[11-03-21-T21]

Assignment

The following are tautologies and are often proved as theorems that may then be used in proofs. Let's see if we can find categorical derivations for them in S_s.

[1] $(\sim p \bigvee q) \equiv (p \supset q)$

[2] $\sim(p \bigvee q) \equiv \sim p \bigwedge \sim q$

[3] $\sim(p \bigwedge q) \equiv \sim p \bigvee \sim q$

[4] $p \bigwedge (q \bigvee r) \equiv (p \bigwedge q) \bigvee (p \bigwedge r)$

[5] $p \bigvee (q \bigwedge r) \equiv (p \bigvee q) \bigwedge (p \bigvee r)$

[6] $\sim(p \bigwedge q) \equiv \sim p \bigvee \sim q$