

Lógica Computacional

LEI, 2014/2015

DI-UBI

Aula Prática 4

Semântica da lógica proposicional: noção de consequência semântica.

Verifique se são verdadeiras ou falsas as afirmações seguintes.

1. $\{\neg(\varphi \wedge \psi), \varphi\} \models \neg\psi$
2. $\{\neg(\varphi \vee \psi), \varphi\} \models \neg\psi$
3. $\{\neg(\varphi \rightarrow \psi), \neg\psi\} \models \psi$
4. $\{\neg(\varphi \rightarrow \psi), \neg\psi\} \models \neg\varphi$
5. $\{\varphi \rightarrow \psi, \neg\varphi \rightarrow \psi\} \models \psi$
6. $\{\varphi \rightarrow \psi\} \models (\delta \wedge \varphi) \rightarrow \psi$
7. $\{\varphi \rightarrow \psi\} \models \varphi \rightarrow (\delta \wedge \psi)$
8. $\{\varphi \rightarrow \psi, \psi \rightarrow \delta\} \models \delta$
9. $\{\varphi \rightarrow \psi, \psi \rightarrow \delta\} \models \varphi \rightarrow \delta$
10. $\{\varphi \vee \psi, \varphi \rightarrow \delta, \psi \rightarrow \gamma\} \models \delta \wedge \gamma$
11. $\{\varphi \vee \psi, \varphi \rightarrow \delta, \psi \rightarrow \gamma\} \models \delta \vee \gamma$
12. $\{\varphi \rightarrow \psi\} \models \neg\varphi \vee \psi$
13. $\{\neg\varphi \vee \psi\} \models \varphi \rightarrow \psi$
14. $\{\varphi \rightarrow (\delta \wedge \psi), (\gamma \vee \psi) \rightarrow \delta\} \models \delta \rightarrow \varphi$