

❖ *Describing Arguments* ❖

1.2. Premises and Conclusions

1. Standard Form. We'll find it useful to represent arguments in a stripped-down, bare-bones format we'll call **standard form**. Casting an argument in standard form involves the following steps.

Standard Form

- Each premise is numbered
- The conclusion is listed last
- A horizontal line separates the premises from the conclusion
- The conclusion symbol “∴” is written before the conclusion
- Irrelevant material, not part of the premise or conclusion, is discarded

For instance, our earlier argument

Jake borrowed ten dollars from Rex on Friday. He borrowed another ten dollars from Rex on Saturday. And he hasn't paid any of that money back. So, Jake owes Rex twenty dollars.

would be represented in standard form like so.

1. Jake borrowed ten dollars from Rex on Friday.
2. He borrowed another ten dollars from Rex on Saturday.
3. He hasn't paid any of that money back.

∴ Jake owes Rex twenty dollars.

Standard form makes the argument visually simpler to analyze and dissect, and easier to discuss as well. For instance, I can call your attention to **Premise 3** without having to state that premise in so many words.

If all arguments were like the ones we've looked at, putting them in standard form would be trivial. That's because so far our examples have been arguments of the simplest variety: a few premises, followed by a conclusion. But as we'll see, English allows many variations on the same basic

argument. Here we rehearse some of the complications this variety brings even to a topic as tame as standard form.

2. Conclusions. In our examples so far the conclusion has been easy to locate: it's been the last sentence in the argument. But that won't always be the case. For instance, our earlier argument could have been phrased like this.

Jake owes Rex twenty dollars. After all, Jake borrowed ten dollars from Rex on Friday. He borrowed another ten dollars from Rex on Saturday. And he hasn't paid any of that money back.

Here the conclusion comes first, and the premises after. Still, this argument ends up in the same standard form as the earlier version. So we can't count on the conclusion to come last in English.

But we can count on the conclusion to appear in a likely place.

Likely Places for the Conclusion

- At or near the beginning of the argument
- At or near the end of the argument

By comparison, having the conclusion in the middle of an argument – with several premises before, and several more after – would be unlikely.¹

¹ In a very short argument this clue is less useful, since *every* sentence in the argument will be at or near the beginning and/or at or near the end.

Conclusion markers provide a second clue for locating the conclusion. Conclusion markers are phrases that appear immediately before a conclusion. The following are some common examples.

Conclusion Markers

So	
Therefore	(Which/that) shows
Thus	(Which/that) proves
Hence	For these reasons, we see
Consequently	We conclude
In conclusion	
It follows	Modal Phrases: must, have to;
(Which/that) means	must not; cannot

The conclusion of our earlier argument could have been stated in any of the following ways.

So, Jake owes Rex twenty dollars
Therefore, Jake owes Rex twenty dollars
 Jake **therefore** owes Rex twenty dollars
And that means Jake owes Rex twenty dollars
Hence Jake **must** owe Rex twenty dollars

Note that conclusion markers, though useful, don't count as part of the conclusion when the argument is put in standard form. All of the sentences in the above list would be written in standard form like so.

Jake owes Rex twenty dollars.

Modal Phrases: Conclusion-Marking and Obligation

Modal phrases such as “must” or “have to” require extra caution, as they only sometimes mark a conclusion. Another use of these phrases is to talk about **obligation**. In the following argument “must” acts as a conclusion marker.

Suki’s either at the spa or the surfing finals. But the surfing finals ended hours ago. So Suki **must** be at the spa.

But in the next argument “must” isn’t marking the conclusion. It’s stating an obligation Suki has.

The state’s doing their monthly inspection today, and the spa owner must be present for it. So Suki **must** be at the spa.

A rough rule of thumb of thumb for separating the two is that conclusion-marking “must” can be reworded, without change of meaning, as “It must be that,” while obligation “must” typically can’t.

So the sentence “Suki must be at the spa,” with **conclusion-marking** “must,” is saying the same thing as the sentence

It must be that Suki is at the spa.

But “Suki must be at the spa,” intended with an **obligation** “must,” **doesn’t** mean “It must be that Suki is at the spa.”²

² In Linguistics these are sometimes classified as **root** modals – such as obligation (or ‘**deontic**’) “must”; versus **raising** modals – such as conclusion-marking (or ‘**epistemic**’) “must”. See (Barbiers 2006).

3. Premises. Premises have their own family of marker phrases, the **premise markers**. Here are some common examples.

Premise Markers

Since	Follows from
For	May be inferred from
Because	As shown by
After all	From the fact that

When one premise is followed by a second, a special marker can appear before that second premise tagging it as further evidence. We call such markers **follow-up phrases**, since they highlight that the original evidence is being followed up with additional support. Here are some typical examples.

Follow-Up Phrases

Moreover	Besides
Furthermore	Likewise
What's more	Also
In addition	And
In fact	But

(A word of caution: these terms **aren't always** used as follow-up phrases. For example, in the sentence “Kitty sang and Letitia played the harp,” the word “and” isn't marking “Letitia played the harp” as a further premise – just linking it to the sentence “Kitty sang”.

A useful clue: when “and” serves as a follow-up phrase, it appears at the **beginning** of the sentence; whereas when simply linking two sentences together “and” appears in the middle. Likewise “but” in the middle – “Barbie likes rock climbing but Rex likes to read” – just links the smaller sentences together; whereas “but” as a follow-up phrase appears at the beginning of a sentence.)

Assertion Markers

Sometimes what looks like a marker isn't labelling a sentence as premise or conclusion, simply expressing the speaker's belief in that claim – for example, “It's clear that” or “Obviously”. Call these **assertion markers**.

Assertion markers can appear before either a premise or a conclusion. For instance, our earlier, argument, with conclusion first, could be rephrased like so.

“**Clearly** Jake owes Rex twenty dollars. After all....”

“**There's no getting around the fact that** Jake owes Rex twenty dollars. For....”

Yet we can just as easily have an assertion marker before a premise.

“**It's clear that** someone was in the cafeteria last night. So Suki must have forgotten to lock the door when she left.”

“**I tell you**, students today aren't as hard-working as when I was in school. And that means they're learning less than students did in the past.”

So assertion markers aren't helpful for deciding if a sentence is a premise or a conclusion. But like premise and conclusion markers, we **strip off assertion markers** when putting an argument into standard form.

4. Standard Form: Examples and Details. We finish with some examples illustrating the finer points of stating arguments in standard form.

I'll tell you what I think: the prime rate has changed three times in the last year. And that means that bond prices will change soon.

With only two sentences in this argument, every sentence is at or near either the beginning or the end of the passage. So likely places are no help in finding the conclusion. But markers do work here: the words “that means that” mark what follows as the conclusion – leaving the first sentence to serve as the sole premise.

1. The prime rate has changed three times in the last year.

∴ Bond prices will change soon.

Since markers don't count as part of the premise or conclusion they mark, “that means that” is left out of the argument in standard form. Non-essential, introductory ‘window dressing’ such as “I'll tell you what I think” is discarded for the same reason: **standard form should show only the bare bones of the argument.**

When a premise is a long sentence with “and” gluing together two smaller sentences, it's generally harmless to break it up into two premises.

Neko's a cat, and cats hate bananas. So Neko won't trade her tuna sandwich for a banana.

We could put this into standard form like this.

1. Neko's a cat.
 2. Cats hate bananas.
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∴ Neko won't trade her tuna sandwich for a banana.

It's innocent to do this because in asserting such an “and” sentence, we assert each of the smaller sentences in the process: in claiming that “Kitty sang and Letitia played the harp,” I assert that Kitty sang, and that Letitia played the harp. The same holds for a “but” sentence: in asserting that

“Barbie likes rock climbing but Rex likes to read,” I assert “Barbie likes rock climbing” and I assert “Rex likes to read”.³

That is in contrast to other logical words which also glue two sentences together. If I assert “**Either** the number of stars is even **or** the number of stars is odd,” I’m not asserting “The number of stars is even” nor that “The number of stars is odd”. So it’s not at all innocent to break that “either... or” premise into those two smaller sentences.⁴ Likewise, in claiming “**If** I won the lottery **then** I’m a millionaire,” I haven’t claimed that I won the lottery, nor that I’m a millionaire. So it’s not an innocent equivalent to break that “if... then” premise into those two smaller sentences.⁵

A longer example allows us to use our ‘likely places’ clue.

It’s clear that our country needs to reinstate the draft. After all, recent history suggests that we’ll need a larger military in the future. And with the aging population there’ll be fewer young volunteers.

Since we don’t expect the conclusion to be buried in the middle of premises, either the first or third sentence is likely to be the conclusion. The marker “after all” pegs the second sentence as a premise⁶, while the “and” before the third acts as a follow-up phrase, signaling that it’s a further premise.

“It’s clear that” may be a sort of conclusion marker, or (more likely) just an assertion marker. Either way, it’s left out of the standard form.

1. Recent history suggests that we’ll need a larger military in the future.
2. With the aging population there’ll be fewer young volunteers.

∴ Our country needs to reinstate the draft.

³ We revisit this point in 2.4 §2.

⁴ Moreover, in asserting “I’m a millionaire” and also “I’m not a millionaire” I contradict myself. But I can assert “Either I’m a millionaire or I’m not a millionaire” without contradiction. So the “either... or” assertion clearly isn’t equivalent to asserting the two sentences separately.

⁵ We revisit this point in reading 3.3.

⁶ Note that since the premise marker “after all” is used in arguments where the conclusion is stated first, it’s useful for marking both premise and conclusion. “After all” comes **before** a premise (like all premise markers) but right **after** the conclusion: “**Conclusion.** After all, **Premise**”.

Arguments with conclusion first sometimes require a bit of further adjustment in standard form, as the next example shows.

Jack can't be a dog. The evidence is simple: he neither barks nor wags his tail.

While “the evidence is simple” wasn't listed as a common premise marker, the word ‘evidence’ tips us to the fact that it's marking a premise all the same. And the modal “can't” is most likely a conclusion marker (since the first sentence can be reasonably rephrased as “It can't be that Jack is a dog”). Removing these markers yields the following standard form.

1. He [Jack] neither barks nor wags his tail.

∴ Jack [isn't] a dog.

As a result of moving the conclusion to the end, the pronoun “he” appears in the first sentence before we're told (in the next sentence) who “he” is pointing to. We fix this by adding “[Jack]” to the premise.

Summary: Premises and Conclusions

Finding the Conclusion

- likely places: at/near the beginning, at/near the end
- conclusion markers

Finding Premises

- premise markers
- follow-up phrases

Putting Arguments into Standard Form

- List each premise and the conclusion on separate lines.
- Put the conclusion last (when necessary inserting bracketed information in premises to explain ambiguous pronouns like “he,” “she,” “they,” or “it”)
- Delete all non-essential material, including introductory comments, as well as premise, conclusion, and assertion markers.
- Separate premises from the conclusion with a horizontal line
- Number each premise.
- Place a conclusion symbol (“∴”) before the conclusion.