Critical Reasoning Basics: A Toolkit

Conclusion & Premises

Think of an argument as a journey from a starting point (premise) to an ending point (conclusion).

The **premise** is the reason(s) and proof given to support the conclusion. It's the evidence or facts that the argument is built upon.

The **conclusion** is the main point that the argument is trying to prove.

Both are crucial for building a solid argument. Without premises, the conclusion has no support, and without a conclusion, the premises have no direction.

Guide to Identifying Conclusions and Premises:

To differentiate between premise and conclusion, use the "Why-Because Test."

Why?

Identify the statement being argued for; this is the conclusion.

Because...

Look for statements that explain the "because"

These statements provide support and justify the conclusion; these are the premises.
For example, if Kevin says:

"Eating vegetables is healthy because they contain vital nutrients,"

- Kevin's premise is: "Vegetables contain vital nutrients."
- Kevin's conclusion is: "Eating vegetables is healthy."

Building Bridges: How Premises Support Conclusions

The strength of an argument lies in how well the premises support the conclusion.

Think of premises as the pillars of a bridge, and the conclusion as the platform connecting these pillars. If the pillars (premises) are strong, the bridge (conclusion) will stand firm.

For instance, in arguing "Physical exercise reduces stress levels," the premises might include:

"Physical exercise releases endorphins."

"Endorphins improve mood and reduce stress."

These **premises** are the **strong, supportive pillars that uphold the conclusion** that physical activity is effective in reducing stress.

They **offer clear, relevant evidence** that illustrates **exactly how** physical exercise contributes to stress relief.

Key Takeaway: Understanding the relationship between premise and conclusion is key to analysing and constructing arguments.

When you complete a critical reasoning question, try to get in the habit of going into "tunnel vision" mode in identifying the conclusion and premises.

Premise & Conclusion Indicators
There are certain indicator words that can be used to differentiate the premise from the conclusion and these are fairly easy to remember.

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

DRILL: DEDUCTIVE REASONING: MUST BE TRUE & MUST BE FALSE

1. A software engineer must master three programming languages: Java, Python, and C++, in order to be considered for the position at TechCorp. The engineer can be considered even if they lack experience, provided that they have created a comprehensive portfolio that displays their coding capabilities. Additionally, if an engineer fails the coding test during the interview, they can retake it only once.

Which one of the following statements must also be true?

A. Sarah has mastered three programming languages and is an experienced software engineer, so she will be offered an interview at TechCorp.

B. Anyone who has experience and mastery of Java, Python, and C++ will always be considered for the position.

C. The only way for an engineer without experience to be considered for the position at TechCorp is by mastering Java, Python, C++, and creating a comprehensive portfolio.

2. The use of educational videos has been more popular now than ever before. Difficult topics that once seemed difficult to teach in a classroom are now more accessible and understandable when delivered via video format. Studies have shown that using short video clips for education facilitates more effective learning. The hybrid style of learning delivered through video allows the user to process the information in a fluid way.

Which of the following best expresses the main conclusion of the above passage?

A. teacher is more likely to send their students a video than teach them in the classroom

B. Hybrid online learning, involving educational videos, is superior to the traditional pedagogic strategy.

C. Due to the rapid development of technology and increased accessibility of information, videos are now a more practical form of education.

D. The different styles of teaching offered by videos is one of the reasons why it has become an increasingly popular and effective way of education.

3. The primary cause of global warming is carbon dioxide emissions from fossil fuel combustion. Automobiles are a substantial source of carbon dioxide emissions. To address this issue, numerous automobile manufacturers have begun to develop electric cars. However, because of the unfamiliarity of electric cars, they are less appealing to the general population. An automobile company may struggle to be profitable if it creates cars that are unappealing to the general public.

Which of the following best expresses the main conclusion of this argument?

A. Automobile companies trying to introduce electric cars may struggle with profitability.

B. The public prefers traditional cars run on petroleum.

C. From a financial perspective, automobile companies should prioritise what the public wants over helping the environment.

D. Generally, people are uninterested in eco-friendly options such as electric cars.

4. Recently, Disney has received heavy criticism for perpetuating unhealthy messages to young girls by showing that those who are beautiful always win, like in Cinderella and Snow White, whereas unattractive people inevitably fail (eg. the step-sisters and the wicked queen). However, this argument undermines the significance of fantasy stories in children's lives. Young girls may use the princesses in these aspirational stories to vicariously experience what it's like to be the protagonist or main character. Also, happy endings in their stories help to give hope that everything will work out alright. Fantasy is necessary for children's imagination to be stimulated.

Which of the following is the best statement of the main conclusion of the above argument?

A. Both boys and girls need fairy tales that give them positive role models.
B. Children need fantasy to stimulate their imaginations.
C. Disney fairy tales, despite their flaws, are valuable for children.
D. Critics are wrong in their views that Disney fairy tales are problematic.

ANSWERS:
1.D
2.D
3.A
4.C