Types of Critical Reasoning Questions

1.1 SUMMARISING MAIN CONCLUSION

- Conclusion if situated within the text
- Task: Identify and summarize main conclusion
- Filter out: Overgeneralizations, assumptions, intermediate conclusions

Paragraph on this

The conclusion is the one statement that is supported by the other statements, and that itself doesn't support any other statements.

Here are some suggestions that you can take to be able to successfully summarize conclusions:

- Find the point: Determine which statement seems like the main prediction, value judgment, interpretation, or theory. What is the one thing the arguer is trying to convince us of?

- Look for support indicator words: Some words indicate that the statements they introduce are part of a support statement, and are not the conclusion. Support indicators like because, since and for can introduce statements that explain why the arguer believes a claim.

- Double-check the claim: If the statement you chose seems to retroactively, or continue on to, support a different claim, then you haven't chosen the main conclusion. In fact, it's now more likely that the different claim being supported is the main conclusion.

- Look for conclusion indicator words: Some words are good indicators that the statements they introduce are part of a conclusion. The most common examples are thus and therefore, but however, yet, although and but can indicate conclusions, too.

Don't use any more than a sentence or two to summarize the point of the passage! This is where filtering out of overgeneralizations, assumptions, etc. occurs. Use the time you have to analyze how the author is making his or her point more powerful and persuasive and why the author might have chosen those methods to make the point.

Many children from poor backgrounds would benefit from wearing spectacles but do not have them. Sometimes parents are not aware of their children's poor eyesight, but most often they suffer from financial constraints. The government should provide free glasses to poor children with eyesight problems. A recent study of underprivileged students with poor vision demonstrated that those who were given free glasses enjoyed an improvement in test scores equivalent to almost a year of additional schooling. Using the most conservative estimate of the impact of schooling on salary, this would significantly increase an average school-leaver's annual income and tax contributions, and by far more than the cost of a pair of glasses.

Which one of the following best expresses the main conclusion of the above argument?
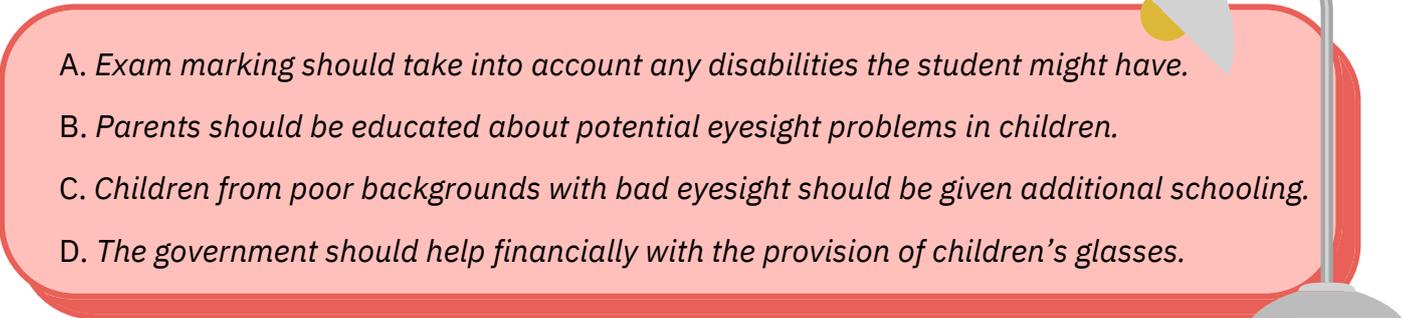
A. *Exam marking should take into account any disabilities the student might have.*

B. *Parents should be educated about potential eyesight problems in children.*

C. *Children from poor backgrounds with bad eyesight should be given additional schooling.*

D. *The government should help financially with the provision of children's glasses.*

We can see in the question above the conclusion is situated within the text "the government should provide free glasses to poor children with eyesight problems." The answer to this question is D, which is actually the same sentence but with a few synonyms to try and trick students into picking a different option. All of the evidence in this text is aimed at supporting the benefits of giving glasses to underprivileged children whilst the initial 2 sentences are saying that poorer families are unable to give access to these benefits for their children due to 'financial constraints.' This is why finding the point of the argument and double checking the claim are extremely important. In other words, find the one main thing the author is trying to argue. It's very easy to choose option C or B, because the text mentions parents being unaware of eyesight problems and that children from poor backgrounds with bad eyesight struggle in school. But this is actually EVIDENCE FOR the main conclusion rather than being the main conclusion itself.

1.2 DRAWING A CONCLUSION

- The conclusion is not directly stated
- Task: infer the main conclusion
- Consider evidence, arguments, and premises

Paragraph on this

These questions will ask you to draw conclusions from information included in the passage.

EXAMPLE

- "Which of the following statements about ___ is best supported by the information provided?"
- "The author of the passage would most likely draw which conclusion about ___?"
- "Which one of the following is a conclusion that can be drawn from the above passage?"

Here are some suggestions that you can take to be able to successfully draw conclusions:

- **Put it in your own words:** Often you will be asked to draw a conclusion from a specific idea contained in the passage. It can be helpful to sum up the idea in your own words *before* considering the choices.
- Use **process of elimination** to get rid of conclusions that can't be supported, until you find one that is

EXAMPLE

Competition between ice cream brands is strong and companies are constantly trying to improve their reputation for the quality of their products.

Data from scientific research might just give them that edge over their competitors.

Experiments tested if the taste of the ice-cream was affected by the packaging. The study found that ice-cream tasted better when the packaging was blue in colour. Similarly, ice-cream tasted

creamier when the containers were smaller. Ice-cream from a glass container tasted more expensive than ice-cream from a plastic container.

Which one of the following is a conclusion that can be drawn from the above passage?

A. People choose ice-cream brands only because of the quality of the product.

B. Companies should think carefully about what packaging they use.

C. Companies should pay less attention to product advertising.

D. Customers pay attention to the packaging of their food.

In this example, the main conclusion isn't just stated as one of the answers. Using the process of elimination we can eliminate option C, because it goes against the entire point that **packaging is important.** Options D and A mention 'people' and 'customers' whilst the passage doesn't actually mention anything about customers. The **scientific research** is NOT the same as **customer feedback** and the initial 2 sentences are solely focused on companies and their products, not people or customers. This is why it's important to summarise the text and put it into your own words. The correct option in this instance is B.

1.3 IDENTIFYING AN ASSUMPTION

- Assumption – unstated and implicit premise of the argument
- Argument will collapse without the assumption
- To identify the assumption: identify conclusion, identify reasoning, consider 'unstated portions' aka. Assumption

An assumption is a claim or belief that is presumed true, without necessarily being warranted or justified. The premises of many arguments are assumptions. In other words, the conclusion of an argument often rests on one or more assumptions.Some assumptions that are made in the course of an argument are implicit rather than openly stated; hence an assumption that is shown to be false or unwarranted leads us to the conclusion that the argument is judged unsound.

1.4 ASSESSING IMPACT OF ADDITIONAL EVIDENCE

- Answer options will contain 'additional evidence' which will modify the premise of the argument
- Assess which answer option has the greatest impact on weakening or strengthening the argument depending on what the question is asking.

Additional evidence either strengthens or weakens arguments. The additional evidence might suggest that something is true that would have been predicted given the premise of the argument, and thereby strengthen the argument. However, when the additional evidence would suggest that something is unlikely to happen, then, it must weaken the argument.

EXAMPLE

Research shows that hockey and football players are more quickly moved to hostility and aggression than are athletes in noncontact sports such as swimming. But the researchers have come to the untenable conclusion that contact sports encourage and teach participants to be hostile and aggressive. The football and hockey players were probably more hostile and aggressive to start with than the swimmers.

Which of the following, if true, would most strengthen the conclusion drawn by the psychological researchers?

A. The football and hockey players became more hostile and aggressive during the season and remained so during the off-season, whereas there was no increase in aggressiveness among the swimmers.

B. The football and hockey players, but not the swimmers, were aware at the start of the experiment that they were being tested for aggressiveness.

C. The same psychological research indicated that the football and hockey players had a

great respect for cooperation and team play whereas the swimmers were most concerned with excelling as individual competitors.

D. The research studies were designed to include no athletes who participated in both contact and noncontact sports.

The above is an example of a question that is asking which statement **strengthens** the conclusion drawn by the researchers in the initial text. It's important to summarise the main premise of the argument and then pick which option strengthens that premise. In this example, the main premise is that football and hockey players (contact sports) are more aggressive than swimmers, and that their sport encourages this sort of behaviour. We can immediately eliminate option C, as this option talks about cooperation and teamwork, which is irrelevant. option B and D seem ok at first glance but we're looking for the best option which is A, which most strongly supports and strengthens the initial premise.

1.5 DETECTING REASONING ERRORS

- Explaining why reasons does not = conclusion
- Reasoning errors: logical fallacies, over-generalisation, misguided assumptions, overlooked information etc.

Skillful readers analyze the quality of written evidence and the reasoning behind the analysis. They can identify fallacious arguments, spot biases, and unwarranted assumptions. Errors in reasoning result in false conclusions, and thereby should be carefully studied and looked into.

EXAMPLE

Whoever stole the diamond necklace, must've had both determination and skill.

Sasha :"Nav had determination and is a skilled robber, he must have stolen the diamond necklace"

Jen: "Steve didn't have determination, so he couldn't have stolen the diamond necklace."

If the information in red is true, whose reasoning is correct?

A. Sasha only

B. Jen only

C. Both Sasha and Jen

D. Neither Sasha nor Jen
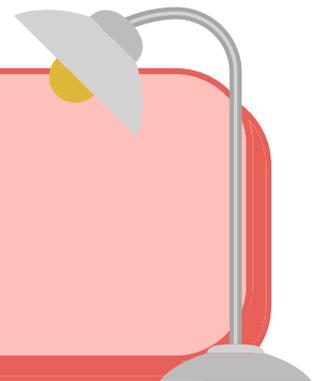
In this question a TRUE statement is presented. This is highlighted in red. Below this true statement is usually 2 additional statements which may or may not be true. The students must identify which of these statements, if any, are correct in their reasoning. Now, many students are inclined to believe that Sasha's statement is correct. Upon first glance it is very easy to make that mistake but you must read both statements and the question very carefully, and use your critical thinking abilities to deduce if there are any unwarranted assumptions, fallacies or

over generalisations being made.

Just because Nav had both factors stated in the red text (determination and skill), it doesn't mean he is the robber. Sasha's statement uses the language 'MUST HAVE BEEN'. If he stated Nav 'COULD HAVE BEEN THE ROBBER', his statement would have been true.

Let's have a look at Jen's statement and analyse why it is correct. The original question states that both determination AND skill are required to have stolen the necklace. Jen states that Steve did not have one of these NECESSARY factors (determination) so he couldn't have stolen the necklace. That is why her reasoning is correct and the answer to this question is B.

1.6   MATCHING ARGUMENTS

- Identifying an argument with the similar logical structure as that provided in the passage

The degree of the conclusion of the argument in the correct option will often match the degree of the conclusion of the argument in the passage. It is important to note passages of the same type and similar degree as the conclusions in the answer. If you're short on time, your awareness of matching arguments help you eliminate choices quickly.

EXAMPLE

A zoologist established that all lions roar. Therefore, any animal that roars is a lion. So, if you were to hear an animal roar, you can certainly say that the animal is a Lion.

Which of the following arguments most closely parallels the flawed reasoning above?

A. All tablets are made from glass. Therefore picking a glass product at random would mean it's a tablet.

B. Only overpriced items should be avoided. Cheap items should not be avoided.

C. All kangaroos live in South Australia. If you go to North Australia, you will not see any kangaroos.

D. If some people are dangerous and dangerous people should be avoided, then some people should be avoided.

In this example, students must first identify the flaw in the initial argument. After this they need to pick the answer option (A-D) that most closely resembles the flaw in the initial argument. The flaw in this question, is that the arguer assumes that because all lions roar, they are the only animals that roar. This is obviously wrong because if you heard an animal roar but couldn't see what it was, it could be a large number of different animals, not just a lion. Now let's take that flawed logic and apply it to our answer options. Answer option A similarly assumes that since all tablets are made from glass, they are the only glass product out there. That is why A is the correct option.

1.7 APPLYING PRINCIPLES

- Identify the underlying principles of the argument in the presented passage
- · Select the statement (from options A-D) that demonstrates a similar principle
- · Helpful to sketch out the scaffold of the argument