

# Tabloux predicativi

domenica 16 gennaio 2022

00:06

- 1) F
- Tutti i nonni sono anche antenati
  - Marco è nonno di Lucia
  - Marco è antenato di Lucia

SEGNATURA

Costanti: M, L

Funzioni:

Predicati:  $N''()$ ,  $A''()$

$$\left( \forall x \forall y (N(x, y) \rightarrow A(x, y)) \wedge N(m, l) \right) \rightarrow A(m, l)$$

-> Risolviamo questa

$$F \left( \forall x \forall y (N(x, y) \rightarrow A(x, y)) \wedge N(m, l) \right) \rightarrow A(m, l)$$

{passaggi comuni}

$$T \forall x \forall y (N(x, y) \rightarrow A(x, y)), T N(m, l), F A(m, l)$$

-> T  $\forall x$

$$@ = \forall x \forall y (N(x, y) \rightarrow A(x, y))$$

$$T \forall y (N(m, y) \rightarrow A(m, y)), T N(m, l), F A(m, l), @$$

-> T  $\forall y$

$$\# = T \forall y$$

$$T N(m, l) \rightarrow A(m, l), T N(m, l), F A(m, l), @, \#$$

-> T ->

$$F N(m, l), T N(m, l), F A(m, l), @, \# \mid T A(m, l), T N(m, l), F A(m, l), @, \#$$

-> Tutti e due chiudono, tautologia

- 2)  $\forall x (P(x) \wedge Q(x) \rightarrow P(x) \vee Q(x))$

-> F  $\forall x$

$$P(t) \wedge Q(t) \rightarrow P(t) \vee Q(t)$$

-> F ->

$$T P(t) \wedge Q(t), F P(t) \vee Q(t)$$

-> T  $\wedge$

$$T P(t), F Q(t), F P(t) \vee Q(t)$$

-> F  $\vee$

$$T P(t), F Q(t), F P(t), F Q(t)$$

- 3)  $\forall x (P(x) \rightarrow Q(x)) \rightarrow \forall x (\sim Q(x) \vee P(x))$

-> F ->

$$T \forall x (P(x) \rightarrow Q(x)), F \forall x (\sim Q(x) \vee P(x))$$

-> F  $\forall x$  (crea termine nuovo)

$$T \forall x (P(x) \rightarrow Q(x)), F \sim Q(t) \rightarrow \sim P(t)$$

-> F ->

$$T \forall x (P(x) \rightarrow Q(x)), T \sim Q(t), F \sim P(t)$$

-> T  $\sim$

$$T \forall x (P(x) \rightarrow Q(x)), F Q(t), F \sim P(t)$$

$\sim \quad \Gamma$

->  $\Gamma \sim$

$T \forall x (P(x) \rightarrow Q(x)), F Q(t), T P(t)$

->  $T \forall x$

$@ = T \forall x (P(x) \rightarrow Q(x)),$

$T P(t) \rightarrow Q(t), F Q(t), T P(t), @$

$F P(t), F Q(t), T P(t), @ \mid T Q(t), F Q(t), V P(t), @$

-> E' chiuso