

- a. Please answer Questions 1 and 2 in Section 9.7 of your textbook
1. Ken says that he does not have a logical mind: he complains that whenever he hears the word validity, he goes into a state of intellectual shock. Well, he is just being perverse. Anyone who can pass university-level courses must be able to think rationally, and anyone who can think rationally must have the capacity to reason logically. And Ken is obviously successful in passing his courses. So, he must have the capacity to reason logically

P1: Anyone who can pass university-level courses must be able to think rationally

P2: anyone who can think rationally must have the capacity to reason logically

P3: Ken is obviously successful in passing his courses

C: he must have the capacity to reason logically

This argument is written using the chain argument valid argument form. Assuming all the premises are correct, if P1 then P2, if P2 then P3, if P3 then C, therefore if P1 then C. Assuming the premises are true, then Ken can reason logically.

2. Jay: There is a rumor going around that Fred is going to resign. This creates a really interesting situation. You see, if Fred resigns, then Grace will be promoted to Fred's position. And if Grace gets promoted, then Howard is going to be so upset that he will certainly quit. So, if Fred resigns then Howard will quit.

Alf: But I happen to know that Fred is definitely not going to resign. Therefore, Howard will not quit.

This argument commits the fallacy of denying the antecedent: if Fred resigns, Howard will quit. But Alf said Fred is not going to resign. Therefore, Howard will not quit. This is typically the form of denying the antecedent. However, we have no guarantee that if Fred decides not to resign, Howard is staying. In the context of this argument, there is no clue as to what Howard will do if Fred decides to stay.

b.

		P1	P2	C
p	q	$\sim p \vee q$	$q \rightarrow (p \& \sim q)$	$q \vee (\sim p \& q)$
T	T	F T T T	T <b>F</b> T F F T	T T F T F T
T	F	F T F F	F <b>T</b> T T T F	F F F T F F
F	T	T F T T	T <b>F</b> F F F T	T <b>T</b> T F T T
F	F	T F T F	F <b>T</b> F F T F	F <b>F</b> T F F F

According to my results, using the long truth table method, when P1 and P2 are both T true, the conclusion is F false. Therefore, the argument form and the original argument are invalid. No deductive argument can be valid with true premises and a false conclusion.