

Homework 0

These are “warm up” exercises, to be discussed in precept.

1. For each of the following paragraphs: (a) State whether or not that paragraph contains an argument. (Note: an argument does not need to be a *good* argument.) (b) If the paragraph does not contain an argument, explain what is lacking. (c) For each argument, explain whether it is ampliative (e.g., inductive) or deductive.
 - (a) Professor Plum was in the drawing room. Miss Scarlet was in the kitchen. The murderer used the knife and the evil act was committed in the hall.
 - (b) If Professor Plum was in the drawing room then Colonel Mustard was the murderer. Professor Plum was in the drawing room. So, Colonel Mustard was the murderer.
 - (c) Every student of logic is wise and knowledgeable. Anyone attempting this exercise is a student of logic. Therefore, anyone attempting this exercise is wise and knowledgeable.
 - (d) I am absolutely sick and tired of getting wet every time it rains. From now on I will never forget to take my umbrella with me in the morning. Even if the weather looks fine when I leave I will certainly make a point of taking that umbrella.
 - (e) All human beings are mortal. So, it stands to reason that Socrates is mortal. After all, he is a human being.
 - (f) Professor Plum was obviously the murderer in this instance. For the murderer used the knife and Professor Plum had the knife. And the murder was committed in the hall and Professor Plum was in the hall.
2. Short answer
 - (a) What are the main components of an argument?
 - (b) Give an example of a sentence that could not be a component of an argument.
 - (c) Is a valid argument necessarily a “good” argument? What might a good argument have that a valid argument doesn’t? (And what’s the point, then, of studying validity as opposed to goodness?)
 - (d) If an argument has true premises and a true conclusion, then is it valid?

- (e) If you disagree with the conclusion of an argument, might you still say that it's a valid argument?
- (f) According to the precise definitions of the science of logic, which of the following sentences makes sense, and which do not?
 - i. That's a true argument.
 - ii. That's a true statement.
 - iii. That's a valid point.
 - iv. That's a valid argument.
 - v. That's a valid reason.
- (g) Give an example of a valid argument with false premises and a true conclusion.
- (h) Give an example of an invalid argument with true premises and a true conclusion.
- (i) What is a *counterexample* to the validity of an argument form?

3. True or False. Explain your answers.

- (a) If an argument is valid, then you might be able to make it invalid by adding further premises.
- (b) You can make an invalid argument valid by removing premises.
- (c) If a sentence doesn't follow from another, then its denial must.

4. Which of the following arguments is valid?

- (a) George W. Bush has deceived millions of people. If you deceive millions of people, then you are shrewd. If you are stupid, then you are not shrewd. Therefore, George W. Bush is not stupid.
- (b) Either God exists, or everything is permitted. But not everything is permitted. Therefore, God exists.
- (c) Chimeras are animals, and chimeras breathe fire. Therefore, some animals breathe fire.
- (d) There is one and only one book on my desk. The cover of the book on my desk is red (all over). Therefore, the cover of the book on my desk is not green.