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## Answer Key: Chapter I

## Exercises for Day I

I. Figure in syllogisms.
2. The figure of a syllogism is the disposition or location of terms in the premises.
3. There are three (some would say four) figures.
4. Disposition means location.
5. sub-prae
6. The middle term is the subject of the major premise and the predicate of the minor premise.
7. Subject; predicate.
8. $\quad \begin{array}{r}M \text { is } P \\ S \text { is } M \\ S \text { is } P\end{array}$
9. Make sure the syllogism is constructed as in question 7.

## $\ldots$ Exercises for Day 2

10. prae-prae

I I. When the middle term is the predicate in both the major and minor premises.
12. predicate; predicate
13. $P$ is $M$
$S$ is $M$
$S$ is $P$
14. Make sure the syllogism is constructed as in 12.
15. sub-sub
16. When the middle term is the subject in both the major and minor premises.
17. subject; subject
18. $M$ is $P$
$M$ is $S$
$S$ is $P$
19. Make sure the syllogism is constructed as in question I7.

## 20. prae-sub

21. When the middle term is predicate of the major premise and subject of the minor premise.
22. predicate; subject.
23. P is M
$M$ is $S$
$S$ is $P$
24. Make sure it is constructed as in 22.
25. The First Figure.
26. The Indirect First or Fourth.
27. Sub-prae prima, bis prae secunda, tertia sub bis.
28. Sub-prae first, prae twice second, sub twice third.

| Exercises for Day 4 |  |  |
| :---: | :---: | :---: |
| 29. | S: Allen | M = prae |
|  | P: liberal | M = prae |
|  | M: conservative | Second Figure |
|  | S: President Clinton | $\mathrm{M}=$ sub |
|  | P : big spender | M = prae |
|  | M: Democrat | First Figure |
|  | S: brilliant things | M = prae |
|  | P : men | $\mathrm{M}=$ sub |
|  | M: physicists | Fourth Figure |


| S: that man | $M=$ sub |
| :--- | :--- |
| P: choosers | $M=$ prae |
| M: beggars | First Figure |
| S: mortals | $M=$ sub |
| P: gods | $M=$ sub |
| M: men | Third figure |


| 30. Letter designation | Form (e.g. "All S is P") | Subject-Term | Predicate-Term |
| :---: | :--- | :--- | :--- |
| A | All $S$ is $P$ | distributed | undistributed |
| I | Some $S$ is $P$ | undistributed | undistributed |
| E | No $S$ is $P$ | distributed | distributed |
| O | Some $S$ is not $P$ | undistributed | distributed |

31. First, First (although it would at first appear to be Fourth, since the syllogism is not in proper logical form), First, Third.
32. Make sure the middle term is in the appropriate location in each premise.
33. $\mathrm{T} ; \mathrm{F}$ (it is the Fourth Figure that is really just a form of the First); $\mathrm{T} ; \mathrm{F}$ (it is the middle, not the major term that is the subject in the major premise and the predicate in the minor premise); F (it is the disposition of terms in the premises, not the conclusion); T .

## Answer Key: Chapter 2

## Exercises for Day I

I. Mood in syllogisms.
2. subject; predicate.
3. Figure is the disposition of terms in the premises.
4. Mood is the disposition of premises according to quantity and quality.
5. Four
6. Sixty-four ( 16 for each figure)
7. That the premises are both A statements.
8. That the major premise is an E statement and the minor premise is an A statement.
9. AA
10. EA
II. AA, AE, AI, AO; EA EE, EI, EO; IA, IE, II, IO; OA, OE, OI, OO

## Exercise for Day 2

12. predicate; predicate
13. Yes
14. 64
15. EE or OO
16. 19
17. BARBARA, CELARENT, DARII, FERIOque prioris;

CESARE, CAMESTRES, FESTINO, BAROCO secundae;
Tertia; DARAPTI, DISAMIS, DATISI, FELAPTON, BOCARDO, FERISON habet;
quarta insuper addit; BRAMANTIP, CAMENES, DIMARIS, FESAPO, FRESISON.
I8. BARBARA, CELARENT, DARII, FERIO (note that it is not FERIOque, but just FERIO, since que is a Latin form of the word and)
19. CESARE, CAMESTRES, FESTINO, BAROCO
20. DARAPTI, DISAMIS, DATISI, FELAPTON, BOCARDO, FERISON
21. BRAMANTIP, CAMENES, DIMARIS, FESAPO, FRESISON
22. The mood of the syllogism by indicating what kind of statement each premise is.

## Exercise for Day 3

23. BARBARA, CELARENT, DARII, FERIOque prioris;

CESARE, CAMESTRES, FESTINO, BAROCO secundae;
Tertia; DARAPTI, DISAMIS, DATISI, FELAPTON, BOCARDO, FERISON habet; quarta insuper addit; BRAMANTIP, CAMENES, DIMARIS, FESAPO, FRESISON.
24. subject; subject
25. Five.
26. AA (First), EA (First), EA (Second), AE (Second), AE (Fourth)

Name $\qquad$ Date $\qquad$ Score $\qquad$

## Terminology:

Figure: the disposition or location of the terms in the argument (the middle term especially)

## Identify the Figure:

1. All men are rational

Steve is a man
Therefore, Steve is rational

## (1) $2 \quad 3 \quad 4$

2. Some plants are lovely

All plants are living
Some living things are lovely
12
(3)
4
3. No hobbits are tall

Frodo is a hobbit
Frodo is not tall

## (1) $2 \begin{array}{lll}\text { (1) } & 3 & 4\end{array}$

4. All mortals are things that die

No angels are things that die
No angels are mortals
1 (2) $3 \quad 4$
5. No hares are tortoises

Some fast things are hares
Some fast things are not tortoises

## $\begin{array}{llll}\text { (1) } & 2 & 3 & 4\end{array}$

6. No bears are friendly

All friendly things are nice
Some nice things are not bears
123 (4)
7. All roses are flowers

No flowers are trees
No trees are roses
123
(4)
8. No acts of volition are free

All decisions are acts of volition
No decisions are free

$$
\begin{array}{llll}
\text { (1) } & 2 & 3 & 4
\end{array}
$$

9. All plants are living

No rocks are living
No rocks are plants
1 (2) 3 4
10. All aliens are foreigners

All aliens are different
Some different things are foreigners
12 (3) 4
11. No ring-bearer is immune to evil

All things immune to evil are pure
Some pure things are not ring-bearers
123 (4)
12. God is merciful

No vindictive person is merciful
No vindictive person is God
1 (2) 3 4

What are the four figures that a categorical syllogism can be in? (Use the Latin phrases.)

1. sub-prae
2. prae-prae
3. sub-sub
4. prae-sub

## True/False Questions:

1. $\mathrm{T}(\mp$ The location of the subject term in a syllogism determines the figure.
2. T F The Fourth Figure is also called the Galenic Figure.
3. (T) F The major premise is normally the first premise in a categorical syllogism.

## Rules for Determining Validity (Traditional Logic I Review, Chapters 11, 12, and 13):

## Terminological Rules

1. There must be three and only three terms.
2. The middle term must not occur in the conclusion.

## Quantitative Rules

1. If the term is distributed in the conclusion, it must also be distributed in the premises.
2. The middle term has to be distributed at least once.

Qualitative Rules

1. No conclusion can follow from two negative premises.
2. If two premises are affirmative, then the conclusion must also be affirmative.
3. If either premise is negative, then the conclusion must be negative.
