

t4_orders_1

(TMSy3GokN9sbRNEHdaNqy3uHArbpubUVux)

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Let $v1_relat_2 : \iota \Rightarrow o$ be given. Let $v4_relat_2 : \iota \Rightarrow o$ 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 $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow ((v4_relat_2 X0) \Leftrightarrow (\forall X1.\forall X2. ((k4_tarski X1 X2 \in X0) \wedge (k4_tarski X2 X1 \in X0)) \Rightarrow (X1 = X2))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (2)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_relat_2 X3) \wedge ((v4_relat_2 X3) \wedge ((v8_relat_2 X3) \wedge ((v1_partfun1 X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))))) \Rightarrow (((X1 \in X0) \wedge ((X2 \in X0) \wedge ((k4_tarski X1 X2 \in X3) \wedge (k4_tarski X2 X1 \in X3)))) \Rightarrow (X1 = X2))$$