

Math 2283 - Introduction to Logic

Quiz #10 - 2008.11.14

Name: _____

Given the following axiom:

Ax IV: If $x < y$ and $y < z$, then $x < z$

Prove the following theorem:

Th: If $w < x$, $x < y$ and $y < z$, then $w < z$.

Hints: The following laws of logic may prove of some use.

Law I: $(P \wedge Q) \rightarrow Q$

Law II: $(P \wedge Q) \rightarrow P$

Law III: $P \rightarrow (Q \rightarrow (P \wedge Q))$