alienate our existing customers and drive them away or 2) we could cause our customers to default on the debt and drive up our costs even further. Answer choice E matches the latter perfectly, so we know this is correct.



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Question Type: Explain an Event or Discrepancy

This question asks the test-taker to look at two facts that seem to contradict each other and determine how this could be the case. This often requires you to think outside of the box. Take this example:

Nitrogen triiodide is a highly explosive chemical that is easy to make from only two ingredients: ammonia and concentrated iodine. However, no terrorists are known to have ever used nitrogen triiodide in an attack.

Which of the following, if true, is the most likely explanation for the discrepancy described above?

- (A) Ammonia can be bought in a grocery store, but concentrated iodine must be obtained from somewhat more restricted sources, such as chemical supply houses.
- (B) Nitrogen triiodide is only one of several powerful explosives that can be made from ammonia.
- (C) Many terrorists have been more focused on acquiring weapons of mass destruction, such as nuclear or biological weapons, than on developing conventional chemical explosives.
- (D) Airport security devices are typically calibrated to detect nitrogen compounds, such as ammonia and ammonium compounds.
- (E) Nitrogen triiodide is extremely shock sensitive and can detonate as a result of even slight movement.

So in essence, something is easy to make and is highly explosive, but it is not used by terrorists. It may seem like a stretch to say these two facts contradict each other, but either way, you can probably think of several reasons why this might be the case. Maybe the two chemicals are impossible to find or highly regulated. Maybe nobody knows that this is easy to make even though it is. Take special note of the fact that no terrorists use this chemical. Therefore, answer choices like (A), (B) and (C) are not strong enough to suggest that absolutely nobody would use it. Instead, they suggest reasons why some terrorists would not use it. Always pay special attention to these boundary phrases. Choice (D) provides a great reason why it is not used in airports, but there are plenty of other places where it could be. Answer choice (E) is the only one strong enough to provide a solid reason that precludes everyone from using this chemical.



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Question Type: Evaluate the Conclusion

Even though we put this under a separate bucket, you can start to see that all of these question types have many commonalities. This type of question essentially asks what type of data would be useful to know in order to decide if a conclusion is true or false. In order to evaluate a conclusion, you first have to know what the conclusion is, so start there. Then, start to hypothesize possible answers in the form of weaknesses in the argument. We can do that by example:

Editorial: In order to preserve the health of its local economy, Metropolis should not permit a Costmart warehouse department store to open within city limits. It has been demonstrated that when Costmart opens a warehouse department store within a city, the bankruptcy rate of local retailers increases in that city by twenty percent over the next several years.

Which of the following questions would be most useful for evaluating the conclusion of the editorial?

- (A) Does the bankruptcy rate of local retailers in a city generally stabilize several years after a Costmart warehouse department store opens?
- (B) Do most residents of Metropolis currently do almost all of their shopping at stores within the city limits of Metropolis?
- (C) Have other cities that have permitted Costmart warehouse department stores within city limits experienced any economic benefits as a result?
- (D) Is the bankruptcy rate for local retailers in Metropolis higher than in the average city that has permitted a Costmart warehouse department store within city limits?
- (E) Does Costmart plan to hire employees exclusively from within Metropolis for the proposed warehouse department store?

Pay particular attention in these question types to things that are out of scope and things that are not. Other cities, in this example, seem to be somewhat irrelevant. We do not really care about whether the neighboring town has permitted a Costmart (C) or if our bankruptcy rate is higher than average (D). We also don't really care if the bankruptcy rate stabilizes (A). If every business goes bankrupt tomorrow, the rate will stabilize but we will have no other businesses. We might care about workers though (E) – they definitely affect the economy of a city.

Answer choice (B) seems like it could be out of scope – why would we care where people do their shopping? But be careful here. If all of our residents shop outside of Metropolis, then we do not have any local businesses. If we don't have local businesses, they cannot go bankrupt, and therefore opening a Costmart will only



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benefit our city. If all of the shopping is already done in Metropolis, then we will be cannibalizing our own sales and reaping negative consequences.

(B) and (E) both seem like possibilities here, but (B) is clearly making a stronger case. The answer to (E) might be interesting, but the answer to (B) is crucial for evaluating the conclusion.

V. Your Game Plan

1. Understand the process

While there are many different question types presented above, you can follow essentially the same process on each.

- Identify the question type
- Diagram the argument
- Pinpoint the ask
- Hypothesize the answer
- Narrow down the choices

2. Summarize key lessons learned

What surprised you the most about what you learned over the past several pages? Write down your key takeaways and internalize them. The best way to study for the exam is not only to practice, but also to understand what you are doing correctly and incorrectly. Creating a “lessons learned” document can be extraordinarily helpful.

3. Practice, practice, practice

...and practice some more. This is the key to success on the GMAT!

4. Relax

After practicing, make sure to relax. The process takes time, but familiarizing yourself with the best ways of doing specific question types will help you to feel better going into the exam.