Premise : A fact, proposition or statement from which conclusion can be made. A premise gives you the reason as to why conclusion should be believed.

Conclusion : A statement or judgment that follows from one or more reasons.

A typical argument has the following elements:

* Background
* Premise
* Counter-Premise
* Conclusion

An argument generally contains of a number of premises (assertions made by author) and conclusion. Sometimes premises and conclusion can be deduced using the indicators

|  |  |  |  |
| --- | --- | --- | --- |
| Premise Indicators | Conclusion Indicators | Extra-Premise Indicators | Contrasting Indicators |
| Because | Therefore | Furthermore | But |
| Since | Thus | Moreover | Yet |
| But | So | After all | Despite |
| Due to | This shows that | Besides | In spite of |
| owing to | This concludes that | In addition | **Admittedly** |
| As indicated by | Consequently | What’s more | While |
| For | Must be that |  | Still |
| For the reason that | Clearly |  | However |
| For example | Follows that |  | On the other hand |
| In that | hence |  | In contrast |
| This can be seen from | accordingly |  | Although |
| We know this by | For this reason |  | Even though |
|  | As a result |  | Whereas |
|  |  |  | After all |

Sometimes an author can raise two opposing views in a single sentence. The introductory premise will take the construction of something like the below sentence:

*A number (some, many, etc.) of people (critics, students, teachers, legislators, vegetarians, psychologists etc.) believe (claim, propose, argue, etc.) that...*

Objective Steps:

1. **Identify if the given piece of text is argument or fact set.**
2. **In case text is argument find the conclusion. Take help from the conclusion indicators keywords or/and Conclusion Identification Method in case you are confused between two premises and both appear to be main conclusion.**

**Conclusion Identification Method**

Take the statements under consideration for the conclusion and mentally place them in an arrangement that forces one to be the conclusion and the other(s) to be the premise(s). Use premise and conclusion indicators to achieve this end. Once the pieces are arranged, determine if arrangement makes logical sense. If so, you have made the correct identification. If not, reverse the arrangement and examine the relationship again. Continue until you find an arrangement that is logical.

1. **If the stimulus is argument, find if the argument is strong or weak.**
2. **Carefully read and analyze the Question stem to find the type of question.**

Some deceptive question stems and its type :

* Which of the following, *if true,* helps explain the viewpoint – Resolve the Paradox Question
* Which of the following, if true, helps in establishing the conclusion above – Strengthen
* A challenges X by – Method of Reasoning.

The question stems in critical reasoning falls into one of the following categories:

|  |  |  |  |
| --- | --- | --- | --- |
|  | First family | Second family | Third family |
| Description: | Top Down– It refers to the questions where the start of flow is in the stimulus and ends at the question, so info in para is taken as it is and end point is under suspicion. | Bottom Up; It is based on the principle of assisting or helping the author’s statement/argument in some way, by revealing an assumption, resolving the paradox and strengthen the argument | It is similar to the second family in terms of information flow but instead of reinforcing the argument, it tends to destroy the argumentation. |
| Types | Must be true | Assumption | Weaken |
| Main Point | Strengthen |  |
| Method of reasoning | Resolve the paradox |  |
| Parallel reasoning |  |  |
| Flaw in reasoning |  |  |

1. **Pre-phrase the Answer. After reading Question stem take a moment to formulate your answer to the question stem.**
2. **Always read each of the 5 answer choices.**
3. **While scanning through the answer choices, strike out the incorrect choices and hold the correct/suspicious choices so as to compare them later on.**
4. **If all answer choices seem incorrect, go back to stimulus and re-evaluate the stimulus.**

**Question Type Notes**

The following is a collection of notes regarding the Ten Question Ty pes. These notes help clear up some questions that ty pically arise when students are learning to identify the question ty pes. In the chapters that discuss each question ty pe we will

reintroduce each of these points.

* Must Be True and Resolve the Paradox questions are frequently connected to stimuli that do not contain conclusions. All remaining question ty pes must be connected to stimuli with conclusions (unless a conclusion is added by the question stem, as sometimes occurs). Hence,

when a stimulus without a conclusion appears on the GMAT, only two ty pes of questions can be posed to you: Must Be True or Resolve the Paradox. Question ty pes such as Weaken or Method of Reasoning do not generally appear because no argument or reasoning is present, and those question ty pes ask you to address reasoning. Generally , Resolve the Paradox questions are easy to spot because they contain a paradox or discrepancy . Thus, if you encounter a stimulus without a conclusion and without a paradox, you are most likely about to see a Must Be True question stem.

* Weaken and Strengthen are polar opposite question ty pes, and both are often based on flawed or weak arguments that contain holes that must be closed or opened further.
* Method of Reasoning and Flaw in the Reasoning questions are a brother/sister pair. The only difference between the two is that Flaw in the Reasoning question stems explicitly note that the stimulus contains an error of reasoning. In a Method of Reasoning question the stimulus contains valid or invalid reasoning.
* Parallel Reasoning questions are a one-step extension of Method of Reasoning questions in that you must first identify the type of reasoning used and then parallel it. Method of Reasoning and Parallel Reasoning questions both have a strong Must Be True element.
* Main Point, Method of Reasoning, Flaw in the Reasoning, Parallel Reasoning, and Evaluate the Argument appear the least frequently on the GMAT.

**Primary Objectives to go through a CR passage :**

🡪 Determine whether stimulus contains argument or not.

🡪 If stimulus contains an argument, determine its conclusion else if it is a fact set, write the facts.

🡪 If stimulus contains argument, determine if it is weak or strong.

🡪 Read precisely and get what the author has said (Don't generalize)

🡪 Carefully read the question stem, deduce answers, if possible.

🡪 Prephrase the answer, if possible

🡪 Always read all answer choices and divide them in contenders and losers. (Strike them out one-by-one)

🡪 If all answers appear to be losers re-evaluate the paragraph.

Q - Must be true :

The incorrect answer choices may include the facts which are likely to occur, but no foolproof evidence is given.

Here are several Must Be True question stem 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?”
* “What can be inferred from the above argument”
* The author’s reasoning provides basis for accepting which of the following assertions?

Type of correct answers:

* Exact statements from the stimulus.
* A consequence generated by combination of multiple statements in the stimulus for example A farmer has 2 fields of corn and 3 fields of wheat, then answer choice may mention that the farmer has a total of 5 fields.
* Idea Umbrella – A concept talked about a large domain is applicable to subdomain also, for example if stimulus talks of animals, then that includes cats, zebras, dogs etc.
* Commonsense assumptions such as water is wet, Canada and India are in different continents.

Type of Incorrect answers:

* Likely to be true answer choices ;the choices which are likely bit not surely to be marked true.
* Exaggerated choices in which keyword such as some is elevated to ‘most’ and ‘likely’ is elevated to ‘will’
* New Information answers.
* Opposite Answers – Completely opposite statement to any fact in the stimulus
* Reverse Answer - The Reverse Answer is attractive because it contains familiar elements from the stimulus, but the reversed statement is incorrect because it rearranges those elements to create a new, unsupported statement.

Conditional reasoning

It occurs when a statement containing sufficient and necessary conditions is used to draw a conclusion based on the statement.

Necessary condition is necessary to occur to make the sufficient condition to be true.

Happening of sufficient means that necessary condition has occurred while happening of necessary condition may not guarantee that sufficient condition will occur.

Consider the statement “A student receives A+ if he studies hard”

Here sufficient condition is “a student receives A+” while necessary condition is ‘student studies hard”. For sufficient condition to be true (“ receiving A+ ”) necessary condition must occur (“Hard study”) while hard study may not guarantees you A+ grade.

**Key Notes:**

infer refers to the must be true question.

Q - Main Point:

Incorrect answers:

* The answers that are true but don’t capture the author’s point.
* Repeated premise written as an answer.

There might be fill in the blank questions which ask you to find the conclusion of the argument and the question in that case can be phrased as:

* Which of the following most logically completes the passage?
* Which of the following best completes the argument below?

Q - Weakens the argument

Typical question stem Keywords :

* Call into question.
* Raises the doubt
* Attacks/Refutes/Weakens/Counters/Challenges/Damages/Undermines the argument.
* Argue against the argument.
* Contradicts the hypothesis.

Steps to solve:

* Identify the conclusion by earlier mentioned strategies.
* Pre-think the ways the argument can be rebuked, write as many as you can think (you can bring new information while doing so )
* The argument rebuttal can be brought in by bringing in other sources of a given event.
* Match your solutions to the answer choice presented.
* In case there is no match, find the best which weakens the conclusion.

**Holes in the argument:**

* Improper Comparison.
* Incomplete information.
* Qualified conclusion.
* Incorrect answer choices :
* Opposite answer, which rather than strengthen the argument.
* Out of scope choice.
* Shell game.
* Reversal of cause and effect/causality.

**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

\* The correct answer will undermine the conclusion by showing that the conclusion fails to account for some element or possibility.

• Enumerate a wrong generalization

• Point out improper comparisons between two scenarios that the author assumed.

Notes (Weakens):

* If predators and preys are living together that shouldn’t be taken as preys being wiped out by predators.

Q – Cause and Effect :

**Following keywords can be used to detect causality 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 |

Some arguments assert two correlated events in premises and incorrectly conclude that one event has **caused** the another. We have to look only conclusion for this. Following are the scenarios in which this argument might get invalid

* If the causal has no effect on the receiver.
* If there is some another causal factor involved.
* Show that the stated relationship is reversed. i.e effect is responsible for the cause.
* If the both the actor and recipient are effected by some another factor.

In Weak en questions, attacking a cause and effect relationship almost always consists

of performing one of the following tasks:

* Find an alternate cause for the stated effect
* Show that even when the cause occurs, the effect does not occur
* Show that although the effect occurs, the cause did not occur
* Show that the stated relationship is in fact reversed
* Show a statistical problem exists with the data used to make the causal statement

Notes:

Pay attention to the question involving %age points, do not mistake percentage for number of people

**Q – Strengthen the Argument**

It will contain the following in question stem:

* Strengthen
* Supports
* Helps
* Most Justifies the conclusion
* Each of the following supports the claim except: (StrengthenX)

Steps to solve:

* Identify the conclusion.
* Personalize the argument
* Look for weakness before prephrasing
* Argument that contains surveys are strengthen by the answer choice which validates that survey
* Match the answer choices with your prephrase, choose it if found else comparatively select the best.

Wrong ones:

1. Shell game.
2. Opposite
3. Out of scope choices.

Cause and Effect:

1. Show that there are no alternate causes to produce the desired effect
2. Show that when cause occur then effect also occur. An example can be given to support this.
3. Show that when cause doesn’t happen then effect didn’t take place.
4. Show that the data used to support cause -> effect is accurate.
5. Defend the reverse scenario, i.e. if effect occur, cause occur.

**Assumptions**

Assumption acts as a foundation for premises and conclusion. The correct answer to an assumption question is a statement the author must believe

in order for the conclusion to be properly drawn. The correct answer choices impacts the conclusion. Read the answer choices carefully.

Question stem:

Generally, It will contain the assumption word.

Two type of answers:

Supporters – Joins the missing links.

Defenders – Eliminate any other underlying cause;

The answer choice containing the words ‘at least some’ and ‘at least one’ are said to be true mostly, but do use Assumption negation technique. BTW At least some/one’s logical opposite is None..

Assumption answers choices generally mixes up with Strengthen causality equation, Check[**this**](#cause_and_effect)

**Fill in the blank questions are generally assumption based question in disguise**

**Notes:**

* **‘many’ refers to ‘some’ not ‘most’**
* **Always be wary of extreme or absolute language in answer choice for Must Be True questions.**

**In the fill in the blank question. If the sentence asked for starts with the conclusion indicator then you have to insert Must be True statement else in case of premises, we have to insert the assumption undertaken in the argument**

🡪 **In logic, "either/or" does not preclude the possibility of both!**

**Resolve the Paradox Questions**

**Features:**

**🡪 Stimulus don’t have conclusion.**

**🡪 Contradictory keywords are present such as But, Yet, However, Although, Paradoxically, Surprisingly etc.**

**Question stems:**

* **“Which of the following, if true, most helps to resolve the apparent paradox?”**
* **“Which of the following, if true, does the most to explain the result described**

**above?”**

* **“Which of the following, if true, best accounts for the seeming discrepancy**

**described above?”**

* **“Which of the following hypotheses best explains the contrast described above?”**

**If the answer choice mentions the situation opposite/different from the given one, then that answer choice is incorrect as we have to target the given situation only.**

**If the answer choice takes care of one or neither side of situation, then that choice is incorrect.**

**Notes:**

**->We cannot change the fact stated in argument.**

**->Find the solution that targets both, not one**

**Question stems : Method of Reasoning**

* **“The method of the argument is to”**
* **“The argument proceeds by”**
* **“The argument derives its conclusion by”**
* **“Which of the following describes the technique of reasoning used above?”**
* **“Which of the following is an argumentative strategy employed in the**

**argument?”**

* **“The argument employs which one of the following reasoning techniques?”**

**Question Stem : Flaw in the reasoning**

* **“Which of the following most accurately describes a flaw in the argument’s**

**reasoning?”**

* **“The reasoning in the argument is most vulnerable to criticism on the grounds**

**that the argument”**

* **“The reasoning above is flawed because it fails to recognize that”**
* **“A questionable aspect of the reasoning above is that it”**

**Common Errors of Reasoning:**

• Uncertain use of a term or a concept (error of equivocation)

• Source arguments (“ad hominem” attacks)

• Circular reasoning

• Mistaken cause and effect

• Error of conditional reasoning

• Straw man

• Errors in the use of evidence (including survey-based errors)

• Internal contradictions

• Appeal to opinion/authority

• Overgeneralizations

• Errors in the use of numerical evidence