

t28_relset_1
(TMK88Tdx7E6vw3UqgyRR2dxh1K2hJY4hF15)

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Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4_tarski\ X0\ X1 \in k2_zfmisc_1\ X2\ X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (v1_xboole_0\ X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ X2))) \Rightarrow (m1_subset_1\ X0\ X2) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1\ X0\ X1) \Rightarrow ((v1_xboole_0\ X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1\ X0\ X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.((m1_subset_1\ X4\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))) \wedge (m1_subset_1\ X5\ (k1_zfmisc_1\ (k2_zfmisc_1\ X2\ X3)))) \Rightarrow (k4_relset_1\ X0\ X1\ X2\ X3\ X4\ X5 = k3_relat_1\ X4\ X5) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1\ (k3_relat_1\ X0\ X1) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(v1_relat_1 X2) \Rightarrow ((X2 = k3_relat_1 \\ X0 X1) \Leftrightarrow (\forall X3.\forall X4.(k4_tarski X3 X4 \in X2) \Leftrightarrow (\exists X5. \\ (k4_tarski X3 X5 \in X0) \wedge (k4_tarski X5 X4 \in X1)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski X0 X1 = k2_tarski X1 X0 \quad (10)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (11)$$

Theorem 1

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ (\forall X2.(\neg v1_xboole_0 X2) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X1))) \Rightarrow (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 \\ (k2_zfmisc_1 X1 X2))) \Rightarrow (\forall X5.\forall X6.(k4_tarski X5 X6 \in \\ k4_relset_1 X0 X1 X1 X2 X3 X4) \Leftrightarrow (\exists X7.(m1_subset_1 X7 X1) \wedge \\ (k4_tarski X5 X7 \in X3) \wedge (k4_tarski X7 X6 \in X4)))))))))) \end{aligned}$$