

# Powerscore CR Bible

**ALL Important Notes Compiled (Latest 2019 Edition)**

## CRITICAL REASONING NOTES - GMAT

- Always better to read the passage quickly but carefully, and then answer question stems.
- Topics can vary - make sure to distinguish reality from GMAT reality and prevent preconceptions from biasing the passage.

### ANALYZING THE STIMULUS

- Stimuli fall into two categories: Facts versus Arguments:
  - Facts: Simply lays out facts in an order without drawing any conclusion. doesn't elicit any reaction from reader.
  - Arguments: state a clearly defined conclusion that is derived from a set of facts.
- When reading a passage, certain objectives need to be drawn upon:
  - **Objective 1: Does stimulus contain an argument or a set of facts:**
    - Premise vs Conclusion:
      - Premise gives a reason on why something should be believed. To identify it, ask yourself:
        - What reason has the author given to persuade me?
        - Why should I believe this argument?
        - Note: it could also include a simple fact or statement that eventually becomes part of a larger argument
          - Ex: The sky can be seen at night (P1). It looks to be blue (P2). Therefore, the sky-gods must be blue (C).
      - A conclusion is the point the author tries to prove by using another statement. It rests on the premise.
        - What does the author want me to believe?
        - What is the author driving at?
      - Key words include (**memorize them**):

| <u>Premise Indicators</u> | <u>Conclusion Indicators</u> |
|---------------------------|------------------------------|
| because                   | thus                         |
| since                     | therefore                    |
| for                       | hence                        |
| for example               | consequently                 |
| for the reason that       | as a result                  |
| in that                   | so                           |
| given that                | accordingly                  |
| as indicated by           | clearly                      |
| due to                    | must be that                 |
| owing to                  | shows that                   |
| this can be seen from     | conclude that                |
| we know this by           | follows that                 |
|                           | for this reason              |

- Premise or a conclusion may occur **in any order**. There may be multiple premises for a single conclusion.

- **Objective 2: Approach arguments differently from facts. If there is an argument, identify the conclusion. If it has facts, analyze them.**

- If stimulus contains an argument, It is essential to **identify the conclusion** before moving onto question stem.

- Premise/Conclusion form: When a conclusion indicator is followed by a premise indicator, the conclusion will eventually appear after second comma:

“Therefore, since higher debt has forced consumers to lower their savings, banks now have less money to loan.”

- Example:

“The rapid diminishment of the ecosystem of the Amazon threatens the entire planet. Consequently, we must take immediate steps to convince the Brazilian government that planned development projects need to be curtailed for the simple reason that these development projects will greatly accelerate the loss of currently protected land.”

- In this example, the beginning sentence is NOT a conclusion because it is used to form the author's final point. It is a PREMISE because it provides a reason to believe author's eventual conclusion.
- Additional Premise indicators: These could be essential to the argument, but could also be non-essential to the conclusion.

Furthermore  
Moreover  
Besides  
In addition  
What's more

- The difference between the main premise and the additional premise is that, even though BOTH are reasons to conclude a certain argument, the additional premise uses aforementioned words to drive the SAME point home. It provides additional proof for the conclusion, but using a different premise.
- Counter Premise Indicators: These are premises that go against the author's argument to assuage and acknowledge opposition.

|                   |             |
|-------------------|-------------|
| But               | Although    |
| Yet               | Even though |
| However           | Still       |
| On the other hand | Whereas     |
| Admittedly        | In spite of |
| In contrast       | Despite     |
|                   | After all   |

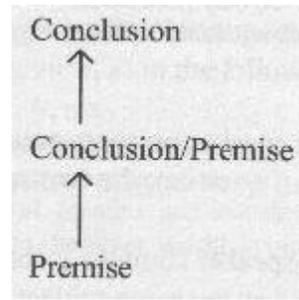
- Trick to ID conclusion w/o indicators (Conclusion ID Method):

- Arrange the entire statement, as to force one of the sentences to be the conclusion and the rest to be the premise.
  - Insert premise and conclusion indicators into sentences to check if they make sense.
- Once pieces are arranged, check to see if they make logical sense. If they don't repeat first step.

- If it contains facts, examine each fact independently, holistically, and systematically.

### COMPLEX ARGUMENTS:

- Simple arguments means that arguments contains ONE CONCLUSION. Complex arguments means that an argument contains MORE THAN ONE CONCLUSION.
- Complex arguments:
  - Rather than presenting a premise that informs a conclusion, a complex argument uses the **sub-conclusion** as a premise for a second conclusion.



- Be wary of wrong answer choices that mislead readers into confusing sub-conclusion from main conclusion.
      - Form 1: Usually, main conclusion is in the first sentence, and sub-conclusion is in the last sentence with a conclusion indicator preceding it.
      - Form 2: Two different speakers present two different arguments with different premise/conclusion sets.
- Opposing viewpoints:
  - In some constructions, the author may state one viewpoint, and immediately provide an opposing viewpoints. They use the following phrases:

“Some people propose...”  
 “Many people believe...”  
 “Some argue that...” or “Some people argue that...”  
 “Some critics claim...”  
 “Some critics maintain...”  
 “Some scientists believe...”

- The structure of these sentences involves: **a number** (some, many, most) of **people** (students, scientists) **claim** (believe, propose). Learn to recognize it.

### TRUTH VERSUS VALIDITY:

- **Objective # 3: If the stimulus contains an argument, determine whether the argument is strong or weak.**
  - It is a waste of time to evaluate each GMAT sentence for truthfulness, based on your own personal opinion.
  - It is MUCH MORE IMPORTANT to evaluate a passage for validity - the notion that one conclusion is being informed by a set of premises. We need to ask if the conclusion true, given the premise. Does it flow logically from premise.
    - Does the premise prove why the conclusion is acceptable? Are the premises well developed?
    - Are there unwarranted assumptions when constructing the argument?
- Inference versus Assumption:
  - Inference: Within an argument, an argument is the part of the argument that must be true based on the information presented in an argument.

- Assumption: Within an argument, it is an unstated premise. It is the part of the argument that must be true in order for the argument to be true.
- Even though both inferences and assumption refer to things that MUST be true, the difference lies in place in argument:
  - An inference is WHAT FOLLOWS FROM an argument (a conclusion)
  - An assumption is WHAT IS TAKEN FOR GRANTED when forming argument
- Note on GMAT Authors:
  - The author of the GMAT doesn't *intentionally* present flawed argument to attempt to deceive the reader. But their writings may contain flaws, which test-takers need to identify.
  - When a premise is created, the statement is likely to be accurate. They should not be looked at as a potential source of error in the argument.
  - Lastly, GMAT authors sincerely believe that their arguments are logical, sound, and well-considered.

● **Objective 4: Read closely and know precisely what the author said. Do not generalize!**

- It is important to carefully examine every word in the text. Some words can be exploited within the wrong answer choices, since they answer may mislead the reader into believing incorrect quantities or probabilities are correct.
  - Quantity indicators: the amount or quantity in a relationship (e.g. some people, many theories, most laws, all disciplines)

Quantity Indicators  
 all  
 every  
 most  
 many  
 some  
 several  
 few  
 sole  
 only  
 not all  
 none

- Probability indicators refer to the likelihood of occurrence or obligation (e.g. the mayor SHOULD resign; the voters will never vote).

Probability Indicators  
 must  
 will  
 always  
 not always  
 probably  
 likely  
 would  
 not necessarily  
 could  
 rarely  
 never

- Argument Scope: It is the range to which the premises and conclusion encompass certain ideas.
  - For example: an argument may discuss a new surgical technique.
    - The ideas of surgery are medicine are within the scope of argument.
    - The idea of federal monetary policy are not within the scope.

- An argument may have a wide or a narrow scope. Narrow scope have definite argument and wide-scope arguments are less definite and more broad.
  - Make sure answer choices don't go beyond the scope of the argument.

## THE QUESTION STEM AND ANSWER CHOICES

- Question stem includes inquiries on:
  - identifying the details within text;
  - describe the argument structure (requires premise and conclusion analysis);
  - what makes an argument stronger;
  - what makes an argument weaker;
  - identifying what the main points, inferences, or assumptions;
  - recognizing errors within line of reasoning;
  - reconciling a conflict;
  - finding arguments that are identical in structure.
- **Primary Objective # 5: When analyzing question stem, carefully read and identify the question stem (try and think, in simple terms, what it's asking us to do). Do not assume that certain words are automatically associated with certain questions types.**
  - **Note:** If the stem is referring to a certain part of the stimulus, make sure to reference that part.
- Question Group 1 (Prove): (1) Accept stimulus to be true (even if it has error in reasoning) and use it to prove that one of the answer choices must be true; (2) any items within the answer choices that are not directly in the stimulus are most likely incorrect.
  - **Must be True:** Usually occurs when argument lacks a conclusion. identify the answer that is **best supported by the stimulus**
    - *if the statement is true, what must also be true?*
  - **Main Point:** identify the **main conclusions** made by the author
    - *the point of the argument is that:*
  - **Method of reasoning:** It asks to describe, in abstract terms, the **way in which the author made his or her argument.**
    - Which one of the following describes the technique of reasoning used above?
  - **Parallel reasoning:** (an extension of method since we must understand and apply method). Used to identify the answer choice that contains **reasoning most similar in structure** to the reasoning presented in the stimulus.
    - Which argument is most similar in pattern to reasoning to the argument above?
  - **Flaw in the reasoning:** (An extension of method, except that we KNOW there is a flaw in reasoning) It asks to describe, in abstract terms, the **error in reasoning** committed by the author.
    - The reasoning in author's argument is flawed because the argument:
- Question Group 2 (**Help - usually contains "if true" in stem**): (1) The stimulus must be placed under suspicion, since there may be errors of reasoning or logic; (2) The answer choices must be accepted as factually correct and we need to determine which answer choice best meets the question posed in the stem (usually positively helping argument)
  - **Assumption:** identify what the **author assumes when making the argument**
    - *what assumption is required by the argument above?*
  - **Strengthen and support:** identify the statement that **supports, corroborates, or strengthens author's argument**
    - which of the following most strengthens authors argument?

- **Resolve the paradox:** Usually occurs when argument lacks a conclusion. In the stimulus, there could exist a paradox or a contradiction. **The questions asks about a way to resolve this conflict.**
  - Which statement most effectively resolves the apparent paradox?
- Question Group 3 (Hurt): Just like group 2, except we need to attack author's argument. (1) The information in stimulus is suspect and the reasoning errors further weaken argument (2) The answer choices must be accepted as correct and we need to determine which answer best weakens argument.
  - **Weaken:** (polar opposite of strengthen since we need to explore hole in argument that need to be opened/closed) Identify which statement **attacks or undermines author's argument.**
    - Which one of the following statements most seriously weakens authors argument?
- Question Group 4 (Evaluate): A combination of group 2 and 3.
  - Evaluate the argument: Decide which answer choice will allow you **to determine the logical validity of the argument.**
    - The answer to which one of the following questions would contribute most to an evaluation of the argument?
- Additional Note:
  - Variety: Don't expect same type of questions to appear back-to-back.
  - Most: The qualifier "most" ensures only ONE correct answer.

#### EXCEPT AND LEAST IN QUESTION STEMS (INTERCHANGEABLE) - usually ALL CAPS on test:

- When EXCEPT is used:
  - test taker SHOULD NOT attempt to answer the polar opposite of the questions (i.e. all statements weaken except  $\neq$  which statement strengthens)
  - instead, test-taker SHOULD find all statements that weaken argument EXCEPT for the argument that DOES NOT weaken argument.
- When LEAST is used, treat it the same way as EXCEPT:
  - if a statement is LEAST helpful in strengthening an argument, that question can be rephrased as follows: all arguments strengthen the argument EXCEPT.
  - when the term "least" is encountered, realize that FOUR statements will meet the criteria and ONE will NOT!

#### PREPHARSING ANSWERS

- Pre-phrasing is a strategy that involves ACTIVELY THINKING about what the correct answer would be BEFORE looking at answer stem.
- **Primary Objective # 6: After reading the question stem, take a moment to mentally formulate the answer to the question.**
  - Reading the question critically and attacking the stimulus is essential to pre-phrasing the answer.

#### ANSWER CHOICES

- Uniqueness Rule of Answer Choices: Every correct answer has a unique logical quality that meets the criteria in the question stem. Every answer has the OPPOSITE logical quality."
  - Logic vs Polar Opposite:
    - Polar: Wet vs Dry
    - Logic: Wet vs Not Wet (what GMAT is concerned with)

Logical Quality of the Correct Answer: Must Be True  
 Logical Quality of the Four Incorrect Answers:  
 the opposite of Must Be True = Not Necessarily True (could be not necessarily the case or never the case)

Logical Quality of the Correct Answer: Strengthen  
 Logical Quality of the Four Incorrect Answers:  
 the opposite of Strengthen = not Strengthen (could be neutral or weaken)

Logical Quality of the Correct Answer: Weaken  
 Logical Quality of the Four Incorrect Answers:  
 the opposite of Weaken = not Weaken (could be neutral or strengthen)

- **Primary Objective # 7: Always read all of the answer choices before answering question.**
  - Be wary of highly attractive incorrect answer choices that don't fit GMAT Logic.
- **Primary Objective #8: Separate answer choices into contenders and losers.**
  - If an answer choice immediately strikes as incorrect, eliminate immediately.
  - List answer choice as a contender if it makes sense, and IMMEDIATELY MOVE ON TO NEXT ANSWER rather than deliberating the merits of current answer.
- **Primary Objective #8: If all 5 answer choices appear incorrect, GO BACK TO STIMULUS and Re-Evaluate argument.**
  - You must have missed something key in the stimulus.

#### CHAPTER 1: MUST BE TRUE QUESTIONS

- These questions require us to select an answer choice that is proven by the information presented in the stimulus.
- Use the Fact Test:
  - The correct answer to a "must be true" question can always be proven by referring to the facts stated in the stimulus.
  - Do not use outside assumption to validate incorrect answer choice.
- Common indicators of question type:
  - The question stem often indicates that stimulus should be taken as true:
    - "if the statements above are true," "the statements above, if true,"
  - It asks to identify a single answer that is best supported by stimulus:
    - "which of the following must be true" "which of the following can be inferred" "most strongly support which of the following"
  - When a question asks us "what can be INFERRED," it is asking "what must be true?"
  - Examples:

"If the statements above are true, which of the following must be true?"

"Which of the following conclusions is best supported by the statements above?"

"The statements above, if true, best support which of the following assertions?"

"Which of the following can be correctly inferred from the statements above?"

"Which of the following is most strongly supported by the information above?"

- 
- Additional Notes on "Must Be True" questions:
  - Most "Must Be True" questions are fact sets. There is no argument to discern or analyze. For this reason, they don't elicit the same type of immediate response as arguments do. Paraphrasing the answer, therefore, is more challenging.
  - It is OK to return to stimulus and re-read passage. It is NOT important to re-read entire passage every single time
  - Objective #4: We need to understand EXACTLY what the author is saying. It is important to read closely and precisely without generalizing. We are like Sherlock Holmes, looking for clues within stimulus and matching those clues to answer choices.
    - **Pay extremely close attention to MODIFIERS:**
      - Some, Many, Most, Could - wide range of scope
      - All, none, never, must, must NOT - limited scope
- Correct Answers Reviewed:
  - Paraphrased Answers: These answers restate a portion of the stimulus in a different way. If you understand the author's meaning, they are hard to miss.
  - Combination Answers: any answer yielded by combining two or more statements in the stimulus will be correct.
- Incorrect Answers Reviewed:
  - Likely to be true:
    - answers that could possibly be true (especially using real world examples) but not necessarily supported using the text are incorrect.
  - Exaggerated answers:
    - use information from the stimulus and stretch it to make a broader statement that isn't supported in the stimulus. Usually, these statements are phrased very similarly to stimulus except for an important detail (ie modifier).
      - e.g. If **some** engineers are from India, **most** engineers are NOT from India.
      - e.g. Schools are likely to adopt  $\neq$  schools will adopt.
  - "New" Information Answers:
    - Sometimes, answers introduce new information. Even though this information is logical, it isn't directly supported by the text. They *could* be correct if they fall within the umbrella of the stimulus, we should be wary.
      - If US economic policies are discussed, information on Japan's policies may not be supported.
    - Check by:

- examining the scope of the argument and ensuring it doesn't fall within scope.
    - combining elements to make sure it's isn't a consequence of a combination answer.
  - Shell Game:
    - A common trick is to introduce an idea in stimulus and introduce a similar idea in the answer. But the idea is changed enough to make answer wrong.
  - Opposite Answer:
    - They suggest the opposite of what is mentioned in the stimulus. Trap for fast readers.
  - Reverse Answers:
    - This answer reverses certain elements of the answer. For example, saying that: Some stores use many different toppings IS NOT the same as many stores use some different toppings.
- Must Be True Problem Set:
  - Q1: Be aware of modifiers (any, only, all). Consider combination answers that rephrase original answer. Read sentence carefully.
  - Q2: Watch out for answers that are beyond the scope of the passage.
  - Q3: Make distinction between BOTH type of pile driving standards and apply the definitions.
  - Q4: Watch out for modifiers.
  - Q5:
    - (A) Most mystery stories feature a brilliant detective who solves the mystery presented in the story.

      - "most" is an exaggeration.
  - Q7: Draw a picture of a complex biological phenomenon.
  - Q8:
    - (C) Attaching a reliable date to any event requires determining which of several conflicting chronologies is most likely to be true.

      - Passage doesn't describe ANY event, just ONE TYPE of event.

### **MAIN POINT QUESTIONS:**

- Less Common in CR but very common in RC. Helps understand author's main argument.
- A subcategory of the "must be true" except for an important caveat: answer MUST capture the MAIN POINT (the author's CONCLUSION, not the premise).
- Do NOT expect main point to be the first or last sentence of the stimulus.
  - There are occasions when the main point occurs in the middle.
  - Also, there may be a sub-conclusion at the end of the sentence, which may NOT be the main point. Do not make assumptions about placement.
- Example:
  - Which choice accurately restates the main point?
  - Which accurately expresses the conclusion of the argument?
- Incorrect choices:
  - Answers that ARE true but NOT the main point.
  - Answers that repeat the premise of the argument.
- Use Conclusion ID Methods:

- Place premise/conclusion indicators before a set of sentences and check if they make sense.
- Main Point Question Type Review:

Prediction, the hallmark of natural sciences, appears to have been possible by reducing phenomena to mathematical expressions. Some social scientists also want the power to predict accurately and assume they ought to perform the same reduction. But this would be a mistake; it would neglect data that are not easily mathematical and thereby would only distort the social phenomena.

Which one of the following most accurately expresses the main conclusion of the argument?

- (A) The social sciences do not have as much predictive power as the natural sciences.
- (B) Mathematics plays a more important role in the natural sciences than it does in the social sciences.
- (C) There is a need in the social sciences to improve the ability to predict.
- (D) Phenomena in the social sciences should not be reduced to mathematical formulas.
- (E) Prediction is responsible for the success of the natural sciences.

- - The answer isn't A, even though the author would agree with it. It is broader than A. The main conclusion rejects the idea of reducing social sciences using math. So it should be D (the mistake that occurs).

## WEAKEN QUESTIONS

- These questions try to decisively undermine the author's argument. They are the MSOT FREQUENT type of questions on the GMAT.
- In addition to the primary objectives, keep in mind:
  - In order to attack author's argument, it is important to ISOLATE premise and conclusion and UNDERSTAND what the author is arguing.
  - All WEAKEN questions impact the conclusion, so focus specifically on THE CONCLUSION.
  - READ ARGUMENT CAREFULLY to find holes in the reasoning or logic.
  - PREPRASING IS VERY IMPORTANT, so actively think about WHAT may weaken the argument.
  - Answer choices don't have to be mentioned within stimulus. They may include NEW INFORMATION.
- Characterizing question stem:
  - Following words are present in stem:

weaken  
 attack  
 undermine  
 refute  
 argue against  
 call into question  
 cast doubt  
 challenge  
 damage  
 counter

- The stem indicates that you should accept the answer choices as true, by prefacing it with "if true."
- How to Weaken the Argument:
  - We are not trying to DESTROY the argument, only hurting it.
  - **When reading answer choices, consider whether the choices would cause author to RECONSIDER or RESPOND!**
  - Strategy 1: Weaken the premise:
    - rarely happens cause it's really easy to spot an answer that directly contradicts the premise.
    - the only time this happens is when the author attacks a sub-conclusion, which affects the conclusion.
  - Strategy 2: Weaken the conclusion:
    - Failure to account for a possibility: Answer choice will show that the conclusion fails to account for some element or possibility.
    - Error of assumptions: Stimuli for these questions contain error of assumptions. Answer choices will attack assumptions made by the author.
      - Statement: If neighbours have blue cars, I have blue car. Assumption: Neighbour's car color affects my car color. Weaken: The impact of neighbour's car has not determinative effect on individual's car.
      - Focus on answer that attacks the way the author arrived at the conclusion. FOCUS ON THE EFFECT THE ANSWER HAS ON THE CONCLUSION.
    - Personalize the argument: How would YOU would respond when talking to the author.
- Weakening Scenarios:
  - Incomplete information: Author fails to consider all possibilities or rely on incomplete evidence. In this case, think of new possibilities or evidence.
  - Improper Comparison: The author attempts to compare items that cannot be compared.
  - Qualified Conclusion: Author qualifies/limits conclusion in a way that leaves it open to attack.
- Incorrect Answer Traps:
  - Opposite Answer: Rather than weakening, answers strengthen argument.
  - Shell Game: When an answer is raised in stimulus and raised AGAIN in argument.
  - Out of Scope Answers: Raise issues that miss the point of the argument or are irrelevant.

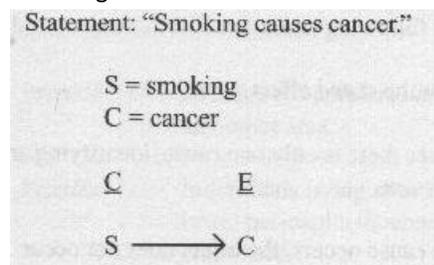
### CAUSE AND EFFECT REASONING:

- Cause and effect reasoning asserts or denies that ONE THING CAUSES ANOTHER. Most causal CONCLUSIONS ARE FLAWED in reasoning because alternate explanations exist.
  - Cause is the event that makes the resulting Effect occur.
- Typical expressions implying causality (MEMORIZE):
  - The extreme weather is caused by climate shift.
  - Obama's declining popularity is because of his pro-Islamic rhetoric.
  - The banks should be held responsible for the global economic crisis

caused by  
because of  
responsible for  
reason for  
leads to  
induced by  
promoted by  
determined by  
produced by  
product of  
played a role in  
was a factor in  
is an effect of

- 
- If a causal relationship occurs in a conclusion, the reasoning is flawed because it is claiming that one premise causes an effect:
  - INCORRECT: A lot of people in America have cancer. Milk is drunk very often by Americans. **So milk causes cancer.**
    - this is flawed because there is no evidence to suggest that milk causes cancer. the author has used two premises and established a causal relationship in the conclusion.
  - Correct: Milk has been proven to cause cancer. North Americans drink milk. North Americans have a higher chance of contracting cancer.
    - This is a correct line of reasoning because the premise establishes a causal relationship and the eventual conclusion follows logically from the causal premise.
- In general, a conclusion is erroneous if it takes two premises and establishes (within the conclusion), a causal relationship between them.
  - But if the causal relationship is established in one of the premises, and the conclusion follows logically from it, there IS NO mistake.
- Errors of Causality (Scenarios)
  - Scenario 1: One event occurs BEFORE another (post-hoc, ergo propter hoc).
    - Just before an initial premise appears before the second event, it does not imply causality.
    - e.g. The rooster crows before the sun rises. Therefore, the rooster causes the sun to rise.
      - just because one statement appears beforehand, it DOES NOT cause the other.
  - Scenario 2: Two (or multiple) events occur at the same time
    - When two events occur simultaneously, it would be a mistake to presume that an event causes the other event. Instead:
      - Both events could have occurred due to a third event
      - There could be a correlation between the two events without being a causation.
    - Example: During the early mornings, there are more accidents. Early mornings cause accidents.
      - Incorrect: third explanation - people are TIRED.'
- Causality Assumption:
  - In the real world, one effect can be caused by multiple stimuli. And one cause can have multiple effects. For example, if a car stops, it's because it runs out of gas.
  - In the GMAT world, the writer assumes that the stated cause is the ONLY possible cause of the effect and the stated cause will ALWAYS produce the effect.

- **central causal assumption:** This assumption essentially states that when a causal conclusion is formed, ALL alternatives have been taken into account and negated. Only ONE cause is valid - the one that causes the effect.
- example: temper near the equator are high. there is poverty near the equator. high temperature causes poverty.
  - So, in essence, we have negated ALL other possibilities.
  - Somewhat incorrect answer choices will suddenly become correct.
- How to attack a Causal Conclusion: Remember, the author's underlying assumption is that the stated cause is the ONLY cause that can create said effect. No other cause can create same effect. To weaken or strengthen this assumption, we can:
  - find an alternative cause for the stated effect
  - show that even the cause occurs, effect doesn't take place
  - show that even when effect occurs, cause did NOT occur
  - show that there are statistical issues in the causal conclusion.
  - Show that stated relationship is reversed or backwards.
- Diagramming Causality: Because writing out the entire causal relationship would be onerous, it's better to draw a causal diagram:



- once the representation of the causal effect has been diagrammed, it is important to stick to it.
- Causal Reasoning Review:
  - Causality occurs when one event is said to make another occur. The *cause* is the event that makes the effect occur. The *effect* is the event that follows from the cause.
  - Causal conclusions are flawed because of alternative explanations, a third event causing the effect, correlation NOT causation, or reversal of situations.
  - Causal statement location:
    - in conclusion: Reasoning is undoubtedly flawed. GMAT questions will focus on weakening the causal conclusion.
    - in premise: Reasoning MAY be flawed, but not because of the premise but because of flaw in argument
  - There are two scenarios that lead to causal conclusions:
    - (1) One event occurs before the other
    - (2) Two or more events occurs at the same time
  - Causal Assumption: The cause is the SOLE event causing the effect and will ALWAYS produce the effect.
  - In order to weaken a causal conclusion: (1) find an alternative cause for effect; (2) prove that effect does not take place (3) show that cause does not take place (4) show statistical improbability (5) show that
- Final Note

## Chapter 4 Must be true questions

- Require you to select answer choice that is proven in the stimulus.
- FACT TEST
  - The correct answer to a Must Be True question can always be proven by referring to the facts stated in the stimulus.
- They may have answers that are likely to be true or maybe true but they are not right.
- Question types
  - Which of the following must be true, best supported by the statement above, support an assertion, inferred, supported
  - Reasoning provided for accepting the following
- What did you read in the stimulus and what do you know on the basis of that reading?
- Try to paraphrase the answer but if you can't that is okay. Because no argument is present and you have no reaction to nothing.
- Go through the 9 objectives
- In objective 6 where you paraphrase try to make a connection with each premise. Look to see what is the one or two words per premise
- Do not make your own assumptions not in the stimulus
- If you must you can return to the stimulus to get a better grasp of the passage.
- 2 answer types in must be true
  - paraphrased answers
  - answers that are the sum of two or more stimulus statements
- types of incorrect answer choices in must be true types of question
  - 1. could be true or likely to be true answers
    - not necessarily right or wrong
  - 2. Exaggerated answers
    - Take info from the stimulus and then stretch that info to a broader statement
    - *Some vendors did ...* -but in the answer choice most of the vendors did ... and that is incorrect.
  - 3. "New" Information answers

- examine the scope of the argument to make sure the “new” information does not fall within the sphere of a term or concept in the stimulus
- examine the answer to make sure it is not the consequence of combining stimulus elements
- 4. The Shell Game
  - An idea or concept is raised in the stimulus, and then a very similar idea appears in the answer choice, but the

idea is changed just enough to be incorrect but still attractive.

- 5. The opposite answer
  - complete opposites of the states facts in the stimulus
- 6. The reverse answer
  - uses the same terms in the stimulus but reverses the elements in the sentence to make it an unsupported statement.
- #5 of problem set... Often means usually but it does not mean most. However "more often than not" means most

#### Chapter 5 Main Point Questions

- The answer selected must follow from the information in the stimulus.
- Even if an answer is true it might not be correct as it doesn't capture the main point of the stimulus.
- Main point questions all contain an argument.
  - P. Obj #2 – identify the argument.
  - Answer to the question should be a rephrasing of the argument
- Be careful: arguments are not always at the end of the stimulus
- Answers that are incorrect:
  - Answers that are true but don't encapsulate the author's point
  - Answers that repeat the premise of the argument
- You must isolate the conclusion and then look for a paraphrase of that conclusion
- If you are unable to identify the conclusion use the "therefore" test of the statements in question.
- Identifying Main point questions usually asks what the conclusion or main point is.

#### Chapter 6: Weaken Conclusion

- Undermines the author's argument as decisively as possible.
- Rules to watch for when attempting this problem.
  - The stimulus will contain an argument. Understand the structure of the argument and it will give you perspective necessary to attack the author's position.

- Focus on the conclusion.
- There are often reasoning errors present, and you must read the argument very carefully.
- Weaken questions often yield strong prephrases. Be sure to actively consider the range of possible answers before proceeding to the answer choices.
- Answer choices are accepted as given, even if they include “new” information.
- Weaken questions usually contain words such as weaken, attack, undermine, refute, argue against, call into question, cast doubt, challenge, damage, counter
- The stem indicates that you should accept the answer choice as true, usually with the following phrase “Which of the following, if true...”
- Attack the conclusion and evaluate the premises
  - The Premise – You can attack an argument by attacking the premise. However the GMAT sees this as being too easy and most correct GMAT weaken question answers leave the premises untouched.
  - The conclusion – the correct answer will undermine the conclusion by showing that the conclusion fails to account for some element or possibility.
  - Answers that weaken the argument’s conclusion will attack assumptions made by the author.
  - The author will fail to consider other possibilities or leave out a key piece of information. The author usually assumes that these elements do not exist.
  - Always look for the answer that attacks the way the author comes to the conclusion. Do not worry about the premises

and instead focus on the effect the answer has on the conclusion.

- Personalize the argument. Imagine how you would respond if you were talking directly to the author.
- Weakening scenarios
  - Author fails to consider all of the possibilities, or relies upon evidence that is incomplete.
  - Author attempts to compare two or more items that are essentially different.
  - The author qualifies or limits the conclusion in such a way as to leave the argument open to attack.
- Incorrect answer traps
  - Opposite answers – In this case they would strengthen the argument.
  - Shell game answers. Shell game occurs when an idea or concept is raised in the stimulus and then a very similar idea appears in the answer choice, but the idea is changed just enough to be incorrect but still attractive.
  - Out of scope answers.
- The conclusion is the part of the argument that is most likely to be attacked, but the correct answer choice will not simply contradict the conclusion. Instead, the correct answer will undermine the conclusion by showing that the conclusion fails to account for some element or possibility.

#### Chapter 7 – Cause and effect reasoning

- Most causal conclusions are flawed because there can be alternative explanations for the stated relationship;
- Causality occurs when one event is said to make another occur. The cause is the event that makes the other occur; the effect is the event that follows from the cause.
- There are usually key identifying terms that help you recognize cause and effect
  - Cause by, because of, responsible for, reason for, leads to, induced by, promoted by, determined by, produced by,

produced by, product of, played a role in, was a factor in, is an effect of.

- If the causal statement is in the conclusion then the reasoning is flawed.
- If the causal statement is in the premise then the argument is flawed.
- Scenarios that tend to lead to causal conclusions in critical reasoning questions (although there may be some correlation there may not be a causal factor in the events)
  - 1. One event occurs before another
  - 2. Two or more events occur at the same time.
- GMAT does not make basic assumptions that are similar to the real world.
- When gmat speaker concludes that one occurrence caused another, that speaker also assumes that the stated cause is the only possible

cause of the effect and that consequently the stated cause will always produce the effect.

- Every argument with a causal conclusion that appears on the GMAT the speaker believes that the stated cause is in fact the only cause and all other theoretically possible causes are not.
- Attacking a cause and effect relationship in weaken questions, it helps to perform one of the following tasks:
  - Find an alternative cause for the stated effect
    - Author believes there is only one cause, so identifying another cause weakens the conclusion
  - Show that even when the cause occurs, the effect does not occur
    - When the effect event does not occur from the cause then this will weaken the conclusion.
  - Show that although the effect occurs, the cause did not occur.
  - Show that the stated relationship is reversed
  - Show that a statistical problem exists with the data used to make the causal statement
- Diagramming the cause and effect relationship can help you visualize the situation but do not do this on the test as it may take too long

#### Chapter 8 Strengthen and assumption questions

- Fundamental rules of these types of questions
  - 1. The stimulus will contain an argument. This is because you are being asked about the author's reasoning and this requires the author to state a conclusion.
  - 2. Focus on the conclusion
  - 3. The information in the stimulus is suspect. There are reasoning errors present and you must read the argument

very carefully in order to know how to shore up the argument.

- These questions often yield strong prephrases
- The answer choices are accepted as given, even if they include “new” information.
- Strengthen questions ask you to support the argument in any way possible.
  - If the player won the tournament support for the conclusion that the player is an outstanding player.
- Assumption questions ask you to identify a statement that the argument assumes or supposes. An assumption is an unstated premise and is necessary for the argument to be true.
  - If the player almost always hits the ball can give proof that the player is an outstanding player
- Strengthen questions
  - Looks for answers that provide support
  - Questions may stem the word strengthen, support, helps, most justifies
- Effective strategy to strengthen arguments:
  - 1. Identify the conclusion – also when looking for the answer ask yourself “would this answer choice assist the author in some way?”
  - 2. Personalize the argument –
  - 3. Look for weakness in the argument – a weak spot in an argument is tailor-made for an answer that eliminates that weakness. Look for an answer that will eliminate the weakness
  - 4. Arguments that contain analogies or use surveys rely upon the validity of those analogies and surveys. Answer choices

that strengthen the analogy or survey, or establish their soundness, are usually correct.

- 5. Correct answer can strengthen the argument just a little or a lot.
- Incorrect answer choices for strengthening
  - 1. Opposite answers – they weaken the argument
  - 2. Shell game answers – shell game occurs when an idea or concept is raised in the stimulus and then a very similar idea

appears in the answer choice, but the idea is changed just enough to be incorrect but still attractive.

- 3. Out of scope answers.
- Cause and effect relationship – strengthen
  - A. eliminate any alternate causes for the states effect
    - Author believes there is only one cause that is stated, and eliminating other causes strengthens.
  - B. Show that when the cause occurs the effect occurs
    - The author believes that the effect will always occur and any scenario where the effect does occur strengthens.  
The answer can appear as an example
  - C. show that the when the cause does not occur, the effect does not occur.
    - This answer can appear as an example as well
  - D. eliminate the possibility that the stated relationship is reversed
    - Author believes in the cause and effect relationship not the other way around.
  - E. Show that the data used to make the causal statement are accurate or eliminate possible problems with the data.
- Assumption Questions
  - Unstated premise of the argument. The author takes for granted and leaves unsaid.
  - On the test you must determine what assumptions the author has made when formulating the argument.
  - The answer you select as correct must contain a statement that the author relies upon and is fully committed to in the argument.
  - Bc the stmt must be something the author believed when formulating the argument, assumption answer choices cannot be extraneous information. I.E. All dogs are smart – correct answer all black dogs are smart. Wrong answer all cats and dogs are smart.
  - Must be true and assumption questions
    - Difference is assumptions are made before the conclusion is stated and must be true answers contain

statements that follow from the argument made in the stimulus.

- Assumptions as supporters or defenders.
  - An assumption is described solely as linking statement, one that links two premises or links a premise to the conclusion.
  - The Supporter is an assumption that connects pieces of the argument
    - Supports often connect “new” or “rogue” pieces of information in the argument. The new or rogue pieces are usually referred to the argument of the stimulus.
    - Closes any gap that the author has not stated to come to the conclusion.
  - The Defender assumptions protect the argument by eliminating ideas that could weaken the argument.
    - “When you read an GMAT argument from the perspective of the author, keep in mind that he or she

believes that their argument is sound. In other words, they do not knowingly make errors of reasoning.”

- Review the argument and if it does not reveal any conspicuous flaws then you should expect a defender type assumption as your answer.
- In order to believe that the argument is “well considered and airtight” an author must assume that every possible objection has been considered and rejected.
  - All other causes or even reverse cause and effect has been considered by the author and does not believe it to be true.
- Mentioning that any other cause of the effect is not true would strengthen the argument.
- Assumption Negation Technique
  - Use this technique to confirm your answer is correct.
  - Technique steps
    - 1. Logically negate the answer choices under consideration.
    - 2. The negated answer choice that attacks the argument will be the correct answer.
  - Logical opposite is not the same as polar opposite.
    - I went to the beach every day last week.
    - (logical) I did not go to the beach every day last week.
    - (Polar) I did not go to the beach any day last week.
  - Logical opposites are opposites of when something is not that such as sour logical opposite is not sour while people may think it is sour. That is incorrect.
  - All = Not all; some = none
  - Always = not always, everywhere = not everywhere, sometimes = never, somewhere = nowhere
- Quirks of assumptions
  - 1. Watch for answer starting with the phrase “**at least one**” or “**at least some**”
    - these answers are usually correct but use the negation technique to make sure it is the correct answer.

- 2. Avoid answers that claim an idea was the most important consideration for the author.
  - These answers have usually been wrong because the idea under discussion was very important but not necessarily the most important idea.
- 3. Watch for the use of “not” or negatives in assumptions answer choices.
  - Do not rule out negative answer choices. Because assumptions can have the role of the defender is to eliminate ideas that could attack the argument.
- Assumptions and causality
  - Correct answers to an assumption question will normally fit one of the following categories:
    - A. Eliminate an alternate cause for the stated effect
    - B. Shows that when the cause occurs, the effect occurs,
    - C. Shows that when the case does not occur, the effect does not occur
    - D. Eliminates the possibility that the stated relationship is reversed.
    - E. Shows that the data used to make the causal statement are accurate, or eliminates possible problems with the data.
- Assumption – Fill in the blank
  - Filling in the missing premise which is basically the assumption.
- Main point – fill in the blank
  - Fill the blank with the answer choice that best represents the main point of the argument.
  - Each sentence for main point fill in the blank questions begins with a conclusion indicator that modifies the blank.
  - Simply look for the answer that best summarizes the point of the author’s argument.

#### Chapter 9 – Resolve the paradox questions

- Easy to recognize
- Features of Paradox questions
  - No Conclusion

- Author presents to you two contradictory facts and you try to solve it. If there is no conclusion and no paradox then it's a Must be True question or Cannot be True question
  - Language on contradiction
    - But, however, yet, although, paradoxically, surprisingly.
- Features of the question stem
  - An indication that the answer choices should be accepted as true
  - Key words (resolve, explain, reconcile) (paradox, discrepancy, contradiction, conflict, puzzle)
- Active resolution
  - The correct answer will positively resolve the paradox so that both sides are true and the conditions in the stimulus have been met.
  - Correct answer must show how both sides coexist
  - You must select the answer choice that contains a possible cause of the situation.
  - If the paradox has two similar items and the answer choice describes their difference then it is wrong.
  - If the paradox items are different and the answer choice explains why they are different then that is the correct answer choice.
- Address the facts
  - The answer choices must address the facts stated. It must conform to the specifics of the stimulus otherwise how will you solve the paradox.
  - –In answering the question about the weight gain and the calorie intake keep track of the groups mentioned such as

groups that exceed the calorie intake and answer choice A those who do not exceed.

- Each answer choice should be taken as true

## Chapter 10: Method of Reasoning and Flaw in the reasoning questions

- Method of Reasoning
  - You are told to identify the logical organization of the argument
  - These are abstract “must be true” type of questions.
  - Use info in the stimulus to prove or disprove each answer.
  - Features of Method of reasoning questions
    - 1. You can use only the information in the stimulus to prove the correct answer choice
    - 2. Any answer choice that describes an element or a situation that does not occur in the stimulus is incorrect.
  - The stimulus in a method question can contain valid or flawed reasoning
  - Types of questions stem include method of the argument... argument proceeds by, the argument derives its conclusion by, etc.
- Flaw in the reasoning
  - Question stem is very similar to the method of reasoning but flaw in reasoning also states that the reasoning in the stimulus is flawed.
  - Question stems include the following: the argument is vulnerable, which of the following most accurately describes the flaw in the argument
  - Carefully consider the reasoning used in the stimulus.
  - Correct answer will identify the incorrect reasoning used and describes it in a general term
- Prephrasing
  - These types of questions focus on the **form** of the argument instead of the concrete facts.
  - GMAT can use one or two words to describe entire sections of the stimulus, and you are rigorously tested on your

knowledge of the mechanics of the argument and your ability to discern the references in the answer choice.

- You must understand the structure of the argument and this may seem like all the answer choices are implausible.
- Make a general abstract prephrase of what occurred in the argument and then rigorously examine each answer choice to see if the test makers have created something similar
- Fact Test in method and flaw questions
  - "If an answer choice describes an event that did not occur in the stimulus, then that answer choice is incorrect."
  - Example answer choice – "The argument accepts a claim on the basis of public opinion of the claim"
  - All parts of the argument must be included in the stimulus
    - 1. Identify where the author accepts the claim
    - 2. where the author accepts it based on public opinion of the claim.
    - If both are not present in the stimulus then it is incorrect.
  - Watch out for answer that are partially true.
    - IE – the author disagrees with the analogy used by the critic
    - Find the disagreement in the stimulus
    - Find the analogy in the stimulus
- Stimulus Note
  - Both question types will include a conclusion.
  - Look out for conclusion indicators
- Incorrect answers in method and flaw questions
  - 1. New Element answers
    - all correct answers must be within the stimulus
  - 2. Half right, Half wrong answers.
  - 3. Exaggerated Answers
    - Be careful not all answers that are extreme are incorrect.
  - 4. The opposite answer
  - 5. The Reverse answer

- contains familiar elements from the stimulus, but reverses them in the answer.
- Method of Reasoning – Bolded Argument
  - The question bolds a part of the stimulus and asks you for the role of the bolded portion.
  - Answer choices have you identify each piece of the argument
- Method-AP stimulus structure
  - Some problems include two conclusions (a main one and a subsidiary)
  - Traditional structure of conclusion at the bottom. If it is not present at the bottom be prepared to answer a question about a part of the argument other than the conclusion.
  - Create wrong answers. Be sure you know what part of the stimulus you are being asked about.

## Chapter 11 – Parallel reasoning question

- Parallel reasoning questions
  - Has you chose an answer similar to the reasoning provided in the stimulus.
  - First identify the method of argumentation then match that reasoning to the reasoning.
  - Question stem will talk about paralleling the argument, exhibit similar patterns, etc.
- Parallel flaw questions
  - The stimulus can contain either valid or invalid reasoning
  - Question stem will include terms like flawed in the reasoning, or questionable pattern
- The peril of abstraction
  - You must understand the structure of the argument, and you must understand the structure in each of the five answer choices.
- Solving parallel reasoning questions
  - The structural basis of these questions forces you to compare the big picture elements of the argument
    - Intent of the conclusion, force and use of the premises, the relationship of the premises and the conclusion, and the soundness of the argument.

- Elements of an argument that do **not** need to be parallel in the questions:
  - Topic of the stimulus
  - The order of presentation of the premises and conclusion in the stimulus – ie premise, premise, conclusion.
- Elements that are paralleled in the arguments
  - The method of reasoning – this is very important. Types of reasoning can be causal reasoning or conditional reasoning. If you can identify the type of reasoning go to the answer choices and attack it.
  - The validity of the argument – if the stimulus has valid reasoning then eliminate any answer choice that is invalid in reasoning and vice versa is the same.
  - The conclusion – you must parallel the subcomponents, including the premises and conclusion. When matching the conclusions you must match the **certainty level** or **intent** of the conclusion in the stimulus
    - For example if the stimulus conclusion has absolutes such as must, never, always, etc. the correct answer must include absolutes to match the reasoning
    - If the stimulus conclusion gives an opinion (should) will be matched by the same idea in the correct answer choice
    - Conditional conclusion in the stimulus will be matched by a conditional conclusion
    -



**In Short: A ten minutes read, everything:**

-Read the information in the given order. Read the stimulus first, then question stem and then the answer choices. Why?

Sometimes reading a question stem first undermines a student's ability to fully comprehend the stimulus especially on tougher questions.

It often leads to time waste because students read the stem first then the stimulus and then back to the stem.

Leads to confusions or distractions because sometimes the question stem refers to information in the stimulus which may throw you off.

Stimuli with two questions will once again lead to time waste because you are not re-reading one question but two questions this time!

Reading the stimulus sometimes enable readers to predict the question stem. For example, "Resolve the Paradox" type of CR questions usually contain an obvious paradox or discrepancy. However, when you read the question stem first, you are not gaining or saving time in anyway.

Premises give the reasons why a conclusion should be accepted. Always ask yourself "What info is the author using to convince me? Why should I believe this argument or what is the evidence behind this conclusion?"

Premise Indicators: because, since, for, for example, for the reason that, in that, given that, as indicated by, due to, owing to, this can be seen from, we know this by.

Conclusion Indicators: thus, therefore, hence, consequently, as a result, so, accordingly, clearly, must be that, shows that, conclude that, follows that, for this reason.

Complex Arguments: Contain more than one conclusion known as sub-conclusions which are then used as premises to unify a main conclusion. Diagram: Premises → Conclusion/Premises → Conclusion.  
Example: Because Miami has the best player in the NBA, they therefore have the best offensive attack in NBA. Because they have the best offensive attack in NBA, they are going to win the NBA 2011 Finals.

Commonly Used Construction: Test makers can raise alternate viewpoints. One popular construction is introducing a viewpoint and disagreeing with it thereafter. These stimuli are recognizable because they use terms like: some people propose, many people believe, some argue that, some people argue that, some critics claim, some critics maintain, some scientists believe. The use of this device to begin a stimulus almost always leads to the introduction of the opposing view.

Argument Analysis:

Once an argument is present, the objective is to figure out if it is strong or weak. To do this, check the relationship between the premises and conclusion. Do the premises strongly support the conclusion? If so, the argument is strong, if not, then the argument is weak.

Conclusion Identification Method (CIM): Use premise/conclusion indicators on possible premises/conclusion that may exist in a CR and choose the conclusion that sounds the best.

Example:

The best way of eliminating traffic congestion will not be easily found.  
There are so many competing possibilities that it will take millions of dollars to study every option, and implementation of most options carries an exorbitant price tag.

Option 1: Because the best way of eliminating traffic congestion will not be easily found, we can conclude that there are so many competing possibilities that it will take millions of dollars to study every option, and implementation of most options carries an exorbitant price tag.

Option 2: Because there are so many competing possibilities... exorbitant price tag, we can conclude that the best... way of eliminating traffic congestion will not be easily found.

Option 2 makes more sense, therefore the conclusion is whatever it states after “we can conclude” hence the conclusion is “the best way of eliminating traffic congestion will not be easily found”

Complex Arguments: Has more than one conclusion. Has one main conclusion followed by sub-conclusions. Sub conclusions are made by premises.

Quantity Indicators refer to the amount or quantity in the relationship for example “some people” or “many of the laws” whereas Probability indicators refer to the likelihood of occurrence, or the obligation present, as in “The mayor should resign” or “The law will never pass.”

Question Type Families

Family #1 (Prove Family) consist of the following question type:

Must Be True / Most Supported

Main Point

Method of Reasoning

Flaw in Reasoning

Parallel Reasoning

Family #2 (Help Family) consist of the following question type: Look for holes in the stimulus and try to close the holes with the given answer choices.

Assumption

Strengthen/Support

Resolve the Paradox

Family #3 (Hurt Family) consist of the following question type:

Weaken

\*Easy way to categorize question stem into corresponding families is by memorizing the Help Family and Hurt Family (HH Family, 4 question type) and categorizing the rest of the question type to Prove Family.\*

The Answer Choices: Logical Opposite

Uniqueness Rule of Answer Choices: Correct answers in a CR question follows a unique logical quality whereas an incorrect answer has the opposite logical quality. For example, the logical opposite of “wet” is “not wet.” The logical opposite of wet is NOT “dry.”

Logical Quality of the Correct Answer: Must Be True. However, logical opposite quality of the four incorrect answers would be: Opposite of “Must be True” which could mean “Not Necessarily true” meaning it could be not necessarily the case or never the case.

Logical Quality of the Correct Answer: Strengthen. However, logical opposite quality of the four wrong answers would be “Not strengthen” meaning the answer choices could weaken the argument or stay neutral.

Rules for Families:

Prove family: Accept the stimulus information and any information in an answer that does not appear in the stimulus is incorrect.

Help Family: Accept the information given in the answer even if they contain new information. In this case, the stimulus is the suspect and there are usually reasoning errors present.

Hurt Family: Find the answer that best attacks the stimulus (weakens it). Info in stimulus is suspect whereas answer choices are accepted as given.

Notes on ten question types:

Must be True and Solve the Paradox questions come from stimuli with no conclusion. All other 8 type of questions relate to stimuli with conclusion.

Weaken/Strengthen are often based on weak arguments that contain holes that must be opened further (to weaken) or closed (to strengthen).

Brother/Sister pair: Method of Reasoning and Flaw in the Reasoning. Difference between the two is that flaw in the reasoning question stem explicitly note that there is an error in the stimulus whereas Method of Reasoning could have a valid or invalid reasoning (since we are judging the method of reasoning of the author).

Parallel Reasoning is basically method of reasoning (identify the type of reasoning) and then parallel it.

Don't get confused by the word “most” in question stem because only one of the five answer choice truly weakens/strengthens the argument.

Be careful of the word “except” in resolve the paradox question. (pg. 68)

When encountering the word “least”, assume that four of the answers will meet the stated criteria and one will not.

Scope is the range of an argument to which the premises/conclusion encompasses certain ideas.

Primary Objectives:

Determine if the stimulus contains an argument or facts

Identify the conclusion if the stimulus contains an argument or if the stimulus contains a fact set, analyze each one thoroughly.

Once you identify the argument, determine if its strong or weak

Know precisely of exactly what the author is trying to say, don't generalize.

Move on to the question stem, read it carefully, identify it, don't automatically associate certain words with certain question type.

Prephrase: Have an idea of what you think the answer might be after reading the stimulus and question stem.

Read every single answer choices. Don't disregard any one of them.

Label each answer as Contender or Loser as you go through them. Once you go through all five, reanalyze the contenders only.

If all five answer choices are losers, re-evaluate the the argument and come back to the answer choices.

Three Important Notes about the Families:

The question stem flows the information from stimulus to the answer choices. The correct answer cannot contain additional information from outside the stimulus box.

The second family is almost the opposite of first. Answer choices help the stimulus. Info outside the stimulus is allowed in the correct answer choice.

The third family hurts the stimulus and just like second family, info from outside the stimulus is allowed in the correct answer.

#### **Chapter 4:**

Must be true questions require you to select an answer choice that is proven by the information presented in the stimulus. Ultimately, the test maker is asking “what did you read and what do you know on the basis of that reading?”

Facts stated in the stimulus can be used to prove the correct answer choice.

Most must be true questions do not contain a conclusion.

Often time, the correct answer are paraphrase of the stimulus in different terms. If the answer choice mirrors the stimulus, its the correct answer. Combination answers result from two or more statements in the stimulus.

In a stimulus, if the author does not make an assertion of his/her own and uses opinions of “others”, then in a Must Be True question, eliminate answer choices that have flat assertion without making reference to “others” opinions. Example in Page 86 of [Powerscore CR Bible](#).

Page 88 has information about correct/incorrect answers of must be true questions.

## **Chapter 6:**

Weaken questions appear the most frequently on the GMAT.

These type of questions usually follow five rules:

The stimulus contain an argument. Why? Because you are trying to weaken the author's reasoning and reasoning requires a conclusion. So its important to separate the premises and conclusion. Only then, we are in a position to attack the author's reasoning.

Almost all correct answers in weaken questions rely on attacking the conclusion. Focus on the conclusion.

There are often reasoning errors present in the stimulus so the information is a suspect. Read the arguments very carefully.

Prephrase. Consider the range of possible answers before proceeding to the answer section.

Weaken answer choices can surpass the outside of or tangential to the stimulus.

Question Stem usually uses the words: weaken, attack, undermine, refute, argue against, call into question, cast doubt, challenge, damage, counter.

The conclusion needs to be attacked in order to weaken an argument and an answer choice will not simply contradict the conclusion but instead, it will undermine the conclusion by showing it fails to account for some element or possibility. Sometimes, a weaken correct answer will show that a conclusion does not follow from premises of an argument. Page 113 for an example.

Focus on the effect that the answer has on the conclusion and not the premises.

Common Weakening Scenarios:

Incomplete info. Author fails to address all possibilities or relies on evidence that is incomplete. In this case, the correct answer would be new possibilities that attack the conclusion.

Improper Comparison. Author compares two or more items that actually differ from each other.

Qualified Conclusion. The conclusion in the stimulus is stated in such a way that it leaves the argument open to attack.

## **Chapter 7:**

Causality occurs when one event makes another event occur. First event makes the second event occur. The first event would be the "cause" and the second event would be the "effect." The "effect" always happens at some point in time after "cause" event.

Terms used to identify cause and effect: caused by, because of, responsible for, reason for, leads to, induced by, promoted by, determined by, produced by, product of, played a role in, was a factor in, is an

effect of.

If a causal statement is in the conclusion, then the reasoning is flawed. If the causal statement is in the premise then the reasoning may be flawed but not due to cause & effect.

Situations that can lead to Errors of Causality:

When one event occurs before the other, people tend to think that the first event caused the second event to occur. Example on page 133.

When two or more events occur simultaneously: people assumes that one event caused another; however, the two events could be the result of another event or the two events could be correlated to one another. The events that occur simultaneously does not necessarily mean that one caused another.

How to attack a Causal Conclusion:

When encountering a causal conclusion, prepare to either weaken or strengthen the argument.

To attack a cause and effect relationship in Weaken questions, do one of the following tasks:

Find an alternate cause for the stated effect. Why? Because the author believes that there is one and only cause for the effect. However, finding an alternate cause will weaken the argument.

Since the author believes that the cause always produces the effect, find an answer that does not let the cause produce the effect. In other words, show that even when the cause occurs, the effect does not occur.

Vice versa as point 2. any scenario where the effects occurs and the cause does not weakens the conclusion. Why? Because the author believes that the effect is always produced by the cause.

Show that the stated relationship is reversed. In an argument, the cause and effect relationship is correctly presented according to the author. If an answer choice presents that the claimed effect is actually the cause of the claimed cause undermines the conclusion.

The causal statement contain statistical problems. If the data used to make a causal statement contain an error, then the validity of the casual claim is questionable.

## **Chapter 8:**

Keep these points in mind when approaching Strengthening and Assumption Questions:

The stimulus will contain an argument. To maximize success, identify, isolate and asses the premises and conclusion.

Focus on the conclusion as all correct choices impact the conclusion. The more you know about the conclusion the better your chances.

The info in the stimulus is suspect and often contain reasoning errors.

Yield strong prephases. Always consider the range of possible answers before proceeding to answer choices.

Answer choices are accepted as given. Just like weaken questions, they can bring into consideration information outside of or tangential to the stimulus. Just because a fact or idea is not mentioned in the stimulus is not grounds for dismissing an answer choice.

Any answer choice that strengthens an argument whether by 1% or 100% is CORRECT.

Assumptions is simply an unstated premise - what must be true in order for the argument to be true? An assumption is something that is necessary for the argument to be true.

-Strengthen questions asks for answers that SUPPORT the argument not JUSTIFY it.

-Terms used in strengthen question stems: strengthen, support, helps, most justifies.

How to Strengthen an Argument:

Identify the conclusion - This is what you are strengthening. Help the author's conclusion.

Personalize the argument. Helps assess the strength of each answer because I am seeing the argument in a very involved perspective..

Look for weaknesses in the argument. Sometimes they are tailor-made for correct answers. The correct answer would ELIMINATE the weakness. Close any hole or gap in the argument. Find the missing link between a premise and a conclusion.

Arguments that contain analogies or surveys rely upon the validity of those analogies and surveys; any answer choices that strengthen the analogy or survey or establishes their soundness, are usually correct.

Remember it can strengthen by a little bit or by a lot which makes these type of questions difficult.

Causality and Strengthen Questions:

Eliminate any alternate causes for the stated effect since the author believes there is only one causes (the one that is originally stated in the argument), eliminating other causes will strengthen the overall argument.

Show that when the cause occurs, the effect occurs since the author believes that the cause always produces the effect.

Show that when the cause does not occur, the effect does not occur. This will support the conclusion.

Eliminate the possibility that the causal relationship is backwards (the claimed effect is actually the cause of the claimed cause).

Show that the data used to make the causal statement are accurate, or eliminate possible problems with the data.

Assumption Questions:

As stated earlier, assumption is an unstated premise in the argument.

Think of an assumption as a foundation of an argument.

The statement must be something that the author believed in when forming the argument.

Assumption answer choices cannot contain extraneous information.

Example: "All dogs are intelligent." A correct answer choice would be "All black dogs are intelligent." or "All large dogs are intelligent." However, "All dogs and cats are intelligent." would be incorrect.

Question Stem Example: "The conclusion of the argument above cannot be true unless which of the following is true..." Don't get these Q stems confused with "Must Be True" questions.

### The Supporter/Defender Assumption Model:

Assumption is described solely as a linking statement. One that links two premises or one premise to the conclusion.

Assumptions play two roles: Supporter Role or Defender Role.

Supporter Role is the linking role, where an assumption connects the pieces of an argument. Example on page 74.

The conclusion in a supporter argument often contains a piece of information not previously seen in the argument. These new elements create gaps in the argument. Therefore, the supporter argument answer tries to close the gap.

Example: All male citizens of Athens had the right to vote. Therefore, Socrates had the right to vote in Athens. In this example, the linking assumption is that Socrates was a male citizens of Athens.

If a weakness is spotted in an argument, try to eliminate the weakness (gaps) in the argument!

### The Defender Assumption Model:

Author feels that his reasoning is sound and no other possible reasoning is correct. For example, if we take a look at the argument: "People who read a lot are more intelligent than other people. Thus, reading must cause a person to be intelligent." The author does not think there is any other reasons that causes one to be intelligent. Therefore, the defender allows answer choices to DEFEND the argument by stating a certain reason DOES NOT cause one to be intelligent. A correct answer choice may be: "Sleeping more than eight hours DOES NOT cause a person to be intelligent." This DEFENDS the argument by showing that a possible attack has been eliminated. It uses logical opposites in the answer choices.

### The Assumption Negation Technique:

Can only be used on Assumption questions.

Do not use this technique on ALL FIVE answer choices. Use it on CONTENDERS only.

Turn the assumption question into a weakness question.

Logically Negate the answer choices.

The negated answer choice that attacks the argument will be the correct answer meaning the negated correct answer will simply weaken the argument.

### Logical Opposites Extended:

There are notes about logical opposites on the third page of this document. This will extend the intuition behind logical opposites.

Denies the truth of the original statement.

Logical opposite of "All" is "Not All." Logical Opposite of "Some" is "None."