

Name: _____ Date: _____

Answer Key: Will Your Logic Hold Up? 12th Grade Foundations of Reasoning Quiz

Students identify fundamental patterns of valid inference and recognize common informal fallacies in real-world arguments to sharpen their analytical comprehension.

1. Identify the logical pattern: 'If the Supreme Court issues a ruling, then it becomes law. The Supreme Court issued a ruling. Therefore, it is law.'

Answer: B) Modus Ponens

This follows the 'If P, then Q; P; therefore Q' structure, known as Modus Ponens (affirming the antecedent).

2. In a deductive argument, if the premises are true and the structure is valid, the conclusion MUST be true.

Answer: A) True

Deductive reasoning provides certainty; if the logical form is valid and the facts (premises) are correct, the conclusion is inescapable.

3. When a debater ignores an opponent's actual position and instead attacks an exaggerated or misrepresented version of it, they are using the ____ fallacy.

Answer: C) Straw Man

The Straw Man fallacy involves 'building' a weak version of an argument just to knock it down easily.

4. Which of these is an example of Inductive Reasoning?

Answer: A) Every 12th grader I have met likes music, so all 12th graders likely like music.

Inductive reasoning moves from specific observations (meeting individual students) to a general probability (all students).

5. An argument that attacks the character of the speaker rather than the substance of their claim is known as an ____ argument.

Answer: A) Ad Hominem

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Ad Hominem is Latin for 'to the person,' referring to the error of attacking the person instead of the logic.

6. A 'False Dilemma' fallacy occurs when someone suggests there are only two possible options when more actually exist.

Answer: A) True

Also known as a 'Black-and-White' fallacy, it oversimplifies a complex situation into just two choices.

7. Identify the conclusion of this Disjunctive Syllogism: 'Either the power grid failed or the light bulb burned out. The power grid did not fail.'

Answer: C) The light bulb burned out.

In a disjunctive syllogism, if one of two options is negated, the other must be true.

8. The logical principle 'Modus Tollens' is also known as the way of ____.

Answer: B) Denying

Modus Tollens follows the structure 'If P then Q; Not Q; therefore Not P,' which is 'denying the consequent'.

9. 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; soundness refers to both the structure and the truth of the statements.

10. Which fallacy is present here? 'Every time I wear these socks, our team wins. Therefore, these socks cause us to win.'

Answer: A) Post Hoc (False Cause)

The Post Hoc fallacy assumes that because one event followed another, the first must have caused the second.