

Logic pset 1

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 there's an argument, identify its conclusion and premises. (c) If there's no argument, explain what's lacking.
 - (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 components of an argument?
 - (b) Which kinds of sentences can be premises or conclusions of an argument?
 - (c) Is a valid argument necessarily a "good" argument? What might a good argument have that a valid argument doesn't?
 - (d) What's the point of studying the validity of arguments, as opposed to their goodness?
 - (e) If an argument has true premises and a true conclusion, then is it valid?
 - (f) If you disagree with the conclusion of an argument, might you still say that it's a valid argument?
 - (g) According to the definitions given in lecture, 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.
- (h) Give an example of a valid argument with false premises and a true conclusion.
- (i) Give an example of an invalid argument with true premises and a true conclusion.
3. True or False. Discuss.
- (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.