

MISTERK 17.12.18

$$\forall x \forall y (H(x) \wedge R(y)) \Rightarrow \text{Faster}(x, y)$$

$$\forall x \forall y (\Delta(x) \wedge R(y)) \Rightarrow \text{Faster}(x, y)$$

$$\Delta(\text{Fury}) \vee H(\text{Fury})$$

$$R(\text{Bunny})$$

$$\text{GreyHound}(\text{Arrow})$$

CRF:

$$\neg H(x) \vee \neg R(y) \vee \text{Faster}(x, y)$$

$$\neg \Delta(x) \vee \neg R(y) \vee \text{Faster}(x, y)$$

$$\Delta(\text{Fury}) \vee H(\text{Fury})$$

$$R(\text{Bunny})$$

$$\text{GreyHound}(\text{Arrow})$$

$$KB = \{ \neg H(x), \neg R(y), \text{Faster}(x, y) \}_1, \{ \neg \Delta(x), \neg R(y), \text{Faster}(x, y) \}_2, \{ \Delta(\text{Fury}), H(\text{Fury}) \}_3, \{ R(\text{Bunny}) \}_4, \{ \text{GreyHound}(\text{Arrow}) \}_5$$

I have to negate the thesis: $\neg \text{Faster}(\text{Fury}, \text{Bunny})$

$$1 \text{ and } 2 \Rightarrow \{ \neg H(x), \neg \Delta(x), \neg R(y), \text{Faster}(x, y) \}_2$$

$$2 \text{ and } 3 \Rightarrow \{ \neg R(y), \text{Faster}(\text{Fury}, y) \}_3$$

$$3 \text{ and } 4 \Rightarrow \{ \text{Faster}(\text{Fury}, \text{Bunny}) \}_4$$

$$4 \text{ and } 6 \Rightarrow \{ \}$$

I have to add: $\forall x \text{ Greyhound}(x) \Rightarrow \Delta(x) \rightarrow \{ \neg \text{Greyhound}(x), \Delta(x) \}_7$

I have to negate the thesis: $\neg \text{Faster}(\text{Arrow}, \text{Bunny})$

$$2 \text{ and } 4 \Rightarrow \{ \neg \Delta(x), \text{Faster}(x, \text{Bunny}) \}_2$$

$$5 \text{ and } 8 \Rightarrow \{ \Delta(\text{Arrow}) \}_3$$

$$2 \text{ and } 3 \Rightarrow \{ \text{Faster}(\text{Arrow}, \text{Bunny}) \}_4$$

$$4 \text{ and } 8 \Rightarrow \{ \}$$

$$\forall x \forall y (\text{ISP}(x) \wedge \text{FSP}(y)) \Rightarrow \text{Better}(x, y)$$

$$\exists x \text{ ISP}(x) \wedge (\forall y \text{ ISP}(y) \Rightarrow \text{Better}(x, y)) \wedge (\exists z \text{ FSP}(z) \wedge \text{Better}(x, z))$$

$x = y \quad b = y \quad a = y \Rightarrow$ They don't unify because it is not possible that a variable is equal to 2 constants.