Name: _____ **Date:** _____

Answer Key: Sharpen Your Seventh Grade Syllogisms and Logic Skills

Strengthen abstract reasoning by analyzing faulty premises, identifying cognitive biases, and dissecting complex arguments found in historical and scientific debates.

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1. Imagine a debate about city planning. A speaker says, 'If we build this new park, we will eventually have to provide free ice cream to everyone in the city, which will bankrupt us.' Which logical error is being used?

Answer: B) Slippery Slope

A slippery slope argument falsely assumes that one small step will inevitably lead to a chain of related (and usually negative) events.

2. In formal logic, the '____ Bias' occurs when someone only looks for information that supports their existing beliefs while ignoring evidence that contradicts them.

Answer: B) Confirmation

Confirmation bias is a psychological tendency to favor information that reinforces what we already think is true.

3. True or False: A 'valid' argument in logic means the conclusion is definitely true, even if the starting facts (premises) are false.

Answer: B) False

Validity only means the conclusion follows correctly from the premises. If the premises are false, the conclusion can still be false even if the argument is logically valid.

4. Consider this argument: 'No mammals lay eggs. A platypus lays eggs. Therefore, a platypus is not a mammal.' While the logic is structurally correct, why is the conclusion scientifically wrong?

Answer: B) The first premise is a false statement

For an argument to be 'sound,' the premises must be true. Since some mammals (monotremes) do lay eggs, the first premise is factually incorrect.

5. During a trial, a lawyer argues: 'The defendant was seen near the library at 4:00. The crime happened at 4:00. Therefore, the defendant committed the crime.' What is the primary weakness of this argument?

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Answer: A) Correlation does not imply causation

Just because two events happen at the same time (correlation) does not prove that one caused the other or that they are directly linked.

6. Which term describes a reasoning process that moves from specific observations (like 'this ice is cold') to a broad generalization ('all ice is cold')?

Answer: B) Inductive Reasoning

Inductive reasoning uses specific patterns or observations to make a generalized conclusion, which is likely but not 100% certain.

7. True or False: In a 'Post Hoc' fallacy, someone assumes that because Event B happened after Event A, Event A must have caused Event B.

Answer: A) True

Post Hoc Ergo Propter Hoc translates to 'after this, therefore because of this,' which is a common error in causal reasoning.

8. An advertisement states: '9 out of 10 athletes wear Stride Shoes; you should too!' Which logical fallacy is being used here to persuade the audience?

Answer: C) Bandwagon Fallacy

The bandwagon fallacy suggests that because something is popular or 'everyone is doing it,' it must be the right choice.

9. A ____ is a logical argument that uses two premises to reach a conclusion, such as: 'All men are mortal; Socrates is a man; therefore, Socrates is mortal.'

Answer: B) Syllogism

A syllogism is a classic form of deductive reasoning where a specific conclusion is drawn from two assumed-to-be-true premises.

10. True or False: Critical thinking involves both the ability to analyze information and the 'disposition' (the willingness) to be open-minded and fair.

Answer: A) True

Logic is the technical tool, but critical thinking also requires a mindset of intellectual honesty and curiosity.

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