

t27_eqrel_1 (TMWR-
Fgt8zBpP9FVUx6ECNPyJiZtLFNF1hH9)

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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 $k6_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_eqrel_1 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_2 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ 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.

$$\forall X0. (v3_relat_2\ (k1_eqrel_1\ X0)) \wedge ((v8_relat_2\ (k1_eqrel_1\ X0)) \wedge ((v1_partfun1\ (k1_eqrel_1\ X0)\ X0) \wedge (m1_subset_1\ (k1_eqrel_1\ X0)\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0)))))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. \forall X4. ((v1_relat_2\ X4) \wedge ((v3_relat_2\ X4) \wedge ((v8_relat_2\ X4) \wedge ((v1_partfun1\ X4\ X0) \wedge (m1_subset_1\ X4\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))))))) \Rightarrow (((X1 \in k6_eqrel_1\ X0\ X0\ X4\ X2) \wedge (X3 \in k6_eqrel_1\ X0\ X0\ X4\ X2)) \Rightarrow (k4_tarski\ X1\ X3 \in X4)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ X2\ X2))) \Rightarrow ((k4_tarski\ X0\ X1 \in X3) \Rightarrow ((X0 \in X2) \wedge (X1 \in X2))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k4_tarski\ X0\ X1 \in k2_zfmisc_1\ X2\ X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (\forall X4. (\\ & m1_subset_1 X4 X0) \Rightarrow (\forall X5. (m1_subset_1 X5 X1) \Rightarrow ((k4_tarski \\ & X4 X5 \in X2) \Leftrightarrow (k4_tarski X4 X5 \in X3)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. k1_eqrel_1 X0 = k2_zfmisc_1 X0 X0 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v3_relat_2 X0) \wedge (v8_relat_2 X0))) \Rightarrow \\ & ((v1_relat_1 X0) \wedge (v1_relat_2 X0)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \end{aligned} \quad (9)$$

Theorem 1

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