

Worksheet Exercise 3.7.A.

Name _____

Practice with Deductions

Class _____ Date _____

Part A. Here are some additional examples of deductions for syllogistic arguments. For some of these arguments a solution has been provided so that you can compare your own answer to it. Do not be alarmed if your answer is different — there are several ways to do these problems.

(1) There are very mellow persons. Everyone is endowed with free will. All who are endowed with free will are potentially very dangerous. So, some very mellow persons are potentially very dangerous.

1. some P are M Prem
 2. all P are E Prem
 3. all E are D Prem
 ∴ some M are D

4. _____
 5. _____
 6. _____
 7. _____
 8. _____

1. some P are M Prem
 2. all P are E Prem
 3. all E are D Prem
 ∴ some M are D

4. some M are P 1, Conv
 5. some M are E 4,2, Part Syll
 6. some M are D 5,3, Part Syll

(2) No introverts are socialites. All who are not introverts are extroverts. So, all socialites are extroverts.

1. no I are S Prem
 2. all non-I are E Prem
 ∴ all S are E

3. _____
 4. _____
 5. _____
 6. _____
 7. _____

1. no I are S Prem
 2. all non-I are E Prem
 ∴ all S are E

3. all I are non-S 1, QN
 4. all S are non-I 3, Contrap
 5. all S are E 4,2, Univ Syll

(3) No one who is a happy is depressed. All who are not depressed are not people whose candidate is losing. So, no one who has a candidate that is losing is a happy person.

1. no H are D Prem
 2. all non-D are non-C Prem
 ∴ no C are H

3. _____
 4. _____
 5. _____
 6. _____
 7. _____
 8. _____

1. no H are D Prem
 2. all non-D are non-C Prem
 ∴ no C are H

3. all H are non-D 1, QN
 4. all H are non-C 3,2, Univ Syll
 5. all C are non-H 4, contrap
 6. no C are H 5, QN

(4) Not everyone can dance. Whoever cannot dance didn't take lessons at the Arthur Murray School of Dance. Only those who take lessons at the Arthur Murray School of Dance pay money to that school. So, not everyone pays money to the Arthur Murray School of Dance.

- | | |
|------------------------|-------|
| 1. not all P are D | Prem |
| 2. all non-D are non-T | Prem |
| 3. all M are T | Prem |
| ∴ not all P are M | |
| ----- | |
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |
| 8. _____ | _____ |
| 9. _____ | _____ |
| 10. _____ | _____ |

- | | | |
|------------------------|------|----------------|
| 1. not all P are D | Prem | |
| 2. all non-D are non-T | Prem | |
| 3. all M are T | Prem | |
| ∴ not all P are M | | |
| ----- | | |
| 4. some P are non-D | | 1, QN |
| 5. some P are non-T | | 4,2, Part Syll |
| 6. all non-T are non-M | | 3, Contrap |
| 7. some P are non-M | | 5,6, Part Syll |
| 8. not all P are M | | 7, QN |

- (5)
- | | | |
|-------------------|-------|-----------------|
| 1. some A are B | Prem | |
| 2. no B are non-C | Prem | /∴ some A are C |
| ----- | | |
| 3. _____ | _____ | |
| 4. _____ | _____ | |
| 5. _____ | _____ | |
| 6. _____ | _____ | |
| 7. _____ | _____ | |

- (6)
- | | | |
|--------------------|-------|---------------------|
| 1. not all A are B | Prem | |
| 2. all A are C | Prem | /∴ some non-B are C |
| ----- | | |
| 3. _____ | _____ | |
| 4. _____ | _____ | |
| 5. _____ | _____ | |
| 6. _____ | _____ | |
| 7. _____ | _____ | |

- (7)
- | | | |
|--------------------|-------|----------------|
| 1. all K are non-S | Prem | |
| 2. all M are S | Prem | |
| 3. all non-B are K | Prem | /∴ all M are B |
| ----- | | |
| 4. _____ | _____ | |
| 5. _____ | _____ | |
| 6. _____ | _____ | |
| 7. _____ | _____ | |
| 8. _____ | _____ | |