DN - 2c

Monday, 26 October 2020 17:30

Ex 2c)

$((p \wedge q) \to p) \dashv\vdash (r \vee \neg r)$

a) Demonstrăm că $((p \wedge q) \to p) \vdash (r \vee \neg r)$

$\underbrace{((p \wedge q) \to p)}_{\Gamma} \vdash (r \vee \neg r)$ (LEM)

b) Demonstrăm că $(r \vee \neg r) \vdash ((p \wedge q) \to p)$

1. $\Gamma, (p \wedge q) \vdash (p \wedge q)$ (ip)
2. $\Gamma, (p \wedge q) \vdash p$ ($\wedge_e, 1$)
3. $\underbrace{(r \vee \neg r)}_{\Gamma} \vdash ((p \wedge q) \to p)$ ($\to_i, 2$)

din a) și b) $\Rightarrow ((p \wedge q) \to q) \dashv\vdash (r \vee \neg r)$