

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?

- (A) Antibiotics are routinely included in livestock feed so that livestock producers can increase the rate of growth of their animals.
 - (B) Most people who develop food poisoning from bacterially infected meat are treated with prescription antibiotics.
 - (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.
 - (D) People who have never taken prescription antibiotics are those least likely to develop resistant bacteria.
 - (E) Livestock producers claim that resistant bacteria in animals cannot be transmitted to people through infected meat.
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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 today suffer from sleep deprivation to some degree. Therefore we should restructure the workday to allow people flexibility in scheduling their work hours.

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

- (A) The primary cause of sleep deprivation is overwork.
 - (B) Employees would get more sleep if they had greater latitude in scheduling their work hours.
 - (C) Individuals vary widely in the amount of sleep they require.
 - (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.
 - (E) The extent of one's sleep deprivation is proportional to the length of one's workday.
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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 the 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.

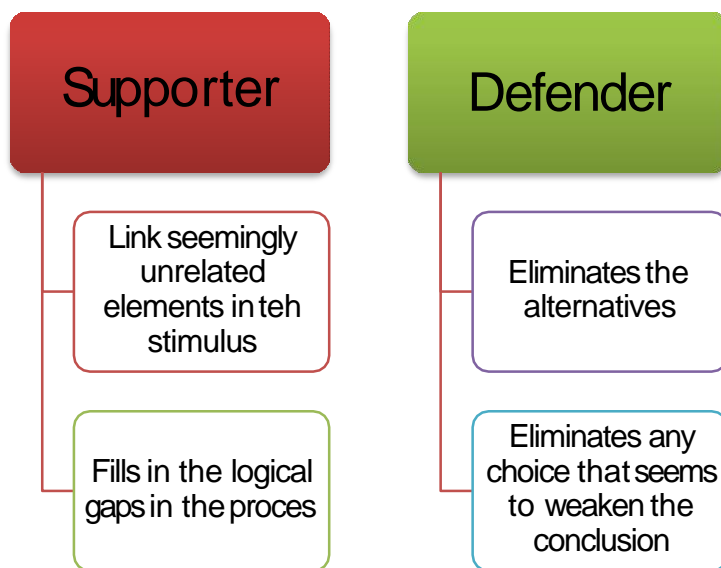
Some of the common ways to identify an assumption type question are as follows:

“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?

- (A) High immune-system activity protects against mental illness better than normal immune-system activity does.
- (B) Mental illness is similar to physical disease in its effects on body systems.
- (C) People with high immune-system activity cannot develop mental illness.
- (D) Mental illness does not cause people's immune-system activity to decrease.
- (E) Psychological treatment of mental illness is not as effective as is medical treatment.

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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.

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

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



Although parapsychology is often considered a pseudoscience, it is in fact a genuine scientific enterprise, for it uses scientific methods such as controlled experiments and statistical tests of clearly stated hypotheses to examine the questions it raises.

The conclusion above is properly drawn if which of the following is assumed?


- (A) If a field of study can conclusively answer the questions it raises, then it is a genuine science.
 - (B) Since parapsychology uses scientific methods, it will produce credible results.
 - (C) Any enterprise that does not use controlled experiments and statistical tests is not genuine science.
 - (D) Any field of study that employs scientific methods is a genuine scientific enterprise.
 - (E) Since parapsychology raises clearly statable questions, they can be tested in controlled experiments.
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In 1563, in Florence's Palazzo Vecchio, Giorgio Vasari built in front of an existing wall a new wall on which he painted a mural. Investigators recently discovered a gap between Vasari's wall and the original, large enough to have preserved anything painted on the original. Historians believe that Leonardo da Vinci had painted, but left unfinished, a mural on the original wall; some historians had also believed that by 1563 the mural had been destroyed. However, it is known that in the late 1560s, when renovating another building, Santa Maria Novella, Vasari built a façade over its frescoes, and the frescoes were thereby preserved. Thus, Leonardo's Palazzo Vecchio mural probably still exists behind Vasari's wall.

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


- A. Leonardo rarely if ever destroyed artworks that he left unfinished.
 - B. Vasari was likely unaware that the mural in the Palazzo Vecchio had willingly been abandoned by Leonardo.
 - C. Vasari probably would not have built the Palazzo Vecchio wall with a gap behind it except to preserve something behind the new wall.
 - D. Leonardo would probably have completed the Palazzo Vecchio mural if he had had the opportunity to do so.
 - E. When Vasari preserved the frescoes of Santa Maria Novella he did so secretly.
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The prices for all kinds of fish sold in Eastville's downtown Old Market are much lower than the prices charged at uptown seafood stores. Old Market vendors buy fish of similar quality from the same wholesalers and at the same prices as uptown vendors do. Therefore, since Old Market fish vendors' businesses are as profitable as those uptown, the volume of the Old Market vendors' daily fish sales must, on average, be higher.

Which of the following, if true, most strengthens the argument given?

- A. People who buy fish at Old Market stores generally have lower incomes than do those who buy fish from uptown seafood stores.
 - B. Some varieties of fish that are not available at Old Market stores can be found occasionally at uptown seafood stores.
 - C. Vendors at the old Market save on energy costs by keeping fish on ice instead of in refrigerated cases.
 - D. Many of the people who live in uptown Eastville prefer to buy fish from the neighborhood stores.
 - E. Fish vendors at the Old Market do not, on average, have lower overhead costs than uptown vendors do.
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Historian: The Land Party achieved its only national victory in Banestria in 1935. It received most of its support that year in rural and semirural areas, where the bulk of Banestria's population lived at the time. The economic woes of the years surrounding that election hit agricultural and small business interests the hardest, and the Land Party specifically targeted those groups in 1935. I conclude that the success of the Land Party that year was due to the combination of the Land Party's specifically addressing the concerns of these groups and the depth of the economic problems people in these groups were facing.

Each of the following, if true, strengthens the historian's argument EXCEPT:

- (A) In preceding elections the Land Party made no attempt to address the interests of economically distressed urban groups.
 - (B) Voters are more likely to vote for a political party that focuses on their problems.
 - (C) The Land Party had most of its successes when there was economic distress in the agricultural sector.
 - (D) No other major party in Banestria specifically addressed the issues of people who lived in semirural areas in 1935.
 - (E) The greater the degree of economic distress someone is in, the more likely that person is to vote
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