t28_toler_1 (TMbX-EVkGmc8vkewBm8bjUngVLrPSauFemps)

October 27, 2020

Let $v1\_relat\_2 : \iota \Rightarrow o$ be given. Let $v3\_relat\_2 : \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_toler\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_toler\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_tarski : \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_2\ X2) \wedge ((v3\_relat\_2\ X2) \wedge ((v1\_partfun1\ X2\ X0) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))))) \Rightarrow (\forall X3.(X3 \in k9\_relat\_1\ X2\ X1) \Leftrightarrow (k4\_tarski\ X1\ X3 \in X2)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_2\ X1) \wedge ((v3\_relat\_2\ X1) \wedge ((v1\_partfun1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))))) \Rightarrow (\forall X2.\forall X3.\neg(k4\_tarski\ X2\ X3 \in X1) \wedge (\forall X4.((v1\_toler\_1\ X4\ X0\ X1) \wedge (m1\_toler\_1\ X4\ X0\ X1)) \Rightarrow (\neg(X2 \in X4) \wedge (X3 \in X4)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.k4\_tarski\ X0\ X1 = k2\_tarski\ (k2\_tarski\ X0\ X1)\ (k1\_tarski\ X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k3\_tarski\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (\exists X3.(X2 \in X3) \wedge (X3 \in X0))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_2\ X1) \wedge ((v3\_relat\_2\ X1) \wedge ((v1\_partfun1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))))) \Rightarrow (\forall X2.(m1\_toler\_1\ X2\ X0\ X1) \Leftrightarrow (\forall X3.\forall X4.((X3 \in X2) \wedge (X4 \in X2)) \Rightarrow (k4\_tarski\ X3\ X4 \in X1))) \tag{5}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_2\ X2)\wedge((v3\_relat\_2\ X2)\wedge((v1\_partfun1\ X2\ X0)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))))\Rightarrow(\forall X3.(\forall X4.(X4\in X3)\Leftrightarrow((X1\in X4)\wedge((v1\_toler\_1\ X4\ X0\ X2)\wedge(m1\_toler\_1\ X4\ X0\ X2))))\Rightarrow(k9\_relat\_1\ X2\ X1 = k3\_tarski\ X3))$$