

t49\_funct\_3  
(TMV2yjhfvvgWo22C5EJFa47grP1ZwU88LD4)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_funct\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2. \\ & ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow ((X0 \in k3\_xboole\_0 (k9\_xtuple\_0 \\ & X1) (k9\_xtuple\_0 X2)) \Rightarrow (k1\_funct\_1 (k13\_funct\_3 X1 X2) X0 = k4\_tarski \\ & (k1\_funct\_1 X1 X0) (k1\_funct\_1 X2 X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. k3\_xboole\_0 X0 X0 = X0 \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. k3\_xboole\_0 X0 X1 = k3\_xboole\_0 X1 X0 \tag{3}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 \\ & X2)) \Rightarrow (\forall X3. ((v1\_relat\_1 X3) \wedge (v1\_funct\_1 X3)) \Rightarrow (((k9\_xtuple\_0 \\ & X2 = X1) \wedge ((k9\_xtuple\_0 X3 = X1) \wedge (X0 \in X1))) \Rightarrow (k1\_funct\_1 (k13\_funct\_3 \\ & X2 X3) X0 = k4\_tarski (k1\_funct\_1 X2 X0) (k1\_funct\_1 X3 X0)))) \end{aligned}$$