

Introductory Logic

Homework #7

Read pages 34-44 in the text.



Define *categorical statement* –

Without looking at the text, can you describe each of the five relationships between categorical statements and identify the statements to which each applies? Check your answers.

Contradiction – _____

Contrariety – _____

Subcontrariety – _____

Subimplication – _____

Superimplication – _____

Contradiction – (A&O and I&E) Both statements cannot be true, and both statements cannot be false. Contrariety – (A&E) Both statements cannot be true, however, both can be false. Subcontrariety – (I&O) Both statements can be true, but both cannot be false. Subimplication – (A to I and E to O) The first statement implies the second. Superimplication – (I to A and O to E) The falsity of the first implies the falsity of the second.

If you had any trouble, take time to go back over the reading. Otherwise, go on to the exercises.

Exercise Ten (page 38)

1. 1st:
2nd:

2. 1st:
2nd:

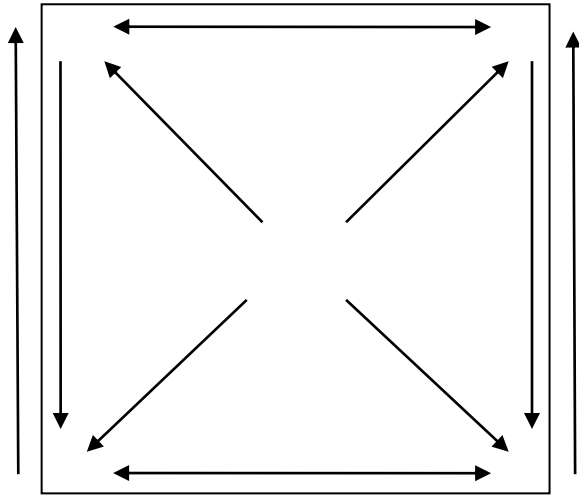
3. 1st:
2nd:

Exercise Eleven (page 42)

- | | | |
|----------|----------|-----------|
| 1. _____ | 5. _____ | 9. _____ |
| 2. _____ | 6. _____ | 10. _____ |
| 3. _____ | 7. _____ | 11. _____ |
| 4. _____ | 8. _____ | 12. _____ |

Exercise Twelve (page 43)

1.



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

- | | |
|----------|-----------|
| 8. T F ? | 10. T F ? |
| T F ? | T F ? |
| 9. T F ? | 11. T F ? |
| T F ? | T F ? |

12. _____
13. _____
14. _____
15. _____

Cranium Calisthenics



"There was a robbery," relayed Scheherazade to the king, "concerning Abu, Ibn, and Hassib. One of them stole a horse, one stole a mule, and one stole a camel. The three were finally caught, but -"

"That's a good thing!" interrupted the king.

"But it was not known which thief stole what. There was a trial, and the three made the following statements:

ABU: Ibn stole the horse.

HASSIB: Not so. Ibn stole the mule.

IBN: Those are both lies! I didn't steal either.

"As it happened, the one who stole the camel was lying, and the one who stole the horse was telling the truth.

Who stole which animal?*



Abu: _____ Ibn: _____ Hassib: _____

Hint: think about what you've learned about statements and their relationships!

* From *The Riddle of Scheherazade and Other Puzzles*, Smullyan. Knopf, 1997.
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