

t30_eqrel_1

(TMFqbpnTd1Cya8xpyW2e1HefRqzfr9zrZgA)

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Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ 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 $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_eqrel_1 : \iota \Rightarrow \iota$ be given. Let $k6_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v3_relat_2 (k1_eqrel_1 X0)) \wedge ((v8_relat_2 (k1_eqrel_1 X0)) \wedge ((v1_partfun1 (k1_eqrel_1 X0) X0) \wedge (m1_subset_1 (k1_eqrel_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v3_relat_2 X1) \wedge ((v8_relat_2 X1) \wedge ((v1_partfun1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \Rightarrow \\ & (\forall X2. ((v3_relat_2 X2) \wedge ((v8_relat_2 X2) \wedge ((v1_partfun1 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \Rightarrow \\ & (\forall X3. ((v3_relat_2 X3) \wedge ((v8_relat_2 X3) \wedge ((v1_partfun1 X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \Rightarrow \\ & ((r2_relset_1 X0 X0 X3 (k3_eqrel_1 X0 X1 X2)) \Rightarrow (\forall X4. \neg (X4 \in X0) \wedge ((k6_eqrel_1 X0 X0 X3 X4 \neq k6_eqrel_1 X0 X0 X1 X4) \wedge (k6_eqrel_1 X0 X0 X3 X4 \neq k6_eqrel_1 X0 X0 X2 X4)))))) \quad (2) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v3_relat_2 X1) \wedge ((v8_relat_2 X1) \wedge ((v1_partfun1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \Rightarrow \\ & ((\exists X2. k6_eqrel_1 X0 X0 X1 X2 = X0) \Rightarrow (r2_relset_1 X0 X0 X1 (k1_eqrel_1 X0))) \quad (3) \end{aligned}$$

Assume the following.

$$\forall X0. \forall X1. (X1 \in X0) \Rightarrow (k6_eqrel_1 X0 X0 (k1_eqrel_1 X0) X1 = X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(\forall X2.(X2 \in X0) \Leftrightarrow (X2 \in X1)) \Rightarrow (X0 = X1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v3_relat_2 X3) \wedge \\ & ((v1_partfun1 X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0)))) \Rightarrow ((X1 \in k6_eqrel_1 X0 X0 X3 X2) \Leftrightarrow (k4_tarski X1 X2 \in X3)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X3 (\\ & k1_zfmisc_1 (k2_zfmisc_1 X2 X2))) \Rightarrow ((k4_tarski X0 X1 \in X3) \Rightarrow ((X0 \in \\ & X2) \wedge (X1 \in X2))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0)))) \Rightarrow (m1_subset_1 (k3_eqrel_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.m1_subset_1 (k1_eqrel_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)) \quad (10)$$

Assume the following.

$$\forall X0.k1_eqrel_1 X0 = k2_zfmisc_1 X0 X0 \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.(((v3_relat_2 X1) \wedge ((v8_relat_2 X1) \wedge ((v1_partfun1 \\ & X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \Rightarrow \\ & (\forall X2.(((v3_relat_2 X2) \wedge ((v8_relat_2 X2) \wedge ((v1_partfun1 \\ & X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \Rightarrow \\ & (\neg(r2_relset_1 X0 X0 (k3_eqrel_1 X0 X1 X2) (k1_eqrel_1 X0)) \wedge ((\neg \\ & r2_relset_1 X0 X0 X1 (k1_eqrel_1 X0)) \wedge (\neg r2_relset_1 X0 X0 X2 (k1_eqrel_1 \\ & X0)))))) \end{aligned}$$