

t36\_funct\_1  
(TMTDuFfR8NvGmwTq82ssBuiua6xFdutC878)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_funct\_1 : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v2\_funct\_1 X0) \Rightarrow \\ ((k10\_xtuple\_0 X0 = k9\_xtuple\_0 (k2\_funct\_1 X0)) \wedge (k9\_xtuple\_0 \\ X0 = k10\_xtuple\_0 (k2\_funct\_1 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.(v1\_relat\_1 X1) \Rightarrow ((r1\_tarski \\ (k9\_xtuple\_0 X0) (k10\_xtuple\_0 X1)) \Rightarrow (k10\_xtuple\_0 (k3\_relat\_1 \\ X1 X0) = k10\_xtuple\_0 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.(v1\_relat\_1 X1) \Rightarrow ((r1\_tarski \\ (k10\_xtuple\_0 X0) (k9\_xtuple\_0 X1)) \Rightarrow (k9\_xtuple\_0 (k3\_relat\_1 \\ X0 X1) = k9\_xtuple\_0 X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 X0 \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v1\_relat\_1 ( \\ k2\_funct\_1 X0)) \wedge (v1\_funct\_1 (k2\_funct\_1 X0))) \end{aligned} \quad (5)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v2\_funct\_1 X0) \Rightarrow \\ ((k9\_xtuple\_0 (k3\_relat\_1 X0 (k2\_funct\_1 X0)) = k9\_xtuple\_0 X0) \wedge \\ (k10\_xtuple\_0 (k3\_relat\_1 X0 (k2\_funct\_1 X0)) = k9\_xtuple\_0 X0))) \end{aligned}$$