

**Instructions: Use the traditional square of opposition together with conversion, obversion, and contraposition to prove that the following immediate inferences are valid. Show each step in the deduction.**

1. All insurance policies are cryptically written documents.

Therefore, some cryptically written documents are insurance policies.

1. (t) All I are C.
2. (t) Some I are C subalt, 1
3. (t) Some C are I conversion, 2.

2. No gemstones that do not contain chromium are emeralds.

Therefore, some stones that are not emeralds are not gemstones that contain Chromium.

1. (t) No non-G are E
2. (t) Some non-G are not E subalt, 1
3. (t) Some non-E are not G contraposition, 2

3. It is false that some *Ficus benjamins* are untemperamental house plants.

Therefore, all *Ficus benjamins* are temperamental house plants.

1. (f) Some F are non-T
2. (f) Some F are not T obversion, 1
3. (t) All F are T contradictories, 3

4. All exogenous morphines are addictive substances.

Therefore, it is false that all addictive substances are endogenous morphines.

1. (t) All E are A.
2. (f) No E are A contrary, 1
3. (f) No A are E conversion, 2
4. (f) All A are non-E obversion, 3

5. No people who do not advocate free-enterprise economics are fundamentalist Christians.

Therefore, it is false that some fundamentalist Christians are not people who advocate free-enterprise economics.

1. (t) No non-A are F
2. (t) No F are non-A conversion, 1
3. (t) All F are A obversion, 2
4. (f) Some F are not A contradictories, 3

6. It is false that some Gothic cathedrals are buildings that do not feature pointed arches.

Therefore, some buildings that feature pointed arches are Gothic cathedrals.

1. (f) Some G are non-P
2. (f) Some G are not P obversion, 1
3. (f) No G are P subalt, 2
4. (f) No P are G conversion, 3
5. (t) Some P are G contradictories, 4

7. Some people who recognize paranormal events are not non-scientists.

Therefore, it is false that no scientists are people who recognize paranormal events.

1. **(t) Some P are not non-S**
2. **(t) Some P are S obversion, 1**
3. **(t) Some S are P conversion, 2**
4. **(f) No S are P contradictories, 3**

8. It is false that no unhealthy things to ingest are food additives.

Therefore, some food additives are not healthy things to ingest.

1. **(f) No non-H are F**
2. **(f) No F are non-H conversion, 1**
3. **(f) All F are H obversion, 2**
4. **(t) Some F are not H contradictories, 3**

9. It is false that some illegal searches are not sobriety checkpoints.

Therefore, some sobriety checkpoints are not legal searches.

1. **(f) Some non-L are not S**
2. **(t) Some non-L are S subcontrary, 1**
3. **(t) Some S are non-L conversion, 2**
4. **(t) Some S are not L obversion, 3**

10. It is false that some feminists are not advocates of equal pay for equal work.

Therefore, it is false that all advocates of equal pay for equal work are nonfeminists.

1. **(f) Some F are not A**
2. **(f) No F are A subalt, 1**
3. **(f) No A are F conversion 2**
4. **(f) All A are non-F obversion, 3**