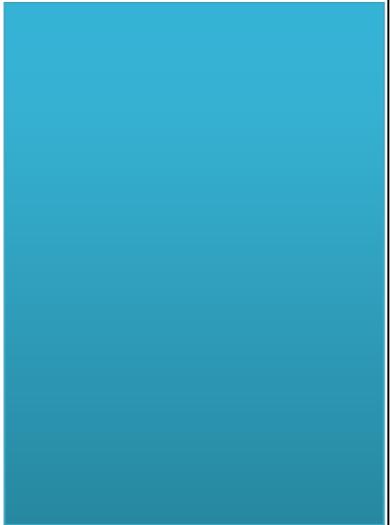


2010



ZOMG! ZOMG! ZOMG!

## The Monster CR Strategy Guide

**DISCLAIMER:** This is merely a compiled strategy document that I put together after reading various CR strategy books. While this might not work for everyone, this is the method that I use to solve the CRs based on the specific question types. I do NOT claim to have created the content by myself and I have stated the source wherever I have used examples. The content of this document draws from many CR books which are all indexed in the last page of the document. I only wish to give back to GMAT Club and it's users for all the benefits I've derived. So don't sue me! I'm just a college kid! 😊

### THE INSPIRATION:

**(This sounds more and more like a novel than a study guide doesn't it? That's the idea. Don't fall asleep though!)**

When I started preparing for the GMAT, I wanted to make a document that would recapitulate the best of the strategies in the reputed books without leaving out anything in particular. This document started out as something I just wanted to use myself – something that I can print out and carry, with not too many examples obstructing convenience and something that can be a pseudo-checklist for CR as I begin my practice. But I showed it to a friend who really liked it and thought I should polish it a bit and put it up so that other people may choose to use it as well. So I added some funky colors and a cover page, and voila! (I really do like colors, btw)

The updated version of this document can be found at:

[The Bang-Bang CR Guide](#)



## BASIC DECONSTRUCTION

There are approximately 12-14 CR questions on the GMAT

**Step 1:** Read the question stem. Not the answer choices, but the question stem. This will help you decide and categorize the question into one among three basic families of questions, and five or six question types.



**Step 2:** Read the stimulus (the paragraph). Now, the stimulus can basically be broken down into two parts – the premises and the conclusion. Identify these parts.



**Step 3:** Focus on the conclusion and read the question stem again. Depending on what the question stem asks for, think about possible reasons why the question stem might be valid. For instance, if the stem asks for answers that would be the main point of the stimulus, think about the conclusion and what it is essentially saying. Keep this in your mind as you proceed. This is basic speculation about what the answer choices might actually be like.



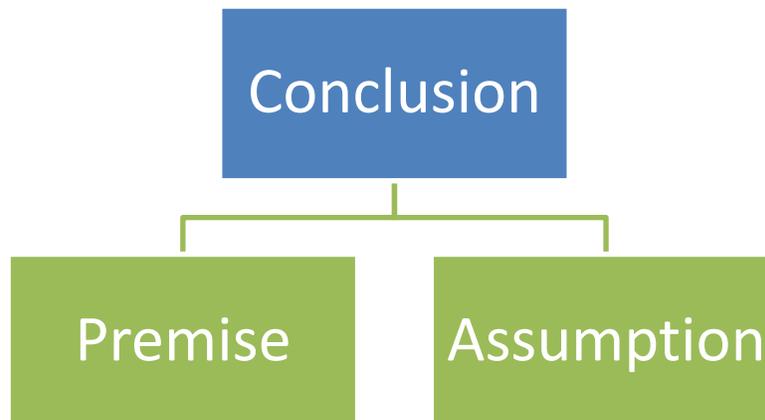
**Step 4:** Eliminate the answer choices that are wrong. DO NOT try to make the answer choice FIT in with what you've been given. If you think it's wrong, eliminate it. If you're unsure, or if you think it's a good match, keep it until you've read all the options. The method of elimination works the best in CR. Never choose an answer before going through all the answer choices.



**Step 5:** Read the final answer choice you've chosen, and read the stem. Does this answer the stem concisely? If yes, pick the answer and move on. If you've eliminated all answer choices, go back to Step 3 and try to gather information more effectively.

### IDENTIFYING PREMISE AND CONCLUSION

As stated in the first deconstruction step, identifying the premise and the conclusion in a stimulus is very, very crucial to your timing and accuracy in answering the CR question. The way I look at it, premise and assumption form the foundation to a conclusion. This is also a place where the logical reasoning can crumble, if the author deduces something wrong from the premise.



The conclusion is formed through the premises and the assumptions. An assumption is NOT stated in the stimulus and hence forms the basis for an entire question type by itself. There are certain indicator words that can be used to differentiate the premise from the conclusion and these are fairly easy to remember.

PREMISE	CONCLUSION
<b>Supports the conclusion – Answers the question of “Why?”</b>	<b>Has a tone of finality. The final message of what the author is saying</b>
Because	Thus
Since	Therefore
For/For the reason	Hence
Due to	So
As indicated by	As a result of/Consequently
Furthermore	Accordingly
Given that	It follows that/It must be that

## TYPES OF QUESTIONS

So now that we are familiar with the basic deconstruction, let's look at some question types. The following five are the most common question types in GMAT and they might be referred to by different names by different books, but I am going with a common nomenclature

1. Main Point/Must Be True – These are basic inference questions
2. Weaken – These are the opposite of the strengthen type of questions
3. Strengthen – These ask for answer choices that strengthen and support the given conclusion
4. Assumptions – These refer to assumptions that help us ascertain the validity of the conclusions
5. Resolve the Paradox – These ask you to resolve a paradox in logic and explain them.
6. Bold Faced Questions – These ask you to identify the relationship between two “bold-faced” statements in the stimulus.

Some other question types that you might encounter, but with a lesser frequency are listed below:

1. Method of Reasoning/Mimic Reasoning
2. Flaw in Reasoning

These question types can be classified into three broad categories on the basis of how we approach the question.

1. **Ascertain Conclusion:** These are questions where we **assume that the stimulus is true** and try to find **answer choices that are supported by the conclusion**. For example, in a “Main Point” type question, we assume that the conclusion is true and try to find an answer choice that will reflect the conclusion of the stimulus.
2. **Strengthen and Support Type:** These are questions where **we assume that the given answer choices are true** and try to pick the **best one that will support the stimulus**. For instance, in the “Strengthen” and “Assumption” questions, we assume the answer choice is correct and try to find out if it validates the conclusion of the stimulus.
3. **Hurt Type:** This is basically the opposite of the above type and aims to **disprove the conclusion of the stimulus**. Hence **we take the answer choice to be true** here as well.

So here's a rough idea as to how this document is structured:

- Introduction to Question Type
- Types of wrong answers – explanations with examples
- Final Summary

So this way, you can go through the whole document first, and in detail and then there's a mini-checklist at the end of each section to help you guys get used to a systematic method of eliminating answer choices. Hopefully by the time you get to the end of this

The first type of CR question is the one of the most common one on the GMAT, I think. This is the "Main Point" and "Must be True" types. The two question types basically follow the same pattern of deduction, but have little variation in the way you decide.

### MAIN POINT/ MUST BE TRUE

So the way you can identify these questions is by looking at the question stem. Some of the common phrases used in the question stem for this type are as follows:

**"Which of the following represents the main idea of the paragraph?"**

**"Which of the following can be inferred from the above?"**

It could be a fill-in-the-blank type question where there is a usage of conclusive words as mentioned previously followed by a blank. If the reverse happens, i.e. there is a conclusion stated and then there's a "because of \_\_\_\_\_" then it's an assumption question.

There is one basic question that you need to ask yourself when you encounter a Main Point Question – **"Can this answer choice be proven or validated by what is given in the stimulus? Is this answer choice true to the stimulus AND the main point of the passage, i.e. similar to the conclusion?"** If the answer is yes, then keep the answer and move on to the next choice. If the answer is no, then eliminate the answer choice. Remember that choosing between 2 answer choices is better than choosing between 5, because you have a 50% chance of getting it right. So don't hang on to an answer choice trying to make it fit.

Here are some ways in which you might eliminate choices. Most of these would be commonly applicable to many types of questions, not limited to this type.

1. **Answers that are possible but not certain**, or in essence, answers that cannot be directly inferred from what is given in the stimulus. Our final answer choice is something that must be CERTAIN, not POSSIBLE.
2. **Answer choices that don't agree with the tone of the passage.** If the wording in the stimulus is strong, then the answer choice can be strong but if the wording in the stimulus is weak, then the answer choice cannot be strong. For instance, consider the following example of a stimulus (Roughly drawn from the Veritas Critical Reading Guide, page 9 and modified for use here):

“Most steroids cause buildup of water in the body and lead to increase in body weight. While exercising and dieting can help lose this excess weight, some weight gain is unlikely to be preventable”

Notice the wording highlighted in the paragraph. It says “some” weight gain is “likely”. This means that the author is using a “broad” tone of passage. He is not emphasizing and saying that it’s impossible to have steroids without weight gain. He is merely stating that some weight loss is mostly likely. When you have something like this, the answer choice cannot have strongly worded phrases like the following:

- A. A doctor should never prescribe steroids to an obese person – **Clearly this is a wrong answer. Nothing in the stimulus talks about such a drastic statement. This statement is out-of-tone with the rest of the passage.**
- B. People who want to lose weight and gain muscle must never take steroids – **Once again, a really bold statement that is not validated by the stimulus. Could it be possible? Yes, it's possible. But is it certain? No. So eliminate this as well.**
- C. At least some people gain weight from taking steroids – **Seems to be true. The conclusion says that “some” weight gain is likely. This is not overtly strict in tone and seems to be indicative of something right. So let's keep this one for now.**
- D. Weight gain due to steroids should be because of a lack of dieting. **Once again, really strong wording and nowhere in the paragraph does it talk about a lack of dieting being a cause for weight gain. So we can eliminate this.**
- E. Everyone taking steroids should diet to maintain weight – **Seems almost like an outrageous statement and doesn't draw anything from the stimulus, hence it can be eliminated.**

So upon analysis of a seemingly straightforward answer, we are able to eliminate unnecessary confusion by watching out for the tone of the passage. This is not only true for the main point questions, but also for any type of CR question. The tone of the passage and the answer choices must go together, if not eliminate!

3. They play the **shell game**. This refers to an answer choice that is remarkably similar to what is given in the stimulus but slightly untrue and perhaps polished to make it sound more attractive to the test-taker. Don't fall for this trap!
4. For the Main Point type question **some of the choices might repeat the premise of the question but it might not be the "main" point** that the stimulus is trying to express and hence this is wrong
5. Some **answer choices might represent true information, but not a direct inference from the stimulus**, and hence it's wrong!
6. There are some **answer choices that will reinforce or repeat the premise instead of the conclusion**. In the Main Point and "Must be True" question types you need answer choices that restate the conclusion in a different way, and support the conclusion, not the premise.
7. **Some answer choices could reverse the causality or state the reverse of what's true**. Causality refers to the cause-effect relationship. Instead of saying "X caused Y" the answer choice might say "Y caused X". This is also a trap.
8. **They might indicate a non-existent relationship**. This is an easy trap that most engineers tend to fall for. There might be a relationship between two events that is mentioned in the stimulus and the answer choice would be a definite relationship that's NOT mentioned in the stimulus. Using the same stimulus stated above, a wrong answer choice would be – "Since there's a proportional weight increase from taking steroids, dietary restrictions must be followed". This is clearly wrong since the stimulus says nothing about a "proportional" relationship. Don't fall for this trap!

To sum up, here are two examples to illustrate how you might fall into the trap of choosing a wrong answer choice. These are examples from the OG12 and taken from user ykaiim's CR strategy thread. My comments are in red just to help you identify these in the passage when you start working on them.

#### Example 1:

**One of the more reliable methods**{**"One of the" suggests a mild tone, so the answer choice has to be of mild tone as well**}of determining regional climatic conditions in prehistoric periods is to examine plant pollen trapped in glacial ice during ancient times. By comparing such pollen samples with spores taken from modern vegetation, scientists can figure out approximately what the weather was like at the time of pollen deposition. Furthermore, by submitting the prehistoric samples to radiocarbon dating techniques, we can also determine when certain climatic conditions were prevalent in that portion of the globe.

**Conclusion: Examining pollen trapped in glacial ice is a method of prehistoric dating. So the answer choice must also have some kind of relationship to the inference we have drawn here. This is an**

**inference question and not the main point, so we just need to check if the answer choice is true to the stimulus or not.**

Which one of the following **may be inferred** *{Inference, indicative of a must-be-true type question}* from the information in the passage?

- A. The earth has undergone several glacial periods – **Clearly this is out-of-scope. While this might be true it is not presented in the stimulus. Hence incorrect.**
- B. Radiocarbon dating can be corroborated by glacial evidence – **This is an example of reversing the order. The stimulus says that glacial evidence can be verified through radiocarbon dating, not vice versa. Hence incorrect.**
- C. Similarities between prehistoric and contemporary climates do not exist – **This is a really broad generalization and exaggeration. The tone of the answer choice is really strong (do not exist). This cannot be the answer choice either. Incorrect.**
- D. Pollen deposition is a fairly continuous process – **We don't have any information about whether this is true or not. Extra information again. Incorrect.**
- E. Certain flora are reliably associated with particular climatic conditions. **The first line of the stimulus tells us that this is a reliable method. So this is a restatement of the conclusion and can be proved by the stimulus. Hence correct.**

Example 2:

Meteorite explosions in the Earth's atmosphere as large as the one that destroyed forests in Siberia, with approximately the force of a twelve-megaton nuclear blast, occur about once a century. The response of highly automated systems controlled by complex computer programs to unexpected circumstances is unpredictable.

Which of the following **conclusions** can most properly be drawn, if the statements above are true, about a highly automated nuclear-missile defense system controlled by a complex computer program?

- A. Within a century after its construction, the system would react inappropriately and might accidentally start a nuclear war. **This is really specific information and nothing in the stimulus talks about this. So this is out of scope and incorrect.**
- B. The system would be destroyed if an explosion of a large meteorite occurred in the Earth's atmosphere. **We are not told about this either, so incorrect.**
- C. It would be impossible for the system to distinguish the explosion of a large meteorite from the explosion of a nuclear weapon. **I think it's safe to assume that the system can distinguish them. Even if otherwise, this is additional information. So incorrect.**
- D. Whether the system would respond inappropriately to the explosion of a large meteorite would depend on the location of the blast. **We are not told anything about the location of the blast in the stimulus, hence incorrect.**
- E. It is not certain what the system's response to the explosion of a large meteorite would be, if its designers did not plan for such a contingency. **This is basically a restatement of the conclusion of the stimulus. Hence correct.**

## SUMMARY OF MAIN POINT/MUST BE TRUE TYPE QUESTIONS

### IDENTIFICATION:

Would have indicative wording that asks you to infer from or choose the main idea of the passage.

### ANSWER CHOICE QUALIFICATION:

- Should be validated by the stimulus (Stimulus is taken to be true)
- Should be the main point of the stimulus, not just a premise (for Main Point questions)
- Will either restate conclusion or present it in a different manner

### CORRECT ANSWER CHOICES:

- Restatement of the conclusion
- Combination of one or more premises

### WRONG ANSWER CHOICES:

- Answers that are possible but not certain
- Answer choices that don't agree with the tone of the passage.
- Shell game
- Answers that repeat the premise of the question which are not the "main" point
- Answer choices that represent true information, but are not a direct inference from the stimulus, i.e. presenting new information
- Answer choices that will reinforce or repeat the premise instead of the conclusion.
- Answer choices that reverse the causality or state the reverse of what's true.
- Answer choices that indicate a non-existent relationship.

## WEAKEN

The way you identify these questions is by looking at the question stem as well. These questions will usually have some kind of negative relationship indicator between the stimulus and the answer choices. Some of the common phrases used in these questions are given below:

**“Which of the following most seriously undermines the argument?”**

**“Which of the following, if true, calls into question the validity of the argument?”**

**“Which of the following casts doubt on the scientist’s conclusion?”**

This is probably the one question type that appears the most on the GMAT. In this question type, we **assume that the answer choices are true and take them for granted – even if it introduces new information**. Instead, we focus on isolating and identifying the premise and the conclusion. Once we identify the conclusion we focus on that. Something in the stimulus has to be wrong. It could be a gross generalization, a wrong conclusion and so on. And once this is done, it is merely enough to cast doubt on the stimulus; you don’t have to prove it wrong.

The conclusion of the stimulus must be treated similar to how we treated the answer choices in the previous question type.

Here are some scenarios:

1. **Incomplete Information:** Not enough information is given, but a conclusion seems to be drawn from thin air.
2. **Improper Comparison:** Comparing apples to oranges, so to speak.

Here are some of the ways in which you can eliminate answer choices for this type:

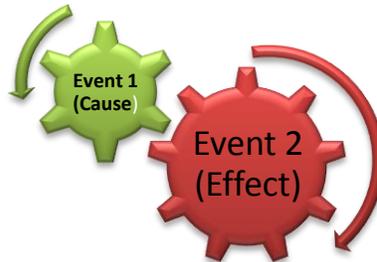
1. **Opposite Answers:** The answer will end up strengthening the conclusion instead of vice versa
2. **Shell Game Answers:** Similar idea to that of the stimulus, but not entirely true. Refer to the explanation given in the previous type.
3. **Out of Scope Answers:** Unrelated and tangential answers.
4. **Wrong Tone in Answers:** This has also been explained in the previous question type.
5. **Reversal of causality or incorrect causality:** These questions oversimplify some statements.

Consider the following example:

“Last week Jack tried out a new restaurant on campus and the same week he got food poisoning. So Jack must have had food poisoning due to the new food”

This is not true. There might have been something else that Jack might have had which caused the food poisoning. Though this seems lucrative, this is a trap.

**Note on Causality:**



Here we are asked to assume that the two events take place in vacuum, that no other event could have influenced what happened. Event 1 strictly influenced Event 2, and that Event 2 couldn't have occurred without Event 1.

**How to break down causality?**

1. **Find an alternate cause.** This is the strongest way to rebuke a causality based stimulus. For the above mentioned example, what if Jack had eaten left-over food from two days ago, and they had actually gone stale? Wouldn't that explain the food poisoning?
2. **Show that the change might not occur even when cause occurs or that the effect can occur without the cause.** This could mean Jack eating at the restaurant previously, without any food poisoning. Jack could have gotten food poisoning earlier when he had left-over food.
3. **Show that the stated relationship is reversed.** This is where you prove that what is perceived to be the effect produces what is thought of as the cause

**Example 1 (Veritas Prep CR):**

Recently a craze has developed for home juicers, \$300 machines that separate the pulp of the fruit and vegetables from the juice they contain. **Outrageous claims**{*Note the strong language*} are being made about the benefits of these devices – drinking the juice they produce is said to help one lose weight, or acquire a clear complexion, to aid in digestion, and even to prevent cancer. **But there is no indication that juice separated from the pulp of the fruit or vegetable has any properties that it doesn't have when unseparated.** {**Conclusion**} Save our money. If you want carrot juice, eat a carrot.

Which of the following, if true {**Assume that the choices are true**}, most calls into question the argument?

Before you begin to look at the answer choices think about what would refute this conclusion? If someone has proven that there IS in fact a difference between juices separated from pulp, we are done. So look for answer choices that might work on a similar vein while eliminating those that don't.

- A. Most people find it much easier to consume a given quantity of nutrients in liquid form than to eat solid foods containing the same quantity of nutrients – **This seems to make a point for the juicer. So maybe people get nutrients from juice more easily and are more prone to getting nutrients from juice. So this rebukes the author’s assumption that it doesn’t matter. Hence correct.**
- B. Drinking juices from home juicers is less healthy than is eating fruits and vegetables because such juice does not contain the fiber that is eaten if one were to consume the entire fruit – **Clearly Incorrect since this strengthens the conclusion**
- C. To most people who would be tempted to buy a home juicer, a \$300 would not be a major expense –**How does this relate to whether the claims about the juicer are true or not? Incorrect**
- D. The author was a member of a panel that extensively evaluated early prototypes of the home juicers –**Once again, this gives him credential. We want to argue against him. Incorrect**
- E. Vitamin pills that supposedly contain nutrients available elsewhere only in fruits and vegetables often contain a form of those compounds that cannot be as easily metabolized as the varieties found in fruits and vegetables – **This is one of the answer choices where they set a trap to catch you with complicated wording. We don’t care about vitamin pills. Irrelevant information. Incorrect.**

Example 2 (From OG10):

Robot satellites relay important communications and identify weather patterns. Because the satellites can be repaired only in orbit, astronauts are needed to repair them. Without repairs, the satellites would eventually malfunction. Therefore, **space flights carrying astronauts must continue**{Conclusion}.

Which of the following, if true, would most seriously weaken the argument above?

- A. Satellites falling from orbit because of malfunctions burn up in the atmosphere – **Irrelevant.**
- B. Although satellites are indispensable in the identification of weather patterns, weather forecasters also make some use of computer projections to identify weather patterns. **This doesn’t provide a reason for not sending astronauts to space. Once again, out of scope.**
- C. The government, responding to public pressure, has decided to cut the budget for space flights and put more money into social welfare programs. **Though this seems like a right answer, think about it. This is lots of irrelevant information, and doesn’t answer our question directly. Incorrect.**
- D. Repair of satellites requires heavy equipment, which adds to the amount of fuel needed to lift a spaceship carrying astronauts into orbit. **Fuel? This is a shell game fallacy. Clearly shows a statement that could be true and is very attractive to the test taker, but irrelevant to what’s asked. Incorrect.**
- E. Technical obsolescence of robot satellites makes repairing them more costly and less practical than sending new, improved satellites into orbit. **This makes sense. If repair cost > new satellite cost, why send astronauts to space to repair them? Just send new satellites. Hence this is correct.**

## SUMMARY OF WEAKEN TYPE QUESTIONS

### IDENTIFICATION:

Would have indicative wording that asks you to weaken or undermine an argument presented as the conclusion of the passage.

### ANSWER CHOICE QUALIFICATION:

- Should rebuke the conclusion of the stimulus
- Answer choices are taken to be true, even if there is new information provided.
- Will either break down causality or show an obvious error in reasoning in formation of the conclusion

### CORRECT ANSWER CHOICES:

- Will point out an obvious reason for the illogical conclusion
- Enumerate a wrong generalization
- Point out improper comparisons between two scenarios that the author assumed

### WRONG ANSWER CHOICES:

- Opposite Answers
- Shell Game Answers
- Out of Scope Answers
- Wrong Tone in Answers
- Reversal of causality or incorrect causality
- Irrelevant Information

## STRENGTHEN

If you were expecting this question type, kudos! The “Strengthen” type of CR question is the next most popular question type in the GMAT. It is also said to be one of the harder question types. Identifying the question stem is usually straightforward, except when the word support is used. Carefully observe the phrase used with that word, because it could point to an inference (i.e. Main Point/Must Be True) question as well.

Stem would **indicate some kind of “support” relationship – strengthen, justify, help, support** and so on.

This support can be little or a lot, that is immaterial to the process. The correct answer choice could either warrant removal of an alternative cause or addition of more information. If there is an analogy or a survey type stimulus, then you can strengthen it by validating the assumptions made in some way. Once again, we take the answer choice to be true, and consider the validity of the stimulus. The word support can also be used in question stems that follow the “Main Point” type. In that sense, the question stem would point to something like “The stimulus supports which of the following” as opposed to the “Strengthen” question which would point to “the answer choice supporting the stimulus”. The difference is subtle but great.

The basic breakdown of approaching a strengthen question isn’t really too different from the other strategies used.

1. **Identify** and analyze the conclusion.
2. Try to **find the missing link in the stimulus**. This works similar to a “Weaken” type question. Finding the weaknesses in the argument might seem counter-intuitive. However, if we find the missing link between the premise and the conclusion or find a counter to an assumption, this could be the potential answer choice – something that validates a potential point of discrepancy. The answer doesn’t have to prove the conclusion, it merely supports it.

Some very common suggestions to identify the wrong scenarios are as follows:

1. **Answers that actually weaken the conclusion**. While it is important to identify weaknesses in the argument, you should ensure that you don’t choose this as an answer. Always be certain that the answer choice supports the conclusion.
2. **Out-of-scope answers** that have nothing to do with what’s given. There will at least be one answer that falls into this category.
3. **Rephrases of the premise** that simply restate what’s given and not really do anything else.

Example 1 (OG10):

**Since the routine use of antibiotics can give rise to resistant bacteria capable of surviving antibiotic environments, the presence of resistant bacteria in people could be due to the human use of prescription antibiotics. Some scientists, however, believe that most resistant bacteria in people derive from human consumption of bacterially infected meat.**

Which of the following statements, if true, would most significantly **strengthen the hypothesis of the scientists?**

Before we jump into the answer choices, let's try to think about what the message of the stimulus is.

Argument: Resistant bacteria comes from antibiotic use

Premise: Routine use of antibiotics can make the bacteria capable of surviving said antibiotics

Alternative: Bacteria actually come from meat consumption.

So, thinking about this any answer choice that supports the theory that bacteria become resistant if we use antibiotics, or anything that refutes the fact that bacteria comes from meat consumption should be what we can eliminate as an answer choice.

- A. Antibiotics are routinely included in livestock feed so that livestock producers can increase the rate of growth of their animals. **At first glance, it seems like this doesn't have anything to do with the question. But what this choice implies is that the antibiotics are used in livestock a lot. This makes the livestock develop resistant bacteria, and hence when humans ingest the meat, the bacteria is transferred to them. Let's keep this one for now, and see if there's a better one.**
- B. Most people who develop food poisoning from bacterially infected meat are treated with prescription antibiotics. **Counter-productive and completely irrelevant. We are interested in finding out how the bacteria got there, not what they did to people WITH the bacteria already.**
- C. The incidence of resistant bacteria in people has tended to be much higher in urban areas than in rural areas where meat is of comparable quality. **If meat is of comparable quality, then this seems to indicate an alternate cause that weakens the hypothesis. Opposite answer trap.**
- D. People who have never taken prescription antibiotics are those least likely to develop resistant bacteria. **This is complicated wording. This is saying: if you've not taken antibiotics, you don't develop resistant bacteria. This is proving the conclusion that we are trying to refute. Incorrect.**
- E. Livestock producers claim that resistant bacteria in animals cannot be transmitted to people through infected meat. **Once again, this weakens the hypothesis. Opposite Answer trap.**

So, sometimes there are situations where at first glance the answer choice might seem wrong, but actually turn out right. If you eliminate all answer choices, then you should go back and read the stem, stimulus and choices more carefully.

Example 2 (Veritas Critical Reasoning Q1):

**Dr. Larson:** Sleep deprivation is the cause of many social ills, ranging from irritability to potentially dangerous instances of impaired decision making. Most people suffer from sleep deprivation to some degree. Therefore we should restructure the work day to allow people flexibility in scheduling their work hours.

Which of the following, if true, would most strengthen the medical doctor's argument about sleep deprivation?

The conclusion of the argument is straightforward. Allow flexibility in scheduling work hours. The basic underlying assumption in the conclusion basically tells you that the author is assuming that greater flexibility would promote better sleeping times. Now we can have this in our mind as we look for answers.

- A. The primary cause of sleep deprivation is overwork. **Perfect shell game choice. So this choice is telling you that overwork causes sleep deprivation. We are not talking about the quantity of work here, but instead the flexibility of scheduling. This is incorrect and irrelevant.**
- B. Employees would get more sleep if they had greater latitude in scheduling their work hours. **This is very true to the answer choice idea we had in mind. So let's keep this one for now.**
- C. Individuals vary widely in the amount of sleep they require. **Completely irrelevant. We are not talking about how much sleep an individual requires at all. It presents new information but without any connection. Incorrect.**
- D. More people would suffer from sleep deprivation today than did in the past if the average number of hours worked per week had not decreased. **This talks about a decrease in work hours and in a very convoluted structure. Are we talking about the number of hours worked? No. We are talking only about the flexibility of scheduling. Hence incorrect.**
- E. The extent of one's sleep deprivation is proportional to the length of the workday. **Once again, length is immaterial. Incorrect.**

Note: It is important to remember that the answer choice should refer directly to the conclusion. It should strengthen the conclusion DIRECTLY. If you are making a 100 connections and it still doesn't fit, there's something wrong. Any answer choice that requires you to make these connections is possibly tangential.

## SUMMARY OF STRENGTHEN TYPE QUESTIONS

### IDENTIFICATION:

Uses the word support in some form or the other – support, justify, help and so on, in the context of the answer choice helping the stimulus. Inference questions use the opposite, i.e. stimulus supporting the answer choice.

### ANSWER CHOICE QUALIFICATION:

- Should reinforce the conclusion of the stimulus
- Answer choices are taken to be true, even if there is new information provided.
- Will validate an (unstated) assumption or rule out a discrepancy in the logic of the conclusion forming process. Helps establish causality.

### CORRECT ANSWER CHOICES:

- Will bridge a gap that leads to a potentially illogical conclusion
- Validate a reason that might have led to wrong generalization
- Find a missing link between two scenarios that the author assumed

### WRONG ANSWER CHOICES:

- Opposite Answers
- Shell Game Answers
- Out of Scope Answers
- Wrong Tone in Answers
- Reversal of causality or incorrect causality
- Irrelevant Information

## ASSUMPTION

This is also one of harder questions tested on the GMAT. An “assumption” is something that is ABSOLUTELY NECESSARY for the conclusion, i.e. a statement that completely supports the conclusion. Any answer choice that leaves the possibility of doubt can immediately be ruled out, even if it’s because the answer choice provides extra information. There might be some questions that ask you fill in the blanks. These are common between assumption and inference questions – in this case, if the words used before the blank indicate a conclusion indicator with keywords like “therefore” and “hence” then it’s an inference indicator. If the keywords like “since” and “because of” are used in the context of a premise indicator, then it’s an assumption question.

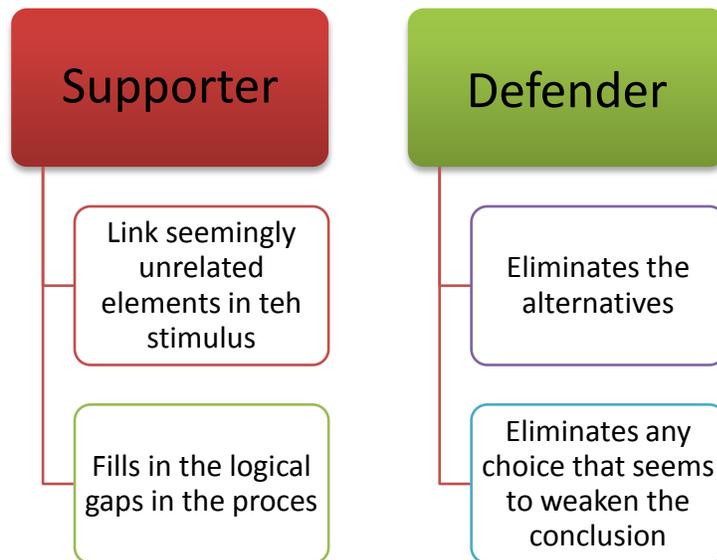
Some of the common ways to identify an assumption type question are as follows:

**“The conclusion depends on which of the following?”**

**“The author assumes that?”**

**“Based on/Assumption Made/ cannot be true unless?”**

Any assumption question can have an answer choice that fits into one among two categories:



Both of these options must be considered before an answer choice is eliminated. Once the common answer choices, such as those that are opposite answers, or those with tone-mismatch are eliminated there is a specific technique that can be employed to test for the validity of the answer choice with respect to the question. This is called the **Assumption Negation Technique**.

This technique basically involves converting the assumption question into a weaken question. The technique can only be applied to assumption questions, so you need to be careful, but once you’ve eliminated other possible answers, follow this technique to check the remaining options:

- **Negate the answer choice** – This basically asks you to assume the opposite of whatever is given in the answer choice.
- **Does the negated answer choice make the conclusion collapse?** – If the answer is yes, then the answer choice is the right one. Any negated answer choice that attacks the conclusion or questions its validity is one that is the right answer.

Example 1 (OG10):

**A researcher discovered that people who have low levels of immune-system activity tend to score much lower on tests of mental health than do people with normal or high immune-system activity. The researcher concluded from this experiment that the immune system protects against mental illness as well as against physical disease.**

The researcher's conclusion depends on which of the following assumptions?

Before we jump into the answer choices, let's try to break this stimulus down according to our fundamentals.

**Premise:** Low Immune System = Poor mental health test performance, and vice versa

**Conclusion:** Immune system protects against mental as well as physical diseases.

**Missing Link:** Relationship between immunity and mental health.

- High immune-system activity protects against mental illness better than normal immune-system activity does. **Irrelevant answer.**
- Mental illness is similar to physical disease in its effects on body systems. **Shell game.**
- People with high immune-system activity cannot develop mental illness. **This is a really strong statement and is unfounded.**
- Mental illness does not cause people's immune-system activity to decrease. **True. Establishes the missing link.**
- Psychological treatment of mental illness is not as effective as is medical treatment. **Out of Scope Answer.**

## SUMMARY OF ASSUMPTION TYPE QUESTIONS

### IDENTIFICATION:

Uses the word “assumes” in some form or the other – depends on, assumes that, must be true, based on, cannot be true unless, and so on.

### ANSWER CHOICE QUALIFICATION:

- Should be necessary for the conclusion to be valid.
- Answer choices are taken to be true, even if there is new information provided.
- It must be a statement that completely supports the conclusion

### CORRECT ANSWER CHOICES:

- Will be supporter or defender
- Supporters help to link unrelated information presented in the stimulus and fill logical gaps
- Defenders eliminate possibilities of weakness and attack to the stimulus/conclusion.

### WRONG ANSWER CHOICES:

- Opposite Answers
- Shell Game Answers
- Out of Scope Answers
- Wrong Tone in Answers
- Reversal of causality or incorrect causality
- Irrelevant Information
- Will present a scenario where it “could be true”, but the answer choice “must be true”
- Additional, irrelevant information

## RESOLVE THE PARADOX /EXPLAIN THE PARADOX

This might seem to be hard, but is actually one of the most consistent and easily recognizable question types on the GMAT. It's very easy spot in that there is an apparent discrepancy or conflict in the stimulus. These stimuli have two very basic characteristics:

1. There is no conclusion. Two contradictory facts are presented as they are. There is no inference.
2. Language of contradiction. The usage of words like "but", "however", "yet", "although", "surprisingly", and "paradoxically" will indicate the presence of this type.

Some characteristics of the question stem are as follows:

1. The answer choices would have to be taken to be true
2. The keywords would involve a combination of the following words:

	Paradox
Resolve	Discrepancy
Reconcile	Contradiction
Explain	Conflict
	Puzzle

A common question would be something along the lines of:

**"Which of the following, if true, most helps resolve the apparent paradox?"**

The best way to approach a "Resolve the paradox" question would be to take the following approach:

1. Try not to disprove the concluding statement or facts presented in the stimulus. Take the stimulus as given. Think of **active resolution** and try to find ways to make the contradictory statements go together.
2. **Address the facts.** Reasonable solution not quite meeting the facts would be incorrect. The answer choice **MUST** conform to the stimulus.

Some of the common, specific incorrect choices that GMAC likes to trick us with are as follows:

1. **Answer explaining only one side of the paradox** and ignoring the other. The correct answer must explain both sides.
2. If the contradiction in the stimulus is about similarities, the answer choice must address this and not the differences. We should choose an **answer that resolves the paradox, not strengthen it.**

Example 1 (Powerscore’s On-Demand Course Example):

Park Ranger: When snowfall levels are below average during winter months, scattered patches on the forest floor often remain exposed and accessible to scavenging wildlife. Because squirrels are able to collect nuts only in the snow-free areas of the forest, **the squirrel population tends to increase when there is a below average snowfall.** However **after last year’s unprecedented snow-free winter season, the squirrel population in this region was determined to be a 20 year low.**

Which of the following, if true, helps explain the paradox above?

The paradoxical parts of the stimulus have been highlighted.

- A. When snowfall is above average, squirrel populations tend to diminish as squirrels are unable to forage for food in snow-covered areas. **Irrelevant. The first phrase itself tells us this is useless since we are looking to explain an event that happens during a snow-free winter.**
- B. The squirrels’ spring breeding season does not begin until all of the snow in the forest has melted. **This doesn’t really explain anything either. If at all anything, the population should have gone up.**
- C. The red-tailed hawk, the squirrel’s most common predator, does not migrate south out of the forest until the first snowfall of the winter season. **This seems good. If the predator doesn’t move until the snowfall, and there was no snowfall, then the squirrel population would have gone down. Makes perfect sense.**
- D. Forest squirrels rarely feed on berries or fruits and prefer nuts for their high calorific content. **Completely irrelevant.**
- E. The current system of estimating squirrel population size is thought to be extremely accurate in its projections. **Once again, irrelevant to our question.**

Example 2 (Veritas Prep Critical Reasoning Guide):

Scientists agree that ingesting lead harms young children. More lead paint remains in older apartment buildings than newer ones because the use of lead paint was common until only two decades ago. Yet these same scientists also agree that laws requiring the removal of lead paint from older apartment buildings will actually increase the amount of lead that children living in older apartment buildings ingest.

Which of the following, if true, most helps to resolve the apparent discrepancy in the scientist’s belief?

Clearly we know that this is a “Resolve the Paradox” question. What is the discrepancy? Older buildings have greater lead and hence children ingest greater amounts of lead in older buildings than newer buildings. But if you choose to take the lead out, then children will ingest MORE lead.

Let’s look at the options now:

- A. Lead-free paints contain substances that make them as harmful to children as lead paint is. Irrelevant. **We are interested in the amount of lead that the children ingest. We are not concerned with other substances.**
- B. The money required to finance the removal of lead paint from apartment walls could be spent in ways more likely to improve the health of children. **Not a direct consequence. Seems like a shell game. But improving health in other ways doesn't impact their lead ingestion.**
- C. Other sources of lead in older apartment buildings are responsible for most of the lead that children living in these buildings ingest. **Once again, if other sources are responsible, then removing the paint shouldn't increase the ingestion.**
- D. Removing lead paint from walls disperses a great deal of lead dust, which is more easily ingested by children than is paint on walls. **There. This is our answer. If removing the paint is going to cause the lead to manifest into a form that's easier for ingestion, then obviously the children will ingest more lead than before.**
- E. Many other environmental hazards pose greater threats to the health of children than does lead paint. **Out of scope answer. We are not dealing with other threats. This is a specific question with a specific argument. We needn't worry about the rest.**

Note:

Thus, it is important to note that in this type of question it is more important to realize that it's futile to try and prove the given facts wrong. We simply have to focus on finding an answer choice that will help us bridge the gap between what seems like two apparently counter-reactive statements.

## SUMMARY OF RESOLVE THE PARADOX TYPE QUESTIONS

### IDENTIFICATION:

Will use the word reconcile or resolve along with the words discrepancy, conflict, contradiction or a similar word that means the same. The stimulus will contain two opposing facts that are to be taken as true.

### ANSWER CHOICE QUALIFICATION:

- Stimulus to be taken as facts and as given.
- Answer choices are taken to be true, even if there is new information provided.
- It must be a statement that bridges the gap between the discrepancies.

### CORRECT ANSWER CHOICES:

- Will either address the weakness in the argument or give reasons for the two conflicting statements to be true.
- Would involve active resolution
- There should be no disparity in the “similarity” or “difference” in stimulus and answer choice.

### WRONG ANSWER CHOICES:

- Opposite Answers
- Shell Game Answers
- Out of Scope Answers
- Wrong Tone in Answers
- Reversal of causality or incorrect causality
- Irrelevant Information
- Answer explaining only one side of the paradox
- Answer that strengthens the paradox instead of resolving it.

## METHOD OF REASONING/ MIMIC REASONING

These questions are not as common on the GMAT as the other types, but I thought I should include them here anyway. These are questions that ask for you to figure out the type of argumentation made in the stimulus and either identify it or choose an answer that mimics it. Hence I've combined the question types together.

Some of the common phrases that can be used to identify these questions are "argumentative technique", "reasoning", "proceeds by", "parallel", "most similar to" "pattern of reasoning" and so on.

**"Which of the following most accurately describes the author's method of defending the case?"**

**"Which of the following is most parallel to the argument in its logical structure?"**

In these questions it's very important to tell you to **focus on the logic of the argument** and **not the subject matter itself**. These questions appear only in less than 5% of the GMAT questions (According to Veritas Prep CR) and hence are most likely to appear when you're doing well on the GMAT.

The correct answer choice would be a **description of the author's logic** in arriving at the conclusion of the argument.

Any answer choice that is **inconsistent with the stimulus** can be eliminated. For "Mimic the Reasoning" questions, the pattern of reasoning is of utmost importance. If the stimulus contains flawed logic, it's prudent to eliminate answer choices that are sound in logic (this is often a trap!), and vice versa. Most of the time, if the content of the argument is repeated in the stimulus, it's wrong.

Example 1 (Veritas Prep CR):

It is inaccurate to say that a diet high in refined sugar cannot cause adult-onset diabetes, since a diet high in refined sugar can make a person overweight, and being overweight can predispose a person to adult-onset diabetes.

The argument above is most parallel, in logical structure, to which of the following?

Note the sentence structure first. It's almost a double negative. "Incorrect to say .... Cannot cause ..."

So we know that the answer must also present a case where it's incorrect to say that something cannot be the cause of something. And then present a reason as to why it is possible for the causation.

Let's look at the answer choices now.

- A. It is inaccurate to say that being in cold air can cause a person to catch a cold, since colds are caused by viruses and viruses flourish in warm, crowded places. **Incorrect since the sentence structure doesn't match.**
- B. It is inaccurate to say that no airline flies from Halifax to Washington. No airline offers a direct flight although some airlines have flights from Halifax to Boston and others have flights from

Boston to Washington. **Incorrect because we are talking about a causal relationship in the stimulus and there is no cause-effect paradigm here.**

- C. **It is correct to say** that over-fertilization is the primary cause of lawn disease, since fertilizer causes lawn grass to grow rapidly and rapidly growing grass has little resistance to disease. **The highlighted portion itself must have raised a red flag in your mind, since the logic of the stimulus is the exact opposite.**
- D. It is **incorrect to say** that inferior **motor oil cannot cause** a car to get poorer gasoline mileage **since inferior motor oil can cause** engine valve deterioration and engine valve deterioration can lead to poorer gasoline mileage. **The highlighted portions clearly indicate a similar logical construction as shown in the stimulus and hence this is the correct answer choice.**
- E. It is inaccurate to say that Alexander the Great was a student of Plato; Alexander was a student of Aristotle and Aristotle was a student of Plato. **Clearly confusing and nowhere related to the argumentation technique presented in the stimulus. Hence Incorrect.**

Example 2 (From Veritas Prep CR):

**Imran:** The only way for a company to be successful, after emerging from bankruptcy is to produce the same goods or services that it did before going bankrupt. It is futile for such a company to try to learn a whole new business.

**Weber:** Wrong. The Kelton Company was a major mining operation that went into bankruptcy. On emerging from bankruptcy, Kelton turned its mines into landfills and is presently a highly successful waste management company.

Weber uses which one of the following argumentative techniques in countering Imran's argument?

- A. He presents a counter example to a claim. **This is precisely what Weber does, so this is the correct answer.**
- B. He offers an alternative explanation for a phenomenon. **Incorrect.**
- C. He supports a claim by offering a developed and relevant analogy. **Incorrect, because he is opposing Imran's argument.**
- D. He undermines a claim by showing that it rests on ambiguity. **Incorrect again, since he doesn't attack Imran's reasons for stating so, he simply provides a case where what Imran said hadn't happened.**
- E. He establishes a conclusion by excluding the only plausible alternative to that conclusion. **Out of scope answer.**

### SUMMARY OF REASONING TYPE QUESTIONS

- Will ask you to mimic or identify the pattern of logic from the stimulus.
- **Correct answer** would be consistent with the stimulus and explain the pattern of reasoning
- **Incorrect answers** will be inconsistent with the stimulus or focus on the subject matter of the stimulus instead of the pattern of reasoning

## BOLD FACED PORTIONS

This is the last main type of question on the GMAT and is extremely easy to identify. There will be two bolded phrases in the stimulus and the question stem will ask you to identify the relationship between them in some way or form.

**“The two bold faced sentences play which of the following roles?”**

These questions are heavily dependent on your ability to interpret the premise and identify the conclusion of the stimulus correctly and hence this can be considered similar to an inference question type. To correctly answer the question it’s important to identify the pattern of reasoning in the stimulus correctly. Thus, going back to the inference lesson, for this question type, we need to isolate the conclusion, understand the premise and identify any logical errors in the drawing of the conclusion. The correct answer **MUST** describe the roles of **BOTH** the bold faced portions, not just one.

Example 1 (Taken from nusmavrik’s example on GMAT Club):

Historian: Newton developed mathematical concepts and techniques that are fundamental to modern calculus. Leibniz developed closely analogous concepts and techniques. It has traditionally been thought that these discoveries were independent. Researchers have however, recently discovered notes of Leibniz’ that discuss one of Newton’s books on mathematics. Several scholars have argued that since the book includes a presentation of Newton’s calculus concepts and techniques and since **the notes were written before Leibniz’ own development of calculus concepts and techniques**, it is virtually certain that the traditional view is false. A more cautious conclusion than this is called for, however. **Leibniz’ notes are limited to early sections of Newton’s book; sections that precede the ones in which Newton’s calculus concepts and techniques are presented.**

In the historian’s reasoning, the two boldfaced portions play which of the following roles?

This is a question where it’s absolutely necessary to **identify what the author’s stand on the argument is**, and hence identifying the conclusion becomes vital. The traditional view is that Leibniz and Newton developed these simultaneously. But people believe this is false because they found Leibniz mentioning that he’d studied Newton’s book. Look at what the historian says in response: A more cautious conclusion. So this means he doesn’t believe that Leibniz had written the works after Newton and hence justifies that by giving an alternative explanation.

So to deconstruct this question we have two statements:

**Researcher’s conclusion:** Traditional view is false.

**Historian’s conclusion:** Researcher’s conclusion is false.

- A. The first provides evidence in support of the overall position that the historian defends; the second is evidence that has been used to support an opposing position. **The historian doesn't defend the position, he opposes it. So incorrect.**
- B. The first provides evidence in support of the overall position that the historian defends; the second is that position. **Once again, the historian doesn't defend this position, hence incorrect.**
- C. The first provides evidence in support of an intermediate conclusion that is drawn to provide support for the overall position that the historian defends; the second provides evidence against that intermediate conclusion. **This is the kind of complicated wording that GMAT likes to trick us with. There is no intermediate conclusion, and the historian doesn't support the overall conclusion.**
- D. The first is evidence that has been used to support a conclusion that the historian criticizes; the second is evidence offered in support of the historian's own position. **This is true. The historian opposes the first and gives an alternative explanation.**
- E. The first is evidence that has been used to support a conclusion that the historian criticizes; the second is further information that substantiates that evidence. **The second part of this is wrong. The first might be evidence that supports something the historian criticizes, however the second part is his alternative explanation and is not in support of the first. Hence incorrect.**

Example 2 (From Veritas Prep CR):

**Some analysts predict that next year will see total worldwide sea shipping tonnage increase by 2% over the current year.** However captains of freight ships generally expect that worldwide shipping tonnage will decrease next year. **At issue is the amount of freight that will be shifted from sea ships to foreign airplanes as compared to the growth in overall demand for freight transport.** The analysts believe growth in demand will outstrip the shift to freight airplanes; the ship captains believe the opposite.

From reading we know that the first part is a viewpoint and the second part is a reason for another viewpoint.

The two portions in **boldface** play which of the following roles?

- A. The first portion is evidence that supports a position; the second portion is a position that is not necessarily true based on the evidence. **Incorrect. The first portion is not evidence.**
- B. The first portion represents one of two opposed positions; the second portion describes the underlying reason for the difference in position. **This is correct.**
- C. The first portion represents one of two opposed positions; the second portion is evidence in support of that position. **The second portion doesn't support the first portion. Incorrect.**
- D. The first portion is evidence that supports a position; the second portion is evidence that supports an opposed position. **The first portion is not evidence. Incorrect.**
- E. The first portion represents one of two opposed positions; the second portion represents the opposing position. **The second portion doesn't represent an opposing position. Incorrect.**

## SUMMARY OF BOLD FACED PORTIONS QUESTIONS

### IDENTIFICATION:

Two sentences or phrases in the stimulus will be **boldfaced** and the question stem will identify the relationship between the two phrases or the significance of the two portions within the stimulus.

### ANSWER CHOICE QUALIFICATION:

- It will address both the boldfaced portions
- Will be true to stimulus and mimic the reasoning in the stimulus

### CORRECT ANSWER CHOICES:

- **MUST** address both portions of the stimulus.
- Will follow the same logical pattern that is used to arrive at the conclusion in the stimulus.

### WRONG ANSWER CHOICES:

- Opposite Answers
- Shell Game Answers
- Out of Scope Answers
- Wrong Tone in Answers
- Reversal of causality or incorrect causality
- Irrelevant Information
- Answer explaining only one side of the bold faced portions

## NUMBERS AND PERCENTAGES – CONCEPT

The GMAT often brings in the concepts of numbers and percentages into the verbal questions. There is an underlying difference between numbers and percentages. Numbers are absolute entities, percentages represent a fraction. There are some common misconceptions when it comes to numbers and percentages:

1. Larger number means larger percentage and smaller number means smaller percentage. This is false. If the group size changes, both these assumptions would be invalidated.
2. Larger percentages mean larger numbers and smaller percentages mean smaller numbers. Once again, this is wrong too. 90% of \$10 is lesser than 10% of \$1000.
3. Increase in percentage does not mean increase in numbers, and vice versa. Similarly decrease in percentage doesn't mean decrease in numbers. The group size could change.

Example 1 (Powerscore's On-Demand Course):

**Student:** The majority of the 50 students in my class answered at least 80% of the questions correctly on last year's Algebra I exam. If these final exam scores do accurately measure the level of a student's level of understanding, Marc must have learned less about Algebra last year than most other students in the class because he answered only 75% of the questions correctly on the Algebra I exam.

Which of the following, if true, most seriously, weakens the student's argument?

- A. Seven students answered less than 75% correctly on the exam. **Irrelevant. Numbers and percentages do not reflect the level of understanding in this case. Incorrect answer.**
- B. Marc is one of four students in the class who did not take an introductory level Algebra course before Algebra I. **This would explain a lot. So if he'd never taken an Algebra course and he got 75% of the questions right, then it means that he probably learnt a lot more about Algebra than did the other students.**
- C. Marc is one of three students who answered exactly 75% of the questions right in the Algebra I final. **This doesn't tell us anything about how much he learned. Incorrect.**
- D. The teacher estimated that last year's Algebra I final was roughly twice as hard as this year's final. **This doesn't say much either, we know this year's exam was easier but how does that answer anything about how much Marc learned?**
- E. Only three students spent less time answering questions on the Algebra I final as Marc did. **This doesn't tell us anything about how much he learned either. Incorrect.**

And that pretty much ends the CR document. Hopefully this has covered all the necessary types of questions and so on. If I've left anything out, please let me know. The next page lists the sources of examples I've used in this document. Once again, this is strictly a guiding tool and is not meant to substitute for any of the CR books.

## REFERENCES:

- Powerscore On-Demand Course Book
- Veritas Prep Critical Reasoning Book I.
- The Official Guide – 10<sup>th</sup> Edition
- Ykaiim's post on GMAT Club