

CIRCLE THE LETTER OF THE CORRECT ANSWER

Instructions: Problems 1-4 relate to distinguishing arguments from non-arguments and identifying conclusions. Select the best answer for each.

1. While the topical application of fluoride to children's teeth can help reduce decay, there are good reasons for inferring that the addition of fluoride to drinking water is not a good idea. Fluoride in drinking water has caused discolored tooth enamel, it is a cumulative poison, which means that it builds up in bone and tissue, and it has been linked to lower IQ in children and to Alzheimer's disease in adults.
 - a. Argument; conclusion: The addition of fluoride ... not a good idea.
 - b. Argument; conclusion: Fluoride is a cumulative poison.
 - c. Non-argument.
 - d. Argument; conclusion: The topical application of fluoride ... reduce decay.
 - e. Argument; conclusion: It has been linked ... Alzheimer's disease in adults.

2. Evolutionary theory provides a principle that organizes the diversity we see among living vertebrates. Also it helps to fit extinct forms into the context of living species. Classification, initially a process of attaching names to organisms, has become a method of understanding evolution.
 - a. Argument; conclusion: It provides a principle ... among living vertebrates.
 - b. Argument; conclusion: Classification ... a method for understanding evolution.
 - c. Non-argument.
 - d. Argument; conclusion: Evolution is central to vertebrate biology.
 - e. Argument; conclusion: It helps to fit ... the context of living species.

3. Microeconomics studies the behavior of individual economic agents and how they interact with each other in markets. Macroeconomics focuses on the overall level of economic activity in a society. It studies such topics as unemployment, inflation, and the rate of economic growth.
 - a. Argument; conclusion: Microeconomics studies ... with each other in markets.
 - b. Argument; conclusion: It studies such topics ... rate of economic growth.
 - c. Argument; conclusion: Macroeconomics focuses ... in a society.
 - d. Non-argument.

4. A watt is a unit of power, which describes the rate of energy use, and power of 1 watt means that 1 joule of energy is being used each second. Therefore, for every second that you leave a 100-watt light bulb turned on, you will have to pay the utility company for 100 joules of energy.
 - a. Non-argument.
 - b. Argument; conclusion: For every second ... 100 joules of energy.
 - c. Argument; conclusion: A power of 1 watt ... used each second.
 - d. Argument; conclusion: A watt is a unit of power ... rate of energy use.

INSTRUCTIONS: Problems 5-8 relate to identifying and evaluating inductive and deductive arguments. Select the best answer for each.

5. If stun guns are safe, then police officers will use them. Stun guns are safe. Therefore, police officers will use them.
 - a. Inductive, strong.
 - b. Inductive, weak.
 - c. Deductive, valid.
 - d. Inductive, invalid.
 - e. Deductive, invalid.

6. Of the more than 40 red wines imported from Australia, we have sampled two of them and found them to be very high in sulfides. Thus, all Australian red wines are probably high in sulfides.
 - a. Deductive, valid.
 - b. Inductive, weak.
 - c. Inductive, strong.
 - d. Deductive, invalid.

7. Either WSU's main campus is in Pullman or it is in Seattle. Since it is not in Seattle, it follows that it must be in Pullman.
 - a. Inductive, strong.
 - b. Deductive, invalid.
 - c. Inductive, weak.
 - d. Deductive, sound.

8. Yuri Androvich is a blue-eyed Russian artist, and his paintings sell for over \$10,000. Peter Roganov is also a blue-eyed Russian, and he just finished art school. Thus, his paintings should sell for over \$10,000, too.
 - a. Inductive, strong.
 - b. Deductive, invalid.
 - c. Deductive, valid.
 - d. Inductive, weak.

Instructions. Problems 9-12 relate to basic concepts in logic. Select the best answer.

9. Which of the following is not a conclusion indicator?
 - a. Thus
 - b. Hence
 - c. Therefore
 - d. For

10. If an argument has a false premise, then ...
- that argument must be invalid or weak.
 - that argument cannot be sound or cogent
 - that argument must contain a fallacy
 - none of the above
11. If a *valid* deductive argument has a false conclusion, then ...
- at least one of its premises must be false
 - all its premises must be false
 - none of its premises are false
 - None of the above
12. If an argument is sound, then...
- all the premises of the argument must be true
 - the conclusion of the argument must be true
 - both (a) and (b)
 - none of the above

INSTRUCTIONS: Problems 13 and 14 relate to the counterexample method.

Argument A: All spies are covert operators, so all covert operators are risk takers, since all spies are risk takers.

13. Which of the following correctly expresses the form of Argument A?
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|----|---|----|---|----|---|
| a. | All C are R.
<u>All S are R.</u>
All S are C | b. | If S then R.
<u>If S then C.</u>
If R then C. | c. | All S are C.
<u>All S are R.</u>
All C are R. |
| d. | All S are C.
<u>All C are R.</u>
All S are R. | e. | All C are S.
<u>All R are S.</u>
All C are R. | | |