

Answer each question.

1. Define *formal fallacy*.
an error in the form of reasoning (caught by using a truth table)
2. Define *informal fallacy*.
an error in the relationship of the premises (caught by examining context)
3. When is a valid argument unsound?
when it has a false premise
4. What should you always do after you have completed your essay?
rewrite it and check it for logical fallacies

Classify the informal fallacy in each deductive argument as accident, begging the question, composition, division, or equivocation.

5. Anyone who thrusts a knife into another person should be arrested on the grounds of attempted murder. Since surgeons regularly put knives into their victims, they should be arrested for attempted murder.
accident
6. Every atom in this chair is invisible. Therefore, the chair is invisible.
composition
7. Please be quiet. You are making far too much noise.
begging the question
8. A watermelon is a fruit. Therefore, a small watermelon is a small fruit.
equivocation
9. The average American family has 2.4 children. The Smiths are an average American family. Therefore the Smiths have 2.4 children.
division

Classify each deductive argument as displaying a false dichotomy or having one of these three formal fallacies: affirming the consequent, denying the antecedent, or improper negation.

10. If your pet is a whale or a dolphin, then your pet is a mammal. Judy is not a mammal. Therefore, Judy is not a whale or not a dolphin.
improper negation
11. If Probst won the election, then we would have a Democrat for mayor. Probst did not win the election. Therefore, we do not have a Democrat for mayor.
denying the antecedent
12. Study hard for the test or you may flunk it. You didn't flunk the test. Therefore, you studied hard.
false dichotomy
13. If Amoco is drilling for oil in the North Sea, then so are Texaco and Shell. Texaco and Shell are drilling for oil in the North Sea. Therefore, Amoco is drilling there also.
affirming the consequent
14. Which of the following verses says that Christ is the way of salvation and that He is the only way? **D**
 - A. John 3:16
 - B. Acts 4:12
 - C. Romans 10:13
 - D. I John 5:12

Use a truth table to show that the argument is false.

15. $[(\sim A \rightarrow B) \wedge A] \rightarrow \sim B$

$[(\sim A \rightarrow B) \wedge A]$	\rightarrow	\sim	B
F	T	F	T
F	T	T	F
T	F	F	T
T	F	T	F

16. $\sim(A \wedge B) \rightarrow \sim B$

$\sim(A \wedge B)$	\rightarrow	\sim	B
F	T	F	T
F	T	T	F
T	F	F	T
T	F	T	F

Determine whether the argument is valid or invalid.

17. Either drive carefully or you will die. Paula did not die. Therefore she drove carefully.
valid (though not sound since it is a false dichotomy, which has a false premise)
18. Mr. Prendergast is a history teacher. Yesterday, he discussed logic in a good essay to his junior class. Therefore, logic is included in that history class.
valid
19. People who don't live in the city don't appreciate it. Valerie doesn't appreciate the city. She therefore must not be from the city.
invalid

Answer the question.

20. Explain the significance of Colossians 2:3, 8–9 for logic.
It is a warning to stay close to Christ in your thinking for protection from fallacies.