

t31\_funct\_1  
(TMFDZpy6c9y92qYJwFWTBiuhUh3hmGaZrgh)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (((v2\_funct\_1 (k3\_relat\_1 X1 X0)) \wedge (r1\_tarski (k10\_xtuple\_0 X1) (k9\_xtuple\_0 X0))) \Rightarrow (v2\_funct\_1 X1))) \quad (1)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow ((k9\_xtuple\_0 (k3\_relat\_1 X1 X0) = k9\_xtuple\_0 X1) \Rightarrow (r1\_tarski (k10\_xtuple\_0 X1) (k9\_xtuple\_0 X0)))) \quad (2)$$

Assume the following.

$$\forall X0. k9\_xtuple\_0 (k4\_relat\_1 X0) = X0 \quad (3)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 (k4\_relat\_1 X0)) \wedge (v2\_funct\_1 (k4\_relat\_1 X0)) \quad (4)$$

**Theorem 1**

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((\exists X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \wedge (k3\_relat\_1 X0 X1 = k4\_relat\_1 (k9\_xtuple\_0 X0))) \Rightarrow (v2\_funct\_1 X0))$$