Matematička logika u računarstvu
Predikatski račun
decembar 2011.

Radni listić broj 10.

1. Dokazati: $(\forall x)\big(\alpha(x) \Rightarrow \beta(x)\big), (\forall x)\alpha(x) \vdash (\forall x)\beta(x)$
2. Dokazati: $(\forall x)\big(\alpha(x) \Rightarrow \beta(x)\big), \neg(\exists x)\beta(x) \vdash \neg(\exists x)\alpha(x)$
3. Dokazati da je: $\vdash (\forall x)\big(\varphi(x) \wedge \psi(x)\big) \Leftrightarrow (\forall x)(\varphi(x)) \wedge (\forall x)\psi(x)$
4. Dokazati: $(\exists x)(\varphi(x) \vee \psi(x)) \vdash (\exists x)\varphi(x) \vee (\exists x)\psi(x)$
5. Dokazati: $(\forall x)\varphi(x) \vee (\forall x)\psi(x) \vdash (\forall x)(\varphi(x) \vee \psi(x))$
6. Dokazati: $(\exists x)(\varphi(x) \wedge \psi(x)) \vdash (\exists x)\varphi(x) \wedge (\exists x)\psi(x)$
7. Dokazati: $(\forall x)\varphi(x) \vee \psi \vdash (\forall x)(\varphi(x) \vee \psi)$
8. Dokazati: ako x nije slobodan u ψ onda $(\forall x)\varphi(x) \vee \psi \vdash (\forall x)\varphi(x) \vee \psi$

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