

BREAKING DOWN AND DIAGRAMMING ARGUMENTS

Knowing how to identify the parts of and diagram an argument allows us to follow the line of thought in an argument more easily. Breaking down an argument and then using a diagram to represent the different parts of the argument let us visualize the entire argument, its propositions, and the relationship between the premise(s) and the conclusion.

HIGHLIGHTS

HOW TO BREAK DOWN AN ARGUMENT

- The entire argument may appear in one sentence or in several sentences.

- Put brackets around each proposition in the argument.

- Identify the conclusion. Ask yourself: "What is this person trying to prove?" The conclusion is often, though not always, preceded by a word or phrase known as a conclusion indicator, such as

therefore	which shows that
thus	for these reasons
hence	consequently
so	it follows that

- Identify the premises. The premises are often, though not always, preceded by a word or phrase known as a premise indicator, such as

because	may be inferred from
since	the reason is that
for	as shown by
given that	in view of

- Draw a double line under the conclusion and a single line under the premise(s). Circle any conclusion or premise indicators.

► **APPLICATION:** Identify in the text an example of (1) a conclusion indicator followed by a conclusion, and (2) a premise indicator followed by a premise.

Breaking Down an Argument into Propositions

Before you can diagram an argument, you must first break down the argument into its propositions. Here are the steps for diagramming an argument:

1. **Bracket the Propositions.** In breaking down an argument, start by putting brackets around each proposition so that you know where each begins and ends. Remember, an entire argument can be contained in one sentence, as in the first of the following examples. Or it can contain several sentences and propositions, as in the second example.

[I think], therefore [I am].

[Students who sit in the front of a classroom generally earn higher grades.] Therefore [you should move up to the front of the class], since [I know you want to improve your grade point average].

2. **Identify the conclusion.** The next step is to identify which proposition is the conclusion. Some, but not all, arguments contain terms known as *conclusion indicators* that help you identify which of the propositions is a conclusion. For instance, words such as *therefore* and *thus* often serve as conclusion indicators. If there is a conclusion indicator in the argument, circle it and, if you want, put the letters *CI* above it. In the two arguments above, the word *therefore* indicates that a conclusion follows.

When there are no conclusion indicators, ask yourself: "What is this person trying to prove or convince me of?" If you are still unsure which proposition is the conclusion, try putting *therefore* in front of the proposition you think may be the conclusion. If the



We can improve our arguments by testing them out on others and then modifying our arguments in light of the feedback we receive. Skynesher/Getty Images

meaning of the argument remains the same, you have located the conclusion. Once you have identified the conclusion, draw a double line under it.

CI (Conclusion)
[I think], therefore [I am].

[Students who sit in the front of a classroom generally

earn higher grades.] Therefore, [you should move up

to the front of the class], since [I know you want to improve your grade point average].

3. **Identify the Premises.** The final step in breaking down an argument is to identify the premise(s). In the first argument, which is the famous cogito argument of French philosopher René Descartes (1596–1650), Descartes supports his conclusion (“I am”) with the premise “I think.” In other words, if he is thinking, it follows that he must exist, since someone must be doing the thinking. Draw a single line under the premise.

CI (Conclusion)
[I think] (therefore) [I am].

Some arguments contain *premise indicators*—words or phrases that signal a premise. *Because* and *since* are common premise indicators. If there is a premise indicator, circle it and put *PI* above it. In the argument about where to sit in the classroom, the word *since* indicates that the last part of this sentence is a premise. The first sentence in the argument is also a premise because it is offering evidence to support the conclusion “you should move up to the front of the class.” Draw a single line under each premise.

(Premise)
[Students who sit in the front of a classroom generally

earn higher grades.] *CI (Conclusion)* (Therefore) [you should move up to

the front of the class], *PI (Premise)* (since) [I know you want to improve your grade point average].

Identifying the Premise(s) and Conclusion in Complex Arguments

Not all arguments are as straightforward as the ones we have looked at so far. Some passages that contain arguments also include extra material, such as background and introductory information. In the following letter to the editor, the first sentence contains a brief argument. It begins with an introduction regarding the identity of the writer followed by the conclusion “the state of Washington should have free college education.” The sentence ends with the premise “it would only increase and benefit our country, and its people,” which is preceded by the premise indicator “because.” The second sentence contains two more premises. The following three sentences are additional premises supporting the conclusion in the first paragraph.

I am a student attending Columbia Basin College and I believe that [the state of Washington should have free college tuition] because [it would only benefit our country, and its people].

(Conclusion)
PI
(Premise)
[The more educated its people are, the more that can be accomplished; the more it can sustain itself.]

(Premise)
[America needs to be able to academically compete with other countries, and we can't do that if people can't afford to further educate themselves.]

(Premise)
[The cost to attend a university seems daunting to those who sacrifice greatly to pay for it, and out of reach to those who cannot afford it.]¹⁰

Well-thought-out arguments have real-life consequences. Arguments such as the one above, which was penned by a college student, eventually lead to policies that made all state colleges free for Washington residents.

Words such as *because*, *since*, *therefore*, and *so*, which sometimes serve as premise and conclusion indicators in argument, do not always play this role. *Because* and *therefore* also appear in explanations, as in this example:

Because the demographics and immigration pattern of the United States is changing, the workforce of today's college graduates will be much different from that of their parents.

In addition, the word *since* may indicate the passage of time rather than a premise.

Since the September 11, 2001, attacks on the World Trade Center and Pentagon, the nature of intercultural relationships radically changed for most Americans.

Knowing how to break down an argument into its conclusion and premise(s) makes it easier for us to analyze arguments. Although words such as *therefore* and *because* can help us in this process, it is important to remember that they do not always serve as conclusion and premise indicators.

Diagramming an Argument

Once you have mastered the basics of breaking down an argument, you are ready to diagram arguments. Sometimes arguments fail simply because the other person does not follow our line of reasoning. Diagramming an argument clarifies the relationship between the premise(s) and the conclusion, as well as the relationship between premises, so we know to present these particular premises together.

Arguments with One Premise. Begin by breaking down the argument into its propositions and drawing two lines under the conclusion and one under the premise(s). Number each proposition in the order in which it appears in the argument. Put a circle around each number.

① [I think], therefore ② [I am].

ANALYZING IMAGES

MARIJUANA LAWS WASTE BILLIONS OF TAXPAYER DOLLARS TO LOCK UP NON VIOLENT AMERICANS.



1 IN 3 ADULT AMERICANS have tried marijuana and federal marijuana laws can arrest or imprison every one of them just for simple possession. These laws are unfair and abuse our criminal justice system. Prosecuting and jailing these Americans wastes valuable resources better spent keeping violent criminals off our streets. As it is, hundreds of thousands of citizens have already been imprisoned - many of them non-violent, otherwise law-abiding and many of them stripped of their right to vote, their property, their jobs and their college grants. Let's adopt common sense and fairness and enact more realistic marijuana laws. And let's save the jails for real criminals. Get involved today. Log on at: www.aclu.org/drugpolicy, www.changetheclimate.org, www.drugpolicy.org and www.mpp.org

Change the Climate
MPP
Marijuana Policy Project

DRUG POLICY ALLIANCE
Reason. Compassion. Justice.
ACLU
American Civil Liberties Union

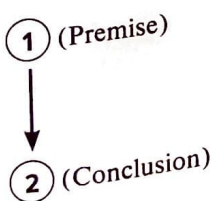
Marijuana Policy Project

The Debate over Marijuana

DISCUSSION QUESTIONS

1. Identify the conclusion and premises in the argument in this advertisement. Evaluate the argument.
2. What is the objective of this ad? Is the ad effective in meeting its objective? Discuss the strategies, including rhetorical devices and fallacies, if any, that the creators of the ad used to try to convince the reader to accept their conclusion.
3. As of 2019 most states and the District of Columbia have legalized marijuana for medical and/or recreational use. Imagine you are a legislator in one of the states that is considering legalizing marijuana for recreational use. Construct an argument supporting your position.

You are now ready to diagram the argument. Begin by writing down the number of the conclusion at the bottom of a space on the page. The premise(s) goes above the conclusion. When there is only one premise, place the number of the premise directly above the conclusion and draw an arrow from the premise number to the conclusion number.



In this section, the parts of the diagram are identified (e.g., premise, conclusion, dependent premises) purely for educational purposes. However, in the actual diagrams, only the numbers, lines, and arrows are used.

Arguments with Independent Premises. The next argument we'll be diagramming has more than one premise. Begin by breaking down the argument into its conclusion and premises, numbering each proposition in the order it appears in the argument.

- ① [Every physician should cultivate lying as a fine art]. . . .
- ② [Many experiences show that patients do not want the truth about their maladies], and that
- ③ [it is prejudicial to their well-being to know it].¹¹

In this argument, the conclusion is the first proposition—“Every physician should cultivate lying as a fine art.” Write

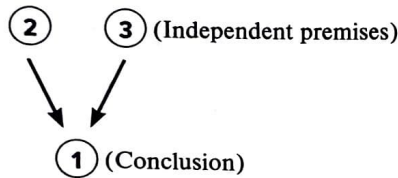
independent premise A premise that can support a conclusion on its own.

dependent premise A premise that supports a conclusion only when it is used together with another premise.

subconclusion A proposition that acts as a conclusion for initial premises and as a premise for the final conclusion.

① at the bottom of the space below. Now examine the two premises, the second and third propositions. In this argument below, each premise supports the conclusion on its own. A premise that can support the conclusion without the other premise is known as an **independent premise**.

You diagram an independent premise by drawing an arrow directly from each one to the conclusion.

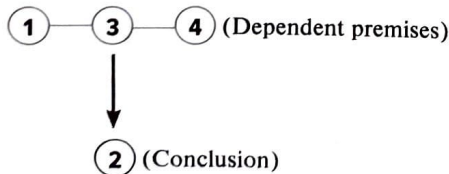


Arguments with Dependent Premises. When two or more of the premises support a conclusion only when they are used together, they are known as **dependent premises**. If you are unsure whether two premises are dependent or independent, try omitting one of them and see if the remaining premise still supports the conclusion on its own. If it does not, then it is a dependent premise.

In the argument below on Harry Potter, premises ①, ③, and ④ are all dependent on each other. Taken alone, they do not support the conclusion.

- ① [The Bible states in Leviticus 19:26, “You should not practice augury or witchcraft.”] Therefore, ② [the Harry Potter books are not suitable reading for children,] since ③ [Harry Potter is a wizard] and ④ [wizards practice augury].

In diagramming dependent premises, you first draw a line between the premises and then draw a line from the center of this connecting line to the conclusion.

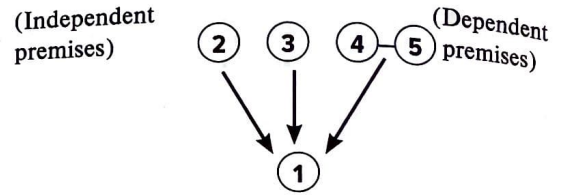


In the above argument, depending on your audience, you may not need ④, which is a definitional premise.

Some arguments have both dependent and independent premises. Consider the following argument:

- ① [Turkey should not be granted full membership in the European Union.] For one thing, ② [the majority of the country is located in Asia, not Europe.]

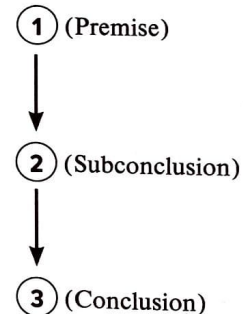
- ③ [Turkey also has a poor human rights record.] Finally, ④ [it is a poor country with high unemployment]. ⑤ [Allowing it to be a full member in the European Union might spark a mass migration of people to European countries with better economies.]



Arguments with a Subconclusion. Sometimes a premise acts as a conclusion for the final conclusion. This type of premise is known as a **subconclusion**.

- ① [My granddaughter Sarah is a college freshman.] ② [Sarah probably wouldn't be interested in hearing an AARP talk on Social Security reform.] So ③ [there's probably no point in asking her to come along with me.]

In the above argument, premise ① offers support for proposition ②: “My granddaughter Sarah is a college freshman. [Therefore] Sarah probably wouldn't be interested in hearing an AARP talk on Social Security.” However, proposition ②, in addition to being a conclusion for premise ①, also serves as a premise for proposition ③. In diagramming an argument with a subconclusion (such as proposition ②), you put the subconclusion between the premise(s) that supports it and the final conclusion.

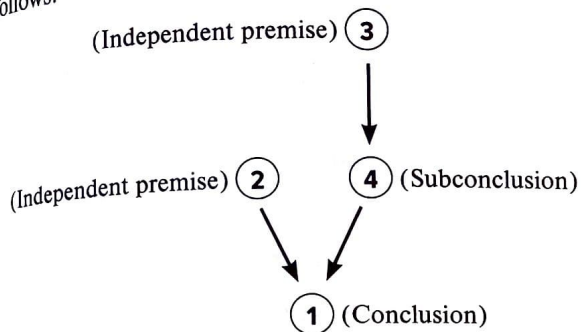


The following argument on capital punishment has a subconclusion as well as two independent premises.

- ① [The death penalty does not deter criminals] because ② [at the time the crime is done they do not expect to be arrested.] Also, since ③ [many offenders are mentally unbalanced,] ④ [they do not consider the rational consequences of their irrational actions.]¹²

Here, proposition ② is an independent premise that supports the conclusion (proposition ①) on its own. If this were all there was to the argument, you would diagram it by placing the ② above the ① and drawing an arrow directly from the ② to the conclusion.

However, the argument goes on to present additional evidence (propositions ③ and ④) for the conclusion (proposition ①) in the form of a separate supporting argument. Therefore, you'll need to adjust the diagram to allow room for this. In this case, proposition ④ is the sub-conclusion and proposition ③ the premise of the supporting argument. The complete argument can be diagrammed as follows:



Arguments with Unstated Conclusions. In some arguments the conclusion is unstated, allowing readers to draw their own conclusions. The following argument, for example, has two premises but no conclusion:

① [Laws that permit public colleges to discriminate against applicants on the basis of race or sex are

unconstitutional.] ② [The University of Michigan's affirmative action policy that awards extra points on the basis of a person's race and sex discriminates against white males.]

In determining what is the unstated conclusion, ask yourself: What is the speaker trying to prove or to convince us of? In this example, it is that the University of Michigan's affirmative action policy is unconstitutional. When a conclusion is unstated, write it in at the end of the argument and number it; in this case, since it is the third proposition, put a ③ in front of it. The broken circle indicates that the proposition is unstated. You can also add a conclusion indicator if you like.

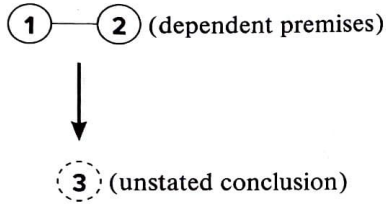
① [Laws that permit public colleges to discriminate against applicants on the basis of race or gender are unconstitutional.] ② [The University of Michigan's affirmative action policy that awards extra points based on a person's race and sex discriminates against white males.] Therefore, ③ [the University of Michigan's affirmative action policy is unconstitutional.]

Diagramming this argument makes it apparent that neither premise can support the conclusion on its own without



These people are burning Harry Potter books based on their conclusion that Harry is a wizard and witchcraft should not be practiced. Neil Jacobs/Getty Images

the other premise. In other words, they are dependent premises. When diagramming an argument with an unstated conclusion, put a broken circle around the number in front of the conclusion to indicate that it was not included in the original wording of the argument. Once again, the parts of the diagram (dependent premises and unstated conclusion) are identified for clarification purposes only. They are not part of the actual diagram.



When you are arguing or discussing an issue, you usually do not have time to step back and diagram it. However, practice at breaking down and diagramming arguments will make it easier for you to recognize the conclusion and see the connections among the conclusion and premises in real-life arguments, the topic of the next section.

HIGHLIGHTS

SYMBOLS USED IN DIAGRAMMING ARGUMENTS

① A **circled number** is used to indicate a proposition and where it appears in the argument.

① A **broken circle** is used to indicate an unstated premise or conclusion.

↓ An **arrow** is used to indicate the relationship between an independent premise and the conclusion, with the conclusion appearing below the arrow.

— A **line** is used to connect dependent premises.

— A **line with an arrow** below it is used to indicate the relationship between dependent premises and the conclusion.

➤ **APPLICATION:** Find an example in the text of each of these symbols being used in an argument.



College students are divided regarding the morality and constitutionality of affirmative action in college admissions, a topic that is considered in the Critical-Thinking Issue of Chapter 1. Alex Wong/Getty Images