

Exercises to 2.5 *Syllogistic rules*

(1) Determine which rules are violated by the following syllogisms:

- 1) IAI-2
- 2) IAO-3
- 3) AEE-3
- 4) AAA-3
- 5) AII-4
- 6) EAA-1
- 7) OEO-4
- 8) EAE-4
- 9) IEO-1

(2) The following arguments are syllogisms. Represent them symbolically and determine through the syllogistic rules whether they are logically valid.

- 1) Some good physicists do not have high spatial intelligence, because all good physicists are good mathematicians and some good mathematicians have low spatial intelligence.
- 2) If a person has an IQ of less than 50, he (or she) is an imbecile, and no one who can graduate at a university has an IQ of less than 50. Therefore, no one who can graduate at a university is an imbecile.
- 3) Some central bank governors have extreme left-wing beliefs and no one with such beliefs is a liberal. Therefore, some liberals are not central bank governors.
- 4) All managers of large companies are actively opposed to the raising of corporate tax because all members of the Chamber of Commerce are managers of large companies and all active opponents of the corporate tax raise are members of the Chamber of Commerce.
- 5) Some narcotics are medicines that can be bought without a prescription. No medicines that can be bought without a prescription cause dependence. Therefore, some narcotics do not cause dependence.