5.1 Standard Form, Mood and Figure

Syllogism: deductive argument consisting of two premises and a conclusion.

Categorical syllogism:

deductive argument consisting of three categorical propositions that is capable of being translated into standard form.

Parts of a Categorical Syllogism:

Terms:

Major Term: predicate of conclusion

Minor Term: subject of the conclusion

Middle Term: occurs once in each premise and does not occur in the conclusion

Premise Names:

Major Premise: top; one that contains the major term

Minor Premise: listed second; one that contains the minor term

Standard Form Rules

Note the need to rearrange arguments that are not in standard form.

Mood: letter names of proposition that make it up (A, E, I & O)

Figure: determined by the location of the middle term in the two premises that make it up

Use the shirt collar model to memorize figure forms.

NOTE: This method of determining figure is the best way to solve the problems that follow in the next two sections.

Unconditionally Valid Categorical Syllogisms

Explain what "unconditionally valid" means. This should be a review of Chapter 4 in that we also dealt with unconditionally valid syllogisms there also.

Aristotelian Additions

The Aristotelian viewpoint is bound up with the existence of the objects referenced in the argument. Thus, these forms are contingent based on existence.

Contrast the idea of unconditionally valid with conditionally valid.

Backwards Reconstruction of Arguments Given Mood & Figure

We can build categorical syllogisms given only mood and figure information.

The key here is remembering that deductive arguments, especially categorical syllogisms, are dependent on form for their validity rather that content (with the exception of the Aristotelian condition of existence).

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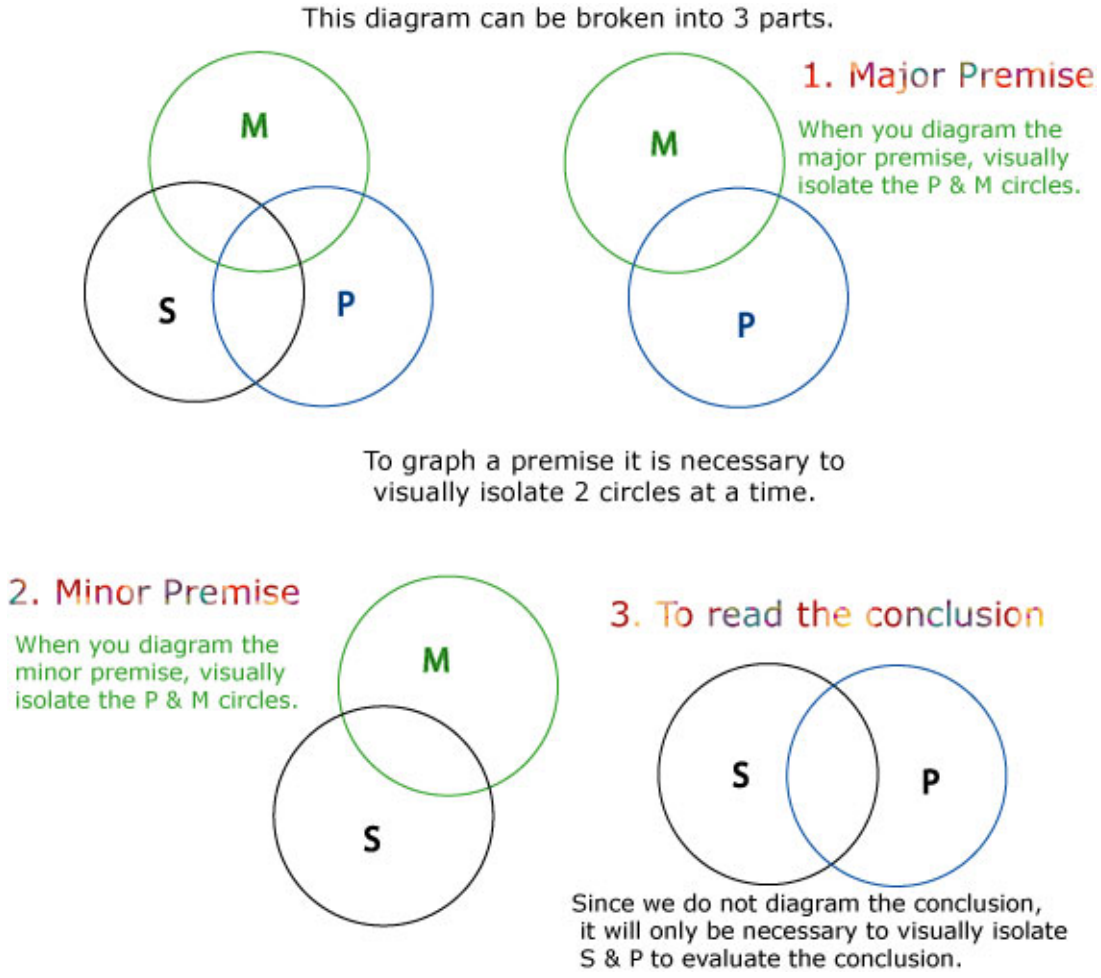
5.2 Venn Diagrams

Venn Diagrams are on every major graduate school test known to man. Many of them have more than three variables, but we'll learn tricks to solve the most complicated of puzzles.

Review the method for drawing a basic Venn Diagram; note the seven areas that have to be visible.

The Diagram:



The Rules:

1. Mark premises only.
2. Universal premises are entered first.
3. Focus on the two areas (variables) addressed in the premise you are graphing and give only minimal attention (i.e., ignore) the third circle.(See my note below about particular propositions [I & O statements] requiring an X.)
4. Particular conclusions assert existence (i.e., are Aristotelian) and therefore should be evaluated for both conditions.

5.3 Rules and Fallacies

These five rules may be used as a convenient cross-check against the method of Venn Diagrams.The *first two* are dependent on *distribution*.

Rule 1: Middle term must be distributed at least once.

- Fallacy = Undistributed Middle

Rule 2: All terms distributed in the conclusion must be distributed in one of the premises.

- Fallacy = Illicit major; Illicit minor
- HINT: Mark all distributed terms first Remember from Chapter 1 that a deductive argument may not contain more information in the conclusion than is contained in the premises. Thus, arguments that commit the fallacies of illicit major and illicit minor commit this error.

Rule 3: Two negative premises are not allowed.

- Fallacy = Exclusive premises
- The key is that "nothing is said about the relation between the S class and the P class."

Rule 4: A negative premise requires a negative conclusion, and a negative conclusion requires a negative premise.

- Fallacy = Drawing an affirmative conclusion from a negative premise. OR
- Drawing a negative conclusion from affirmative premises. OR Any syllogism having exactly one negative statement is invalid.
- Note the following sub-rule: No valid syllogism can have two particular premises. The last rule is dependent on *quantity*.

Rule 5: If both premises are universal, the conclusion cannot be particular.

- Fallacy =Existential Fallacy

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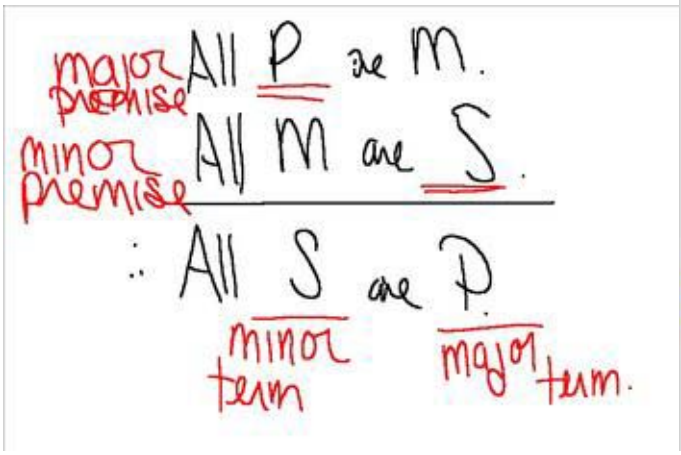
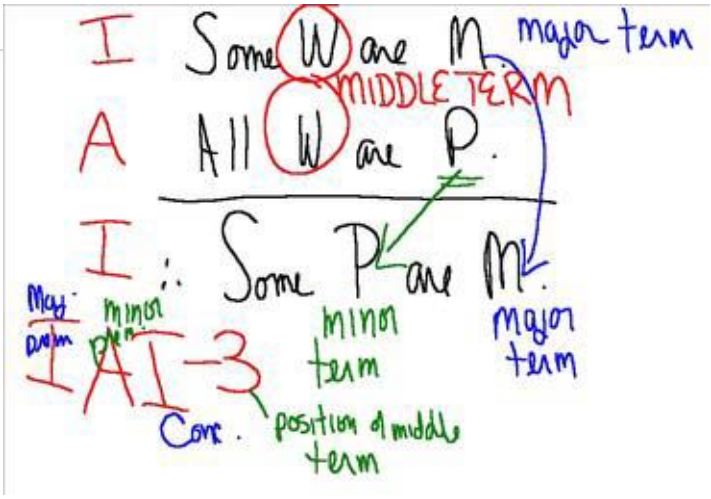
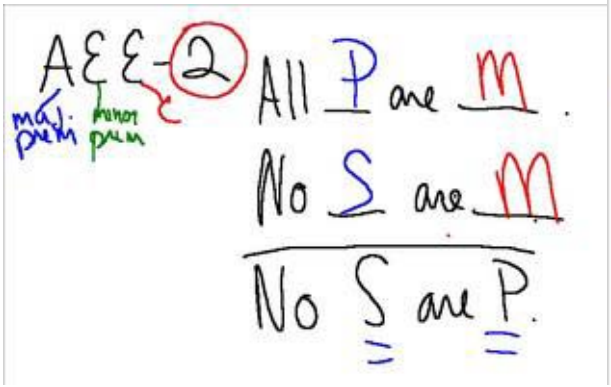
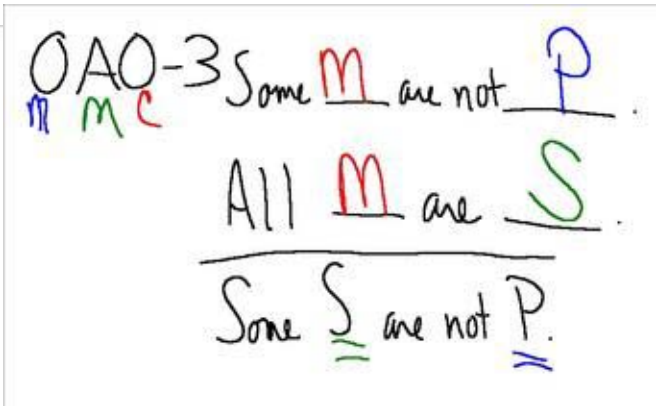
Smartboard Notes from Chapter 5 Lectures:

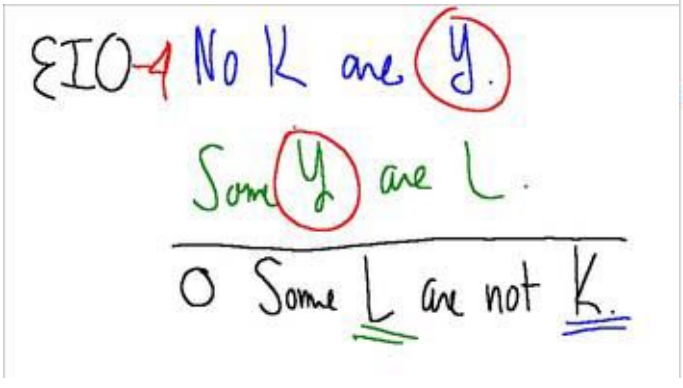
5.1 Mood and Figure

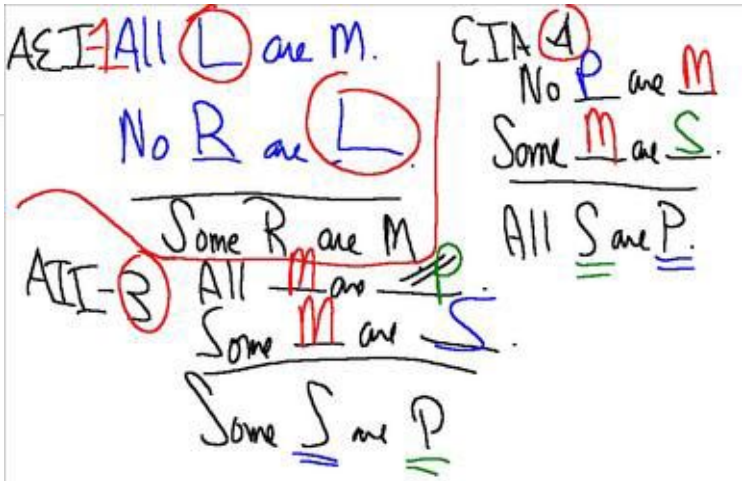




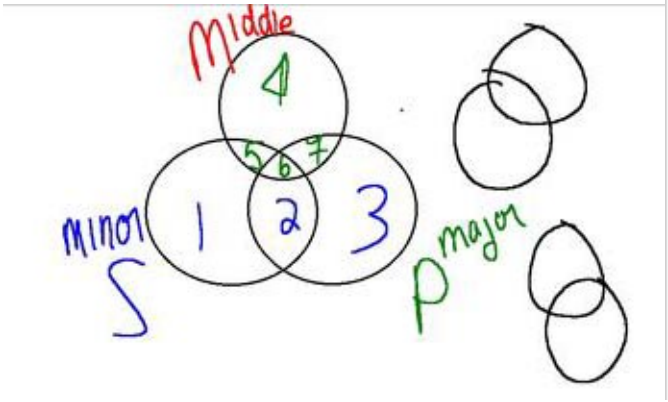


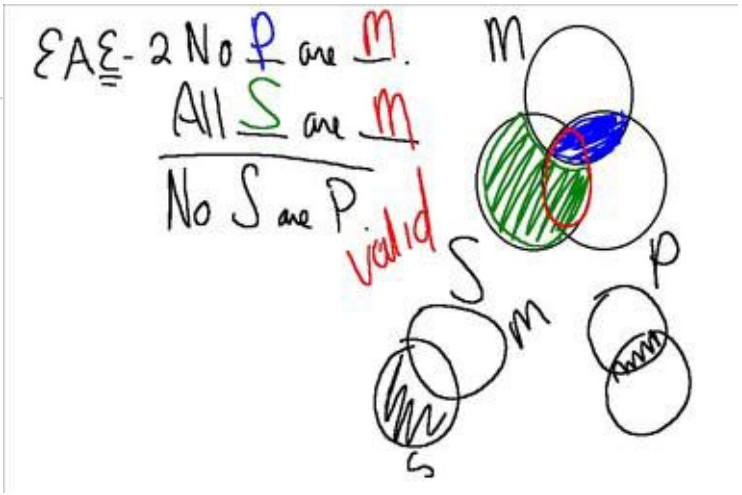


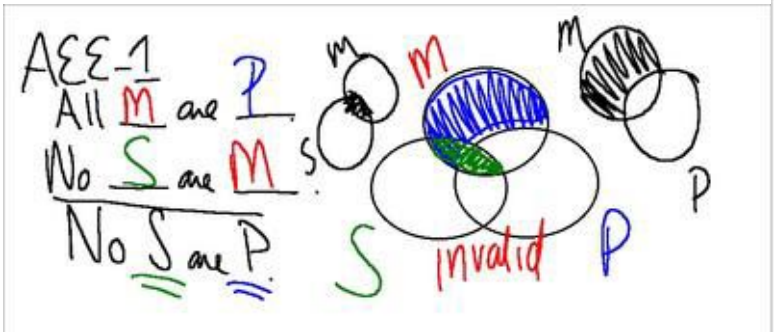


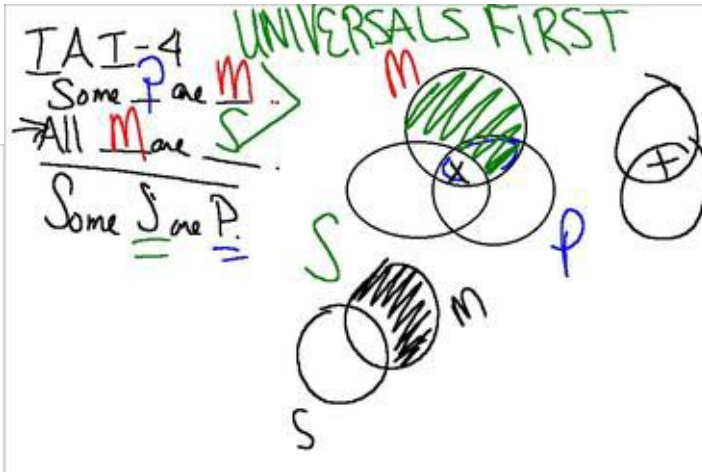


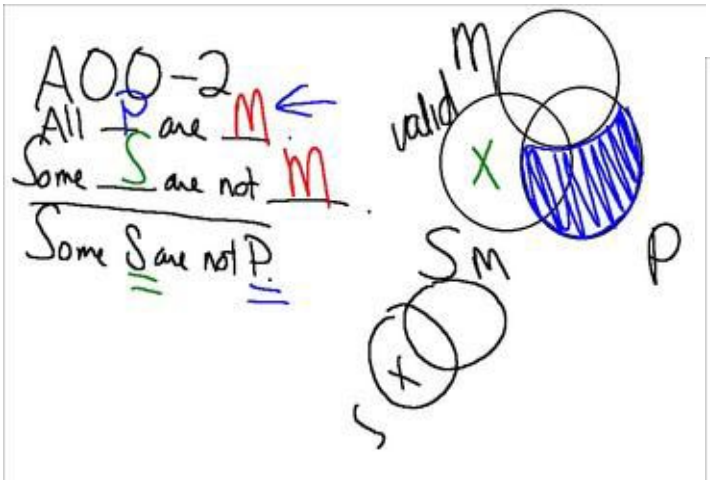
5.2 Venn Diagrams

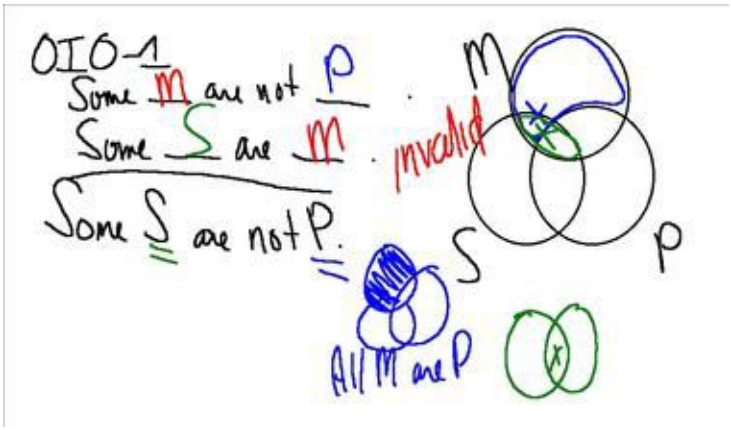






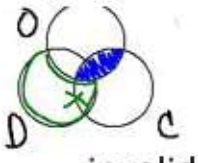






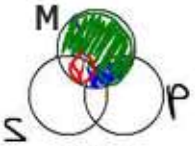
Section 5.2

No C are O.
Some D are not O.
Some D are not C.

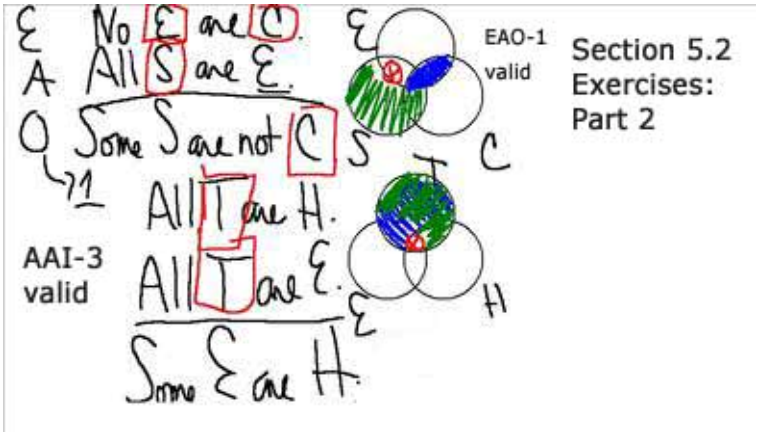


invalid

No M are P.
All M are S.
Some S are not P.

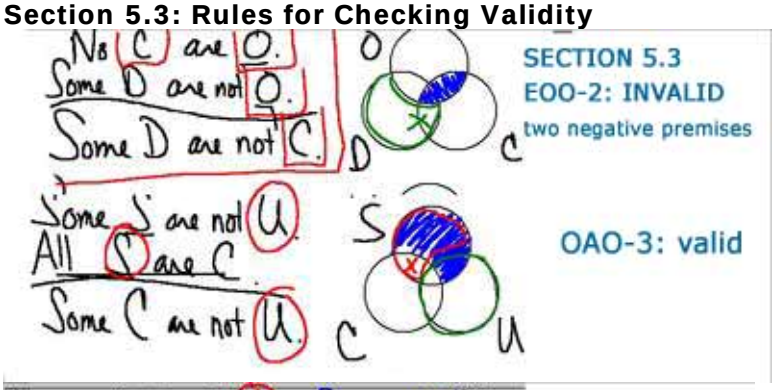


valid



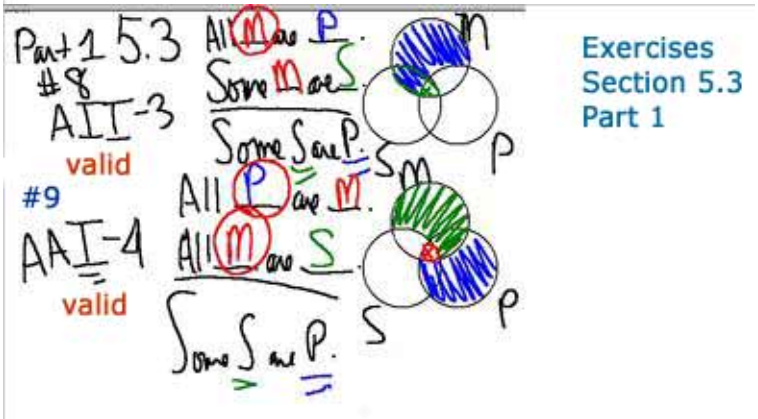
Section 5.2 Exercises: Part 2

Section 5.3: Rules for Checking Validity

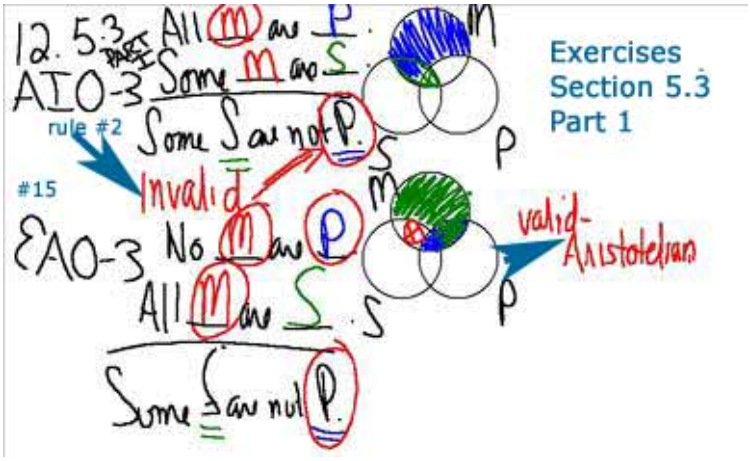


SECTION 5.3
EOO-2: INVALID
two negative premises

OAO-3: valid



Exercises Section 5.3 Part 1


12.5.3
AIO-3
rule #2
#15
EAO-3
No M are P.
All M are S.
Some S are not P.
Invalid
valid-
Aristotelian
Exercises
Section 5.3
Part 1