

## Homework Assignment # 2

Due: 2006-09-29 (Friday)

1. Determine the inverse, converse, and contrapositive of “If I was what I would be, then I would be where I am now,” and write them out as English statements (being sure to label which is which).
2. Determine the dual of “ $p \leftrightarrow q$ ”.
3. Consider the statement: “If Thanksgiving is on Thursday, then you are American.”

State which of the following statements is true, and why the others are not.

- (a) The contrapositive is logically equivalent to the converse.
- (b) The inverse is “If Thanksgiving is not on Thursday, then you are not American.”
- (c) The dual is “Either Thanksgiving is on Thursday or you are American.”
- (d) The contrapositive is “If you are American then Thanksgiving is on Thursday.”

from *Gersting* (sixth edition):

4. Section 1.1: Questions: 39, 42-45 (in the fifth edition these are 36-39).