

t33_funct_7 (TM- RPL8TvRcfWsj8LZGZYAmqq7gSVuhGdS6)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_funct_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_xboole_0 (k9_xtuple_0 \\ X0) (k9_xtuple_0 X1)) \Rightarrow (k1_funct_4 X0 X1 = k1_funct_4 X1 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ k9_xtuple_0 (k2_funct_7 X0 X2 X1) = k9_xtuple_0 X0) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge \\ (v1_funct_1 X2)) \Rightarrow (k1_funct_4 (k1_funct_4 X0 X1) X2 = k1_funct_4 \\ X0 (k1_funct_4 X1 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (k9_xtuple_0 (k2_funcop_1 X0 X1) = X0) \wedge (\\ r1_tarski (k10_xtuple_0 (k2_funcop_1 X0 X1)) (k1_tarski X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (X0 \neq X1) \Rightarrow (r1_xboole_0 (k1_tarski X0) (k1_tarski \\ X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k7_funcop_1 X0 X1 = k2_funcop_1 X0 X1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 (k2_funcop_1 X0 X1)) \wedge (v1_funct_1 (k2_funcop_1 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(v1_funct_1 (k7_funcop_1 X0 X1)) \wedge ((v1_funct_2 (k7_funcop_1 X0 X1) X0 (k1_tarski X1)) \wedge (m1_subset_1 (k7_funcop_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 (k1_tarski X1)))))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_relat_1 (k2_funct_7 X0 X1 X2)) \wedge (v1_funct_1 (k2_funct_7 X0 X1 X2))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k16_funcop_1 X0 X1 = k7_funcop_1 (k1_tarski X0) X1 \quad (10)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.\forall X2. ((X1 \in k9_xtuple_0 X0) \Rightarrow (k2_funct_7 X0 X1 X2 = k1_funct_4 X0 (k16_funcop_1 X1 X2))) \wedge ((\neg X1 \in k9_xtuple_0 X0) \Rightarrow (k2_funct_7 X0 X1 X2 = X0))) \quad (11)$$

Theorem 1

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.\forall X2. \forall X3.\forall X4.(X3 \neq X4) \Rightarrow (k2_funct_7 (k2_funct_7 X0 X3 X1) X4 X2 = k2_funct_7 (k2_funct_7 X0 X4 X2) X3 X1))$$