

t44_eqrel_1

(TMNH2WzaGPuxi67v1oh2FT3Fu4urttZwbnQ)

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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 $m1_eqrel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_eqrel_1 X1 X0) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X1)) \Rightarrow (k7_subset_1 X0 \\ & (k5_setfam_1 X0 X1) (k3_tarski X2) = k5_setfam_1 X0 (k7_subset_1 \\ & (k1_zfmisc_1 X0) X1 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. k3_tarski (k1_tarski X0) = X0 \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k7_subset_1 X0 X1 X2 = k4_xboole_0 X1 X2) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \tag{5}$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (k6_domain_1 X0 X1 = k1_tarski X1) \tag{6}$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. (m1_eqrel_1 X1 X0) \Rightarrow (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (m1_subset_1 (k6_domain_1 X0 X1) (k1_zfmisc_1 X0)) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (m1_subset_1 (k5_setfam_1 X0 X1) (k1_zfmisc_1 X0)) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow & ((m1_eqrel_1 X1 X0) \Leftrightarrow ((k5_setfam_1 X0 X1 = X0) \wedge (\forall X2. \\ (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow & ((X2 \in X1) \Rightarrow ((X2 \neq k1_xboole_0) \wedge \\ (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 X0)) \Rightarrow & (\neg(X3 \in X1) \wedge ((X2 \neq \\ X3) \wedge (\neg r1_xboole_0 X2 X3)))))))))) & \quad (11) \end{aligned}$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_eqrel_1 X1 X0) \Rightarrow (\neg v1_xboole_0 X1)) \quad (12)$$

Theorem 1

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow & (\forall X2. (m1_eqrel_1 X2 X0) \Rightarrow ((X1 \in X2) \Rightarrow (k5_setfam_1 X0 \\ (k7_subset_1 (k1_zfmisc_1 X0) X2 (k6_domain_1 (k1_zfmisc_1 X0) X1)) = & k6_subset_1 X0 X1)))) \end{aligned}$$