

t38\_funct\_3  
(TMQL63q2AEBvRwrGbdkm4vejRTTgSonDu)

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Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_funct\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. 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  $k1\_xboole\_0 : \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (k1\_funct\_1 (k4\_funct\_3 X1 X2) \quad (1) \\ X0 = np\_1) \Rightarrow (X0 \in X1)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 (k4\_funct\_3 X0 X1) \wedge (v1\_funct\_1 \quad (2) \\ (k4\_funct\_3 X0 X1)))$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow \quad (3) \\ (X2 \in X1))$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 \quad (4) \\ X2)) \Rightarrow ((X2 = k4\_funct\_3 X0 X1) \Leftrightarrow ((k9\_xtuple\_0 X2 = X1) \wedge (\forall X3. \\ (X3 \in X1) \Rightarrow (((X3 \in X0) \Rightarrow (k1\_funct\_1 X2 X3 = np\_1)) \wedge ((\neg X3 \in X0) \Rightarrow (k1\_funct\_1 \\ X2 X3 = k1\_xboole\_0)))))))$$

Assume the following.

$$\forall X0. \forall X1. (X0 = X1) \Leftrightarrow ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X0)) \quad (5)$$

**Theorem 1**

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge ((r1\_tarski \quad (6) \\ X2 X1) \wedge (k4\_funct\_3 X0 X1 = k4\_funct\_3 X2 X1))) \Rightarrow (X0 = X2)$$