

## Exercises for Reading 8

\_\_\_\_\_ Exercises for Section I • Peruse the entire chapter. Pay particular attention to the summary. Then read the introductory section at the very beginning of chapter 12. Read this section carefully and try to understand it as best you can.

1. What are we discussing in this chapter?
2. Write out all seven rules for the validity of categorical syllogisms.
3. How many of these rules does a syllogism have to comply with in order to be considered to be valid?
4. Which two of these rules do we discuss in this chapter?
5. Why are these *quantitative rules*?
6. With what does a statement's quantity have to do?
7. What are the three terms contained in a syllogism? [Review]
8. Explain how to distinguish major, minor and middle terms. [Review]
9. In a syllogism, which premise is the major premise? [Review]
10. In a syllogism, which premise is the minor premise? [Review]

**Read "Rule III: If a Term is Not Distributed in the Premises, Then It Must Not Be Distributed in the Conclusion."**

11. What is Rule III?
12. What does this rule prevent us from trying to do?
13. What is the definition of distribution?
14. With what does extension have to do?
15. When we say that a term is distributed, what do we mean?
16. When we say that a term is undistributed, what do we mean?
17. In marking a syllogism, how do you show that a term is distributed?
18. How do you show that a term is undistributed?

\_\_\_\_\_ Exercises for Section 2.

19. Fill in the following diagram showing which terms are distributed and which undistributed in different kinds of categorical statements:

### DIAGRAM OF THE DISTRIBUTION OF TERMS IN A, I, E, AND O STATEMENTS

<u>Type of sentence</u>	<u>Subject-Term</u>	<u>Predicate-Term</u>	<u>Categorical Statements</u>
A	_____	_____	_____
I	_____	_____	_____

E  
O

\_\_\_\_\_

\_\_\_\_\_

20. Mark the following syllogisms indicating the minor, major and middle terms (using S, P and M, respectively) as in the text. Indicate whether the term is distributed or undistributed by writing a lower case **d** next to the letter that indicates the distributed term (S, P, or M), and a lower case **u** next to the letter that indicates the undistributed term. (Note that negative statements in which the subject-term is a proper noun are E statements. For example, "Jeff is not rude" is "No S is P," an E statement).

Example:

All men<sup>Md</sup> are mortal<sup>Pu</sup>.

Socrates<sup>Sd</sup> is a man<sup>Mu</sup>.

Therefore Socrates<sup>Sd</sup> is mortal<sup>Pu</sup>

All kings\_\_ are good \_\_

Hussein\_\_ is a king\_\_

Therefore, Hussein\_\_ is good\_\_

All boy\_\_ are human \_\_

Nathaniel\_\_ is a boy\_\_

Therefore, Nathaniel\_\_ is human\_\_

No organisms\_\_ is simple\_\_

Cats\_\_ are organisms\_\_

Therefore, Cats\_\_ are not simple\_\_

No boys\_\_ are rude\_\_

Jeff\_\_ is a boy\_\_.

Therefore, Jeff\_\_ is not rude\_\_.

All Romans\_\_ are brave\_\_

Caesar\_\_ is Roman\_\_

Therefore, Caesar\_\_ is brave\_\_

All cars\_\_ are fast\_\_

A Corvette is a car\_\_

Therefore, a Corvette\_\_ is fast\_\_

All generals\_\_ are great\_\_

Hannibal\_\_ is a general\_\_

Therefore, Hannibal\_\_ is great\_\_

All horses\_\_ are strong\_\_

Patches\_\_ is a horse\_\_

Therefore, Patches\_\_ is strong\_\_

No wars\_\_ are fun\_\_

World War II\_\_ was a war\_\_

Therefore, WWII\_\_ was no fun\_\_

21. Syllogisms that violate Rule III are said to commit what fallacy?

22. In what two ways can this fallacy be committed?

23. Explain the Fallacy of Illicit Major.

24. Explain the Fallacy of Illicit Minor.

25. **Make bold** the Rule that is violated in the following syllogisms. Indicate minor, major and middle terms (S, P and M) and whether the terms are distributed or undistributed (d and u) to help determine if Rule III is violated. If Rule III is violated, indicate which fallacy is committed, Illicit Major (IMj) or Illicit Minor (IMn). If no fallacy is committed, then do not mark.

Example:

All boys<sup>Md</sup> are human<sup>Pu</sup>

No girls<sup>Sd</sup> are boys<sup>Md</sup>

Therefore, no girls<sup>Sd</sup> are human<sup>Pd</sup>

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj

All towns\_\_ are safe\_\_

Jerusalem\_\_ has high walls\_\_

Therefore, Jerusalem\_\_ is safe\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj

All victories\_\_ are glorious\_\_

No defeat\_\_ is a victory\_\_

Therefore, no defeat\_\_ is glorious\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj

All Gorgons\_\_ have snakey hair\_\_

All Gorgons\_\_ are sisters\_\_

Therefore, all sisters have snakey hair\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj

All men\_\_ are animals\_\_

All men\_\_ are mortal\_\_

Therefore, all mortals\_\_ are animals\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj

All Southerners\_\_ eat grits\_\_

No Yankee\_\_ is a Southerner\_\_

Therefore, no Yankee\_\_ eats grits\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj

No boys\_\_ are cowards\_\_

All Latin students\_\_ are boys\_\_

Therefore, no Latin students\_\_ are cowards\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj

All Romans\_\_ are brave\_\_

No Gaul\_\_ is a Roman\_\_

Therefore, no Gaul\_\_ is brave\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj

All cars\_\_ are fast\_\_

My car\_\_ is a Corvette\_\_

Therefore, my car\_\_ is fast\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj

All generals\_\_ are great\_\_

All generals\_\_ are brave men\_\_

Therefore, all brave men\_\_ are great\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj

All girls\_\_ eat cookies\_\_

All girl scouts\_\_ sell cookies\_\_

Therefore, all girls\_\_ are girl scouts\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj

All wars\_\_ are cruel\_\_

No sports games\_\_ are wars\_\_

Therefore, no sports games\_\_ are cruel\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj

\_\_\_\_\_ Exercises for Section 3. Read "Rule IV: The Middle Term Must be Distributed at Least Once."

26. Explain Rule IV.

27. Syllogisms that violate Rule IV are said to commit what fallacy?

28. Explain the fallacy referred to in Question 27.

29. Indicate which Rule is violated in the following syllogisms. Indicate minor, major, and middle terms (S, P, and M) and whether the terms are distributed or undistributed (d and u) to help determine which rules are violated. If Rule III is violated, indicate which fallacy is committed, Illicit Major (IMj) or Illicit Minor (IMn). If Rule IV is violated, indicate that it has committed the Fallacy of Undistributed Middle (FUM). If no fallacy is committed, then do not mark:

All Gorgons\_\_ have snakey hair\_\_  
Medusa\_\_ has snakey hair\_\_  
Therefore, Medusa\_\_ is a Gogon\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj
- Rule IV:        ■ FUM

All towns\_\_ are safe\_\_  
Jerusalem\_\_ is a town\_\_  
Therefore, Jerusalem\_\_ is safe\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj
- Rule IV:        ■ FUM

No defeat\_\_ is glorious\_\_  
All victories\_\_ are glorious\_\_  
Therefore, no victory\_\_ is defeat\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj
- Rule IV:        ■ FUM

All queens\_\_ are good\_\_  
All kings\_\_ are good\_\_  
Therefore, all kings\_\_ are queens\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj
- Rule IV:        ■ FUM

All princes—are handsome\_\_  
Some toads\_\_ are not princes\_\_  
Therefore, some toads\_\_ are not handsome\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj
- Rule IV:        ■ FUM

All opera stars\_\_ sing songs\_\_  
No sirens\_\_ are opera stars\_\_  
Therefore, no sirens\_\_ sing songs\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj
- Rule IV:        ■ FUM

All heroes\_\_ are patriots\_\_  
Charles Lindbergh\_\_ is a hero\_\_  
Therefore, Charles Lindbergh\_\_ is a patriot\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj
- Rule IV:        ■ FUM

Some dull things\_\_ are valuable\_\_  
All homework\_\_ is dull\_\_  
Therefore, some homework\_\_ is valuable\_\_

- Rule I            ■ Rule II
- Rule III        ■ IMn     ■ IMj
- Rule IV:        ■ FUM

Some merry men\_\_ live in Sherwood Forest\_\_  
All archers\_\_ are merry men\_\_

Some great generals\_\_ defeated Rome\_\_  
Hannibal\_\_ was a great general\_\_

Therefore, some archers\_\_ live in Sherwood\_\_

- Rule I
- Rule II
- Rule III
- IMn
- IMj
- Rule IV:
- FUM

Therefore, Hannibal\_\_ defeated Rome\_\_

- Rule I
- Rule II
- Rule III
- IMn
- IMj
- Rule IV:
- FUM

All Merry Men\_\_ are archers\_\_

Robin Hood\_\_ is an archer\_\_

Therefore, Robin Hood\_\_ is a merry man\_\_

- Rule I
- Rule II
- Rule III
- IMn
- IMj
- Rule IV:
- FUM

All toads\_\_ are ugly\_\_

No princes\_\_ are toads\_\_

Therefore, no princes\_\_ are ugly\_\_

- Rule I
- Rule II
- Rule III
- IMn
- IMj
- Rule IV:
- FUM

\_\_\_\_\_ **Exercises for summary. Read "Summary." Read it carefully.**

30. Indicate which Rule is violated in the following syllogisms. Indicate minor, major, and middle terms (S, P, and M) and whether the terms are distributed or undistributed (d and u) to help determine which rules are violated. If Rule III is violated, indicate which fallacy is committed, Illicit Major (IMj) or Illicit Minor (IMn). If Rule IV is violated mark 'FUN' (Fallacy of Undistributed Middle). If no fallacy is committed, then simply mark it valid.

Some green men\_\_ are leprechauns\_\_

Some green men\_\_ are Martians\_\_

Therefore, some Martians\_\_ are leprechauns\_\_

- Rule I
- Rule II
- Rule III
- IMn
- IMj
- Rule IV:
- FUM

All towns\_\_ are safe\_\_

Jerusalem\_\_ is a holy city\_\_

Therefore, some holy cities\_\_ are safe\_\_

- Rule I
- Rule II
- Rule III
- IMn
- IMj
- Rule IV:
- FUM

All leopards\_\_ are felines\_\_

All lions\_\_ are felines\_\_

Therefore, some lions\_\_ are leopards\_\_

- Rule I
- Rule II
- Rule III
- IMn
- IMj
- Rule IV:
- FUM

Some rodents\_\_ are a threat\_\_

All mice\_\_ are rodents\_\_

Therefore, no mice\_\_ are a threat\_\_

- Rule I
- Rule II
- Rule III
- IMn
- IMj
- Rule IV:
- FUM

All oaks\_\_ are trees\_\_

No maples\_\_ are oaks\_\_

Therefore, no maples\_\_ are trees\_\_

- Rule I
- Rule II
- Rule III
- IMn
- IMj

All kings\_\_ are good\_\_

All kings\_\_ are rich\_\_

Therefore, al rich people\_\_ are good\_\_

- Rule I
- Rule II
- Rule III
- IMn
- IMj

■ Rule IV:      ■ FUM

No irrational thing\_\_ is a man\_\_  
All beasts\_\_ are irrational\_\_  
Therefore, no beast\_\_ is a man\_\_

■ Rule I          ■ Rule II  
■ Rule III        ■ IMn      ■ IMj  
■ Rule IV:        ■ FUM

■ Rule IV:      ■ FUM

No ducks\_\_ are birds\_\_  
All birds\_\_ have feathers\_\_  
Therefore, some birds\_\_ are not ducks\_\_

■ Rule I          ■ Rule II  
■ Rule III        ■ IMn      ■ IMj  
■ Rule IV:        ■ FUM

31. Tell whether the following are true or false: (Make the correct answer **bold**.)

- |   |   |   |
|---|---|---|
| T | F | If a term is distributed in the conclusion, it must be distributed in the premises.   |
| T | F | The subject-term of an E statement is distributed.  |
| T | F | Syllogisms that violate Rule IV are said to commit the Fallacy of Illicit Process.  |
| T | F | The Fallacy of Illicit Major is committed when the major term is distributed in the conclusion, but not in the premises.        |
| T | F | If the middle-term is not distributed in either of the premises, then the syllogism is invalid.                                 |
| T | F | The Fallacy of Undistributed Middle is committed when the middle term is distributed in the premises but not in the conclusion. |