

## t13\_funct\_5

(TMGA1S1bHVevDYzdjT5aCgXaR4cBLeFpnhA)

October 27, 2020

Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (v1\_relat\_1 \\ X4) \Rightarrow & ((X4 = k2\_tarski (k4\_tarski X0 X1) (k4\_tarski X2 X3)) \Rightarrow ((k9\_xtuple\_0 \\ & X4 = k2\_tarski X0 X2) \wedge (k10\_xtuple\_0 X4 = k2\_tarski X1 X3))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. v1\_relat\_1 (k2\_tarski \\ & (k4\_tarski X0 X1) (k4\_tarski X2 X3)) \end{aligned} \quad (2)$$

### Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (k9\_xtuple\_0 (k2\_tarski \\ & (k4\_tarski X0 X1) (k4\_tarski X2 X3)) = k2\_tarski X0 X2) \wedge (k10\_xtuple\_0 \\ & (k2\_tarski (k4\_tarski X0 X1) (k4\_tarski X2 X3)) = k2\_tarski X1 X3) \end{aligned}$$