An Introduction to Arguments
What *IS* an argument?

**Definition:**

**Argument** - a set of **statements** (*two or more*) in which one is *logically dependent* on the other(s).
Erin seldom attended her Logic class. *Therefore*, she’s not likely to pass.
I forgot to feed Kato this morning. *Therefore*, he’s likely to be hungry when I get home.
The majority of people voted for the Republican presidential candidate. 

*Thus,* the new president will be a Republican.
I’ve never changed the oil in my car. It’s screwed!
Definition: Argument - a set of statements in which one is logically dependent on the other(s).

I’ve never changed the oil in my car. Hence, my dog’s name is Kato.
Definition: Argument - a set of statements in which one is logically dependent on the other(s).

I’ve never changed the oil in my car. **Hence, my dog’s name is Kato.**

The second statement does not follow logically from the first.
Arguments
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Definition: Argument - a set of statements in which one is logically dependent on the other(s).

I. The Basic Elements of an Argument -

A. The **Premise** - a statement (i.e., evidence) that logically supports a conclusion

B. The **Conclusion** - a statement that logically follows from a premise
“Since the good, according to Plato, is that which furthers a person’s real interests, it follows that in any given case when the good is known, men will seek it.”

Stroll and Popkin, “Philosophy and the Human Spirit”
The good secures our interests.

Therefore, if a person knows the good, they will seek it.
“As the denial or perversion of justice by the sentences of courts, as well as in any other manner, is with reason classed among the just causes of war, it will follow that the federal judiciary ought to have cognizance of all causes in which the citizens of other countries are concerned.”

Alexander Hamilton
A denial of justice is a reasonable cause of war.

Therefore, courts should be aware of problems in other countries.
“Since the drive for profits underlies the very existence of business organizations, it follows that a most important function of an accounting system is to provide information about the profitability of a business.”

Meigs and Meigs, “Accounting”
The profit motive underlies the existence of businesses.

Therefore, an accounting system should provide information about the profitability.
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**Definition:** Argument - a set of statements in which one is *logically dependent* on the other(s).

I. The Basic Elements of an Argument -

A. The *Premise* - a statement (i.e., evidence) that *logically supports* a conclusion

B. The *Conclusion* - a statement that *logically follows from* a premise

C. The *Inference* - the *logical connection* between the premise(s) and conclusion
The good secures our interests. **Therefore,** if a person knows the good, they will seek it.
A denial of justice is a reasonable cause of war. Therefore, courts should be aware of problems in other countries.
Therefore, the profit motive underlies the existence of businesses. An accounting system should provide information about profitability.
II. The Purpose of an Argument - persuading your audience through reason alone

A. Self-evident claims - tautological, analytical, definitional statements
Any Sentence That *Cannot* be False

One is equal to one.
Bachelors are unmarried men.
Triangles are trilinear.
Nothing is both red and black all over.
II. The Purpose of an Argument - **persuading** your audience through reason alone

A. **Self-evident** claims - tautological, analytical, definitional statements

B. **Deductions** - propositions that *follow with logical necessity* from one or more propositions.
premise 1) All dogs are mammals.

premise 2) Kato is a dog.

conclusion) Therefore, Kato is a mammal.
II. The Purpose of an Argument - persuading your audience through reason alone

A. Self-evident claims - tautological, analytical, definitional statements

B. Deductions - propositions that follow with logical necessity from one or more propositions.

C. Inductions - propositions that follow with a degree of probability from one or more propositions.
premise 1) All European domestic cats are quadrupeds.
premise 2) All African domestic cats are quadrupeds.
premise 3) All Asian domestic cats are quadrupeds.

conclusion) \textit{Therefore, it’s likely that all domestic cats are quadrupeds.}
II. The Purpose of an Argument - persuading your audience through reason alone

A. **Self-evident** claims - tautological, analytical, definitional statements

B. **Deductions** - necessary conclusions

C. **Inductions** - probable conclusions

D. **Credibility** -
   1. **Knowledge**
   2. **Objectivity**
   3. **Principle of Charity** - be fair to opposing arguments
III. Recognizing Arguments -

A. An *argument* is a set of *statements* in which the *premise* provides logical support for the *conclusion*.

1. *Statement* - any *bivalent* [L. *valentia* - value] sentence (i.e., it is either *true* or *false*)
All cats are dogs.
Kato is asleep on the bed.
Sodium reacts with water.
I am a physician.
**Note:** *Not all* sentences are statements:

- Warnings
- Advice
- Questions
- Imperatives
- Opinions
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1. *Statement* - any *bivalent* [L. *valentia* - value] sentence (i.e., it is either *true* or *false*)

2. *Proposition* - the *content* or *meaning* of a statement

3. *Explicit Inferences* - indicated by signs
   
a. *Premise* Indicators -
Common Premise Indicators

‘since’
‘because’
‘for’
‘seeing that’
‘the reason being’
‘is implied by’
III. Recognizing Arguments -

A. An *argument* is a set of *statements* in which the *premise* provides logical support for the *conclusion*.

1. **Statement** - any bi-valent (L. *valentia* - value) sentence (i.e., it is either *true* or *false*)

2. **Proposition** - the content or *meaning* of a statement

B. *Explicit Inferences* - indicated by signs

1. Premise Indicators -

2. *Conclusion* Indicators -
Common Conclusion Indicators

‘so’
‘thus’
‘therefore’
‘hence’
‘consequently’
‘in conclusion’
III. **Recognizing Arguments** -

A. An *argument* is a set of *statements* in which the *premise* provides logical support for the *conclusion*.

1. **Statement** - any bi-valent [L. valentia - value] sentence (i.e., it is either *true* or *false*)

2. **Proposition** - the content or *meaning* of a statement

B. **Explicit Inferences** - indicated by signs

1. Premise Indicators -

2. Conclusion Indicators -

C. **Implicit Inferences** - *not indicated* by signs
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* Special Note:  NOT EVERY inference indicates an argument.

Conditional Statements
contain a logical inference, but are not arguments.

Conditional Statement:  an “if” “then” statement.

If Kato is a dog, then he is a mammal.

If Kato is an mammal, then he is an animal.

If Kato is an animal, then he is not a mineral.
Conditional Statements are composed of two distinct parts:

If ________________, then ________________.

Antecedent

Consequent
The Terms (i.e., antecedent and consequent) of a conditional statement represent two distinct logical relationships:

**Necessary** - a condition without which an event cannot occur

**Sufficient** - a condition which, when present, is all that is needed for the event to occur

*If (antecedent), then (consequent).*
If Kato is a dog, then he is a mammal.

Being a dog is a sufficient condition for being a mammal.

Being a mammal is a necessary condition for being a dog.
Summary

- An **argument** is two (or more) statements where one is *logically dependent* on the other.

- An **argument** has **three necessary elements**:
  - the **premise(s)** - the support or evidence
  - the **conclusion** - what *logically* follows from the evidence
  - the **inference** - the movement *from* premise *to* conclusion as determined by the rules of logic

- The purpose of an argument is to persuade your audience **using reason alone**.

- A **statement** is a sentence that has a **truth-value**.

- A **proposition** is the **meaningful content** of a statement.