**Why should lawyers study logic?**

- “[T]he person who studies logic—law student, lawyer or judge—and who has become familiar with the principles of logical thinking, is more likely to reason correctly than one who has not thought about the general concepts of reasoning.” Ruggero J. Aldisert, *Logic for Lawyers: A Guide to Clear Legal Thinking*, at 23 (3d ed. 1997).

- Understanding logical principles allows you to structure your arguments in a compelling way and find and explain weaknesses in your opponent’s arguments.

**Informal vs. Formal Logic:**

- **Formal**: deductive; concerned with the structure of an argument, its validity.
  - In law, normally moves from the general to the specific in the form of a categorical syllogism.
  - The conclusion of a valid formal argument follows necessarily from its premises. If the premises of a valid argument are actually true, then the argument is also sound.

- **Informal**: inductive, material
  - In law, typically moves from the specific to the general, through the process of generalization and analogy.
  - The conclusion of an inductive argument, even a really good one, is not necessarily true just because the premises are true; the goal of an inductive argument is to show that the conclusion is more likely true that not.

**Rules of a Categorical Syllogism:**

- **Structure**: 3 propositions, consisting of 3 terms (major, middle, and minor), each of which is used twice; the middle term is used in both premises, but not the conclusion.

- **Distributed and Undistributed Terms**: a term is either distributed (refers to an entire class) or undistributed (refers to less than an entire class).

- **Quantity and Quality**: every proposition has a quantity (universal or particular), and a quality (affirmative or negative).
  - *Universal affirmative* (*A*): “All S is P.” S is distributed and P is undistributed. The statement is universal as to S, but it tells us nothing universally applicable to all members of P.
  - *Universal negative* (*E*): No S is P. S and P are both distributed. The statement tells us something about all members of each class, because if no S is P, we also know that no P is S.
  - *Particular affirmative* (*I*): Some S is P. S and P are both undistributed. The statement tells us nothing that is universally applicable to either class.
  - *Particular negative* (*O*): Some S is not P. S is undistributed and P is distributed. The statement tells us nothing universally applicable to all members of S, but we do know that no member of P is within the category “some S.”
Six Rules of the Valid Categorical Syllogism:

- **One**: It must contain exactly three terms, each of which is used in the same sense throughout the argument.
- **Two**: The middle term must be distributed in at least one premise.
- **Three**: Any term that is distributed in the conclusion must also be distributed in the premise.
- **Four**: It cannot have two negative premises.
- **Five**: If either premise is negative, the conclusion must be negative.
- **Six**: If the conclusion is particular, one of the premises must also be particular.

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**Example 1**: In order to be valid, a contract for the sale of real estate must be in writing. This contract is for the sale of real estate, and it’s not in writing, so it’s invalid.

**Syllogism**:

All valid contracts for the sale of real estate are written.

This contract for the sale of real estate is not written.

This contract is not valid.

**Terms**:

- **Major**: valid contracts for the sale of real estate [A]
- **Middle**: written contracts [B]
- **Minor**: this contract [C]

**Diagram**:

All A [distributed] are B [undistributed]. [Proposition is a universal affirmative.]

C [undistributed] is not B [distributed]. [Proposition is a particular negative.]

C [undistributed] is not A [distributed]. [Proposition is a particular negative.]

**Valid**: this argument does not violate any of the rules.

**Example 2**: In order to be valid, a contract for the sale of real estate must be in writing. This real estate contract is in writing, so it’s valid.

All valid contracts for the sale of real estate are in writing.

This contract is a written contract for the sale of real estate.

This contract is valid.

**Terms (classes)**: same as above

**Diagram**:

All A [distributed] are B [undistributed]. [Proposition is a universal affirmative.]

C [undistributed] is B [undistributed]. [Proposition is a particular affirmative.]

C [undistributed] is A [undistributed]. [Proposition is a particular affirmative.]

**Invalid**: the middle term, B, is undistributed in both premises, and the argument therefore violates Rule 2.