

Name: _____

Date: _____

Answer Key: Clear Minds vs. Messy Logic: 11th Grade Critical Thinking Quiz

Demonstrate proficiency in advanced reasoning by navigating 10 challenging scenarios involving syllogistic logic and subtle rhetorical maneuvers.

1. A defense attorney argues: 'If my client were at the crime scene, his GPS would show it. His GPS does not show he was there; therefore, he was not at the crime scene.' Which logical structure is being used?

Answer: A) Modus Tollens

Modus Tollens (denying the consequent) follows the form: If P, then Q; Not Q; therefore, Not P. It is a valid form of deductive inference.

2. In formal logic, an argument is considered 'sound' if it is valid and all of its premises are actually true.

Answer: A) True

Validity refers to the structure of the argument, while soundness requires both a valid structure and factual accuracy of the premises.

3. A politician states, 'We must either increase the military budget or accept that our nation will be invaded tomorrow.' This reasoning represents a ____.

Answer: B) False Dichotomy

A False Dichotomy (or False Dilemma) unfairly limits the available choices to two extremes when other viable middle-ground options exist.

4. During a debate on city planning, a speaker says: 'My opponent's plan for more bike lanes is flawed because he was once cited for a traffic violation.' What fallacy is this?

Answer: D) Ad Hominem Abusive

An Ad Hominem attack targets the person's character or past actions rather than addressing the substance of their logical argument.

5. Which of the following best describes 'Inductive Reasoning' in a scientific context?

Answer: B) Drawing a probable conclusion based on a set of specific observations

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Inductive reasoning uses specific patterns or observations to make a generalized claim that is likely, though not absolutely certain, to be true.

6. Consider: 'No philosophers are billionaires. Some researchers are philosophers. Therefore, some researchers are not billionaires.' This is an example of a ____.

Answer: A) Categorical Syllogism

A Categorical Syllogism is a deductive argument consisting of three categorical propositions (two premises and a conclusion) that determine group membership.

7. The 'Post Hoc Ergo Propter Hoc' fallacy assumes that because Event A happened after Event B, Event B must have caused Event A.

Answer: B) False

The fallacy actually implies Event A caused Event B because B happened *after* A. The phrasing in the question reverses the chronological order of the fallacy's definition.

8. A philosopher argues: 'If a society values freedom, it allows dissent. This society allows dissent, so it must value freedom.' Why is this argument logically invalid?

Answer: B) It commits the fallacy of Affirming the Consequent

Affirming the Consequent is an error where one assumes that because the result (Q) is true, the cause (P) must also be true, ignoring other possible ways Q could happen.

9. When an arguer misrepresents an opponent's position to make it easier to attack, they are engaging in the ____ fallacy.

Answer: C) Straw Man

The Straw Man fallacy involves building a weak or distorted version of the opposing argument so that it can be easily knocked down.

10. Which of the following is a key requirement for a 'Disjunctive Syllogism' to result in a certain conclusion?

Answer: D) The argument must eliminate all but one possibility

A Disjunctive Syllogism works on the 'Either/Or' principle. By negating one of the options (not A), the other (B) is logically forced as the conclusion.