

# t8\_funct\_7 (TMKxCPEzRUqjBoTHrK- LKv2sTLHns1QCChBu)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k17\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4\_tarski X0 X1 \in k2\_zfmisc\_1 X2 X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.k16\_funcop\_1 X0 X1 = k1\_tarski (k4\_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 X0) \wedge ((v1\_funct\_1 X1) \wedge (v1\_partfun1 X1 X0)))) \Rightarrow (\forall X2.(X2 \in X0) \Rightarrow (k16\_funcop\_1 X2 (k1\_funct\_1 X1 X2) = k5\_relat\_1 X1 (k1\_tarski X2))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k17\_funcop\_1 X0 X1 X2 = k16\_funcop\_1 (k4\_tarski X0 X1) X2 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.k2\_zfmisc\_1 (k1\_tarski X0) (k1\_tarski X1) = k1\_tarski (k4\_tarski X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.\forall X2.k1\_binop\_1 X0 X1 X2 = k1\_funct\_1 X0 (k4\_tarski X1 X2)) \quad (6)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1\_relat\_1 X2)\wedge((v4\_relat\_1 \\ & X2 (k2\_zfmisc\_1 X0 X1))\wedge((v1\_funct\_1 X2)\wedge(v1\_partfun1 X2 (k2\_zfmisc\_1 \\ & X0 X1))))))\Rightarrow(\forall X3.\forall X4.((X3 \in X0)\wedge(X4 \in X1))\Rightarrow(k17\_funcop\_1 \\ & X3 X4 (k1\_binop\_1 X2 X3 X4) = k5\_relat\_1 X2 (k2\_zfmisc\_1 (k1\_tarski \\ & X3) (k1\_tarski X4)))) \end{aligned}$$