Exercises for Reading 7

_____ Exercises for Section 1. Peruse the entire chapter. Then read the introductory section at the very beginning of Reading 7. Read this section carefully and try to understand it as best you can.

1.What are we discussing in this chapter?

2. Make sure you understand each of the seven rules for the validity of a syllogism, the type of rule it is (i.e. terminological, quantitative or qualitative). (Nothing to submit.)

3. How many of these rules does a syllogism have to comply with in order to be considered valid?

4. Which two of these rules do we discuss in this reading?

5. Why are these rules called **terminological** rules?

6. What are the three terms contained in a syllogism? [Review]

7. Explain how to distinguish major, minor and middle terms. [Review]

8. In a syllogism, which premise is the minor premise? [Review]

9. In a syllogism, which premise is the major premise? [Review]

10. In the following syllogisms, indicate which is the major premise and which is the minor premise the minor premise by writing major or minor next to the appropriate premise. Indicate also the minor, major, and middle terms by using S, P, and M. [Review]

All plants are living things.
A daisy is a plant
Therefore, a daisy is a living thing.

All animals were created by evolution.
Horses are animals.
Therefore, horses were created by evolution.

No animal is rational.
My dog Spot is an animal.
Therefore, my dog Spot is not rational.

_____ Exercises for Section 2. Read "Rule I: There Must be Three and Only Three Terms." Read it carefully.

11. What is Rule I?

12. Indicate the two ways in which this rule can be violated.

13. Explain the Fallacy of Four Terms.

14. Explain the Fallacy of Equivocation.

15. What does it mean when a term is equivocal?

16. Tell whether the following syllogisms are examples of the Fallacy of Four Terms (FFT) or the Fallacy of Equivocation (FE) by circling FFT or FE:

All wildebeasts are mammals.
All lions are felines.
Therefore, all felines are mammals.
• FFT   • FE

All animals are irrational.
All dogs are mammals.
Therefore, all mammals are irrational.
• FFT   • FE

All accidents are life-threatening.
This new recipe was an accident.
Therefore, this new recipe is life-threatening.
• FFT   • FE

All banks contain money.
All rivers have banks.
Therefore, all rivers contain money.
• FFT   • FE

All mice eat cheese.
Some computer parts are mice.
Therefore, some computer parts eat cheese.
• FFT   • FE

All kings are powerful
No Queens are men
Therefore, some men are powerful.
• FFT   • FE

All aliens are from outer space.
All foreigners are aliens.
Therefore, foreigners are from outer space.
• FFT   • FE

All roses have thorns .
All flowers are beautiful.
Therefore beautiful things have thorns.
• FFT   • FE

_____ Exercises for Section 3.

17. Convert the syllogisms you marked **FFT** (Fallacy of Four Terms) in question 16. above into syllogisms that comply with rule I. In other words, use three of the four terms you find in them and construct an argument that has a major term, a minor term and a middle term:

Read "Rule 2: The Middle Term Must not Occur in the Conclusion." Read it carefully.

18. What is Rule II?

19. Indicate whether the syllogisms below violate Rule IL (simply write "Yes" or "No")

All lions are felines.
All felines are animals.
Therefore, some felines are lions.

All animals are living beings.
All mice are animals.
Therefore, all mice are living beings.

All animals are irrational.
All horses are animals.
Therefore, all horses are irrational.

Some men are kings.
All kings are powerful.
Therefore, some kings are men.

All things life-threatening should be avoided.
All accidents are life-threatening.
Therefore, all accidents should be avoided.

All aliens are supposed to be registered.
All foreigners are aliens.

Therefore, all foreigners are supposed to be registered.

All that contain water are wet.
All rivers contain water.
Therefore, all rivers are wet.

All flowers are beautiful.
All beautiful things should be admired.
Therefore, some beautiful things have flowers.

20. Circle (or make **bold**) the middle terms in the syllogisms in question 19. (the middle term in these cases will be the term that appears in both premises).

_____Exercises for Section 4.

21. Using the terms in the syllogisms you found to be invalid in question 19, construct 5 syllogisms that comply with rules I and II.

22. In the following syllogisms, indicate which is the major premise and the minor premise by writing **major** or **minor** in the space provided. Indicate also the minor, major and middle terms by using S, P, and M. Determine whether the syllogism is valid or invalid. If it is invalid, tell whether it violates Rule I or Rule II (Hint: if you have a hard time determining the minor and major terms, it is probably because it violates one of these rules) :

A horse is a quadruped.
All mammals breathe oxygen.
Therefore, some mammals are quadrupeds.

All Romans were brave.
Julius Caesar was a Roman.
Therefore, Julius Caesar was brave.

All horses are fast.
Secretariat is a horse.
Therefore, some horses are fast.

All food should be eaten.
This logic problem is food for thought.
Therefore, this logic problem should be eaten.

23. Tell whether the following are true or false:

T   F   In order for a syllogism to be valid, it must comply with all seven rules.
T   F   A syllogism must have a minor, major and middle term.

T	F	If a syllogism commits the Fallacy of Four Terms, that means it does not contain enough terms.
T	F	In a valid syllogism, the minor and major term are connected together by the middle term.
T	F	The Fallacy of Equivocation is easier to spot than the Fallacy of Four Terms.
T	F	Rules I and II are considered terminological rules because they have to do with the nature of the terms in a syllogism.
T	F	A syllogism violates Rule II when more than one middle term appears in the premises.
T	F	The minor term is the subject of the conclusion.

_____ Review Exercises

25. What is the definition of reasoning?

26. Give a brief explanation of the three steps involved in the reasoning process.

27. What is the definition of syllogism?

28. What is the Essential Law of Argumentation?

29. What is the first corollary to the Essential Law of Argumentation?

30. What is the second corollary to the Essential Law of Argumentation?

31. What is the Principle of Reciprocal Identity?

32. What is the Principle of Reciprocal Non-Identity?

33. What is the Dictum de Omni?

34. What is the Dictum de Nullo?