

t47\_funct\_4  
(TMaHf69yQBSAo5jbSeCCuigpEj6shM8DVE8)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_funct\_4 : \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\neg(r1\_tarski\ X0\ (k2\_zfmisc\_1\ X1\ X2))\wedge((X3\in X0)\wedge(\forall X4.\forall X5.\neg(X4\in X1)\wedge((X5\in X2)\wedge (X3 = k4\_tarski\ X4\ X5)))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2)\wedge(v1\_funct\_1\ X2))\Rightarrow((k4\_tarski\ X0\ X1\in k9\_xtuple\_0\ X2)\Leftrightarrow(k4\_tarski\ X1\ X0\in k9\_xtuple\_0\ (k2\_funct\_4\ X2))) \quad (2)$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\Rightarrow(r1\_tarski\ (k10\_xtuple\_0\ (k2\_funct\_4\ X0))\ (k10\_xtuple\_0\ X0)) \quad (3)$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\Rightarrow((v1\_relat\_1\ (k2\_funct\_4\ X0))\wedge(v1\_funct\_1\ (k2\_funct\_4\ X0))) \quad (4)$$

Assume the following.

$$\forall X0.(((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge(v1\_funct\_1\ X1))\Rightarrow((X1 = k2\_funct\_4\ X0)\Leftrightarrow((\forall X2.(X2\in k9\_xtuple\_0\ X1)\Leftrightarrow(\exists X3.\exists X4.(X2 = k4\_tarski\ X4\ X3)\wedge(k4\_tarski\ X3\ X4\in k9\_xtuple\_0\ X0))))\wedge(\forall X2.\forall X3.(k4\_tarski\ X2\ X3\in k9\_xtuple\_0\ X0)\Rightarrow(k1\_binop\_1\ X1\ X3\ X2 = k1\_binop\_1\ X0\ X2\ X3)))))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1\_tarSKI X0 X1) \wedge (r1\_tarSKI X1 X0)) \quad (6)$$

**Theorem 1**

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow ((r1\_tarSKI (k9\_xtuple\_0 X2) (k2\_zfmisc\_1 X0 X1)) \Rightarrow (k10\_xtuple\_0 (k2\_funct\_4 X2) = k10\_xtuple\_0 X2))$$