Introduction to Logical Reasoning

Review Session for Exam #1

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The Skills You Have Practiced…

1. Dispute analysis,
2. Statement classification,
3. Argument parsing, and
4. Argument diagraming.

Dispute Analysis

Dispute analysis involves determining whether a disagreement is either

1. Merely verbal,
2. Obviously genuine, or
3. Apparently verbal but really genuine.

Furthermore, if it is a genuine dispute, then you must go on to determine whether the dispute is over beliefs or over attitudes.

Common Problems

Many people seem to just assume that there is always some verbal ambiguity in any dispute. But a difference of opinion is not necessarily due to the parties understanding a word or phrase differently. If you are confident that there is a verbal dispute, then be sure you can identify the *precise* word or phrase at issue.

Two Examples

Dispute 1

a. Hafsa finally got rid of that old Kia and bought herself a new car. She's driving a Land Cruiser now.

b. No, Hafsa didn't buy a new car. That Land Cruiser is a good three years old.

Dispute 2

a. Hamid finally got rid of that old Kia and bought himself a new car. He's driving a Land Cruiser now.

b. No, Hamid didn't buy a new car. It's his brother's new Land Cruiser that he's now driving.

Statement Classification

Statement classification involves determining whether a statement is either

1. Simple: positive,
2. Simple: negative,
3. Compound: conjunctive,
4. Compound: disjunctive,
5. Compound: hypothetical, or
6. Some combination of these.

Common Problems

People sometimes forget that if you are dealing with a compound statement, then you need to figure out what type of statements the parts are, until you reach all simple statements (either positive or negative).

Example

If I study hard for the exam, then I will either pass the exam or not be happy.

Common Problems

Remember the indicator words. But don't get complacent—you are not a robot!

Common Conjunctive Indicators

and	but	while
both . . . and . . .	yet	however
also	though	furthermore

Common Disjunctive Indicators

or	either . . . or . . .	unless

Common Hypothetical Indicators

if . . . then . . .

Examples

Statement 1

Study hard but do not do it at the last minute.

Statement 2

Study hard and you will pass this logic class.

Argument Parsing

When parsing an argument, you are searching for the following things

1. Premise indicators (if any),
2. Conclusion indicators (if any),
3. The main conclusion, and
4. Sub-conclusions (if any) and premises.

Common Problems

Do not confuse premise/conclusion indicators with conjunctive/disjunctive/hypothetical indicators.

Common Premise Indicators

because	in view of the fact	assuming that
since	given that	for the reason that
for	seeing that	inasmuch as
as	due to the fact that	as indicated by
follows from	being that	the reason being

Common Conclusion Indicators

therefore	which implies that	it must be that
thus	consequently	as a result
hence	it follows that	which means that
so	we can conclude that	ergo

Example

If I study hard then I will pass logic. Furthermore, if I pass logic then I will make the Dean's list. Therefore, if I study hard then I will make the Dean's list.

Common Problems

Remember that each premise and the conclusion is a complete statement. This statement may either be simple or compound.

Hypothetical and disjunctive statements *cannot* be broken down into separate premises/conclusions. They are always one single premise/conclusion.

Conjunctive statements *should* be broken down, each conjunct treated as a separate premise/conclusion.

Examples

Argument 1

Either I will study hard or I will fail the class. I am not failing this class, so I must be studying hard.

Argument 2

I will study hard because I want to pass the class and I want on the dean's list.

Argument Diagraming

When diagraming an argument, you are trying to determine the inferential structure of how the premises entail the conclusion. This adds two important steps in the argument analysis process:

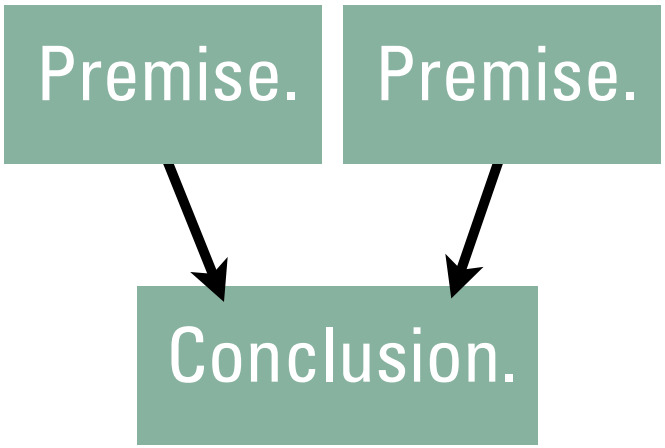
1. Distinguishing between premises and sub-conclusions.

2. Distinguishing between argument chains, dependent premises, and independent premises.

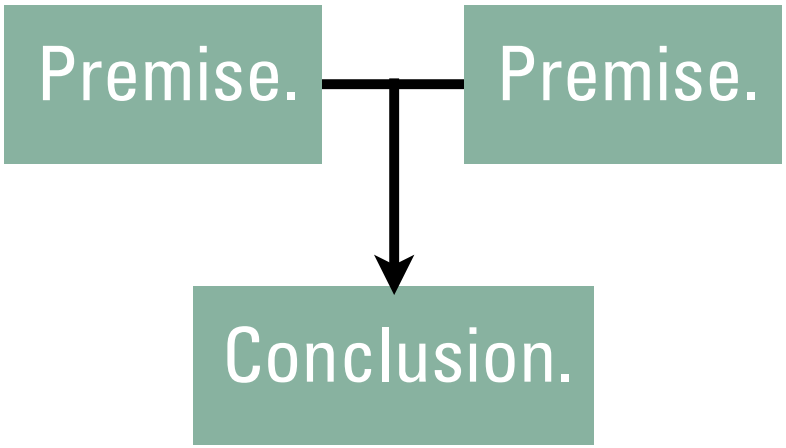
Common Problems

Keep working on seeing the difference between . . .

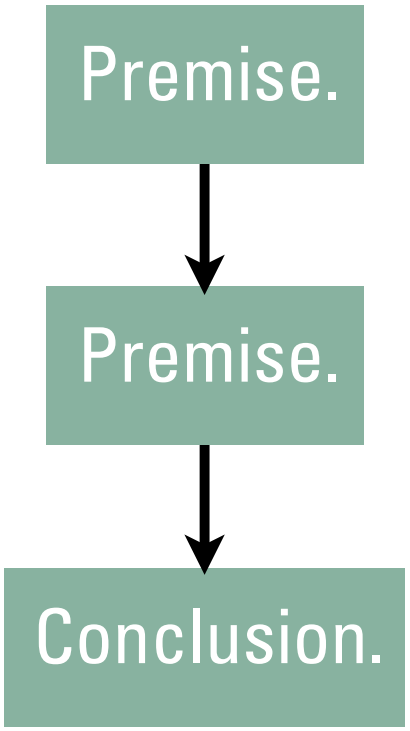
Independent Premises



Dependent Premises



Argument Chain



Examples

Argument 1 (**Independent Premises**)

I will study hard, because I want to pass the class and
I want on the dean's list.

Argument 2 (**Dependent Premises**)

I will study hard, because studying hard will put me on the dean's list and I want on the dean's list.

Argument 3 (**Argument Chain**)

I will study hard, because I want to pass the class since
I want on the dean's list.

Next Class…

Exam #1 will will be held in **lecture hall 1202** and begin promptly at 3:00PM. Please show up and be seated by that time.

Be aware that you will be asked to put anything you bring (including cell phone) in the aisle or the back of the room. You will *not* be able to leave the room until you finish the exam. Plan accordingly.

You will be provided with two pencils, one pen, and plenty of scratch paper.