

t55_eqrel_1 (TMdL- HtLfcP5xuXVJsPNytHECpLPTyycN64C)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg(X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (\neg(\neg r1_xboole_0 X0 X1) \wedge (\forall X2. \neg(X2 \in X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2. (X2 \in X0) \wedge (X2 \in X1)) \wedge (r1_xboole_0 X0 X1)) \quad (2)$$

Assume the following.

$$\forall X0. (X0 \neq k1_xboole_0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 X0) \Rightarrow ((\neg X2 \in X1) \Rightarrow (X2 \in k3_subset_1 X0 X1)))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow ((r1_xboole_0 X1 (k3_subset_1 X0 X2)) \Leftrightarrow (r1_tarski X1 X2))) \quad (4)$$

Assume the following.

$$\forall X0. m1_subset_1 k1_xboole_0 (k1_zfmisc_1 X0) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski\ X0\ X0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (k1_zfmisc_1\ X0)))\Rightarrow(k5_setfam_1\ X0\ X1 = k3_tarski\ X1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0))\Rightarrow(\forall X2.(X2 \in X1)\Rightarrow(X2 \in X0)) \quad (9)$$

Assume the following.

$$v1_xboole_0\ k1_xboole_0 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0))\Rightarrow(m1_subset_1\ (k3_subset_1\ X0\ X1)\ (k1_zfmisc_1\ X0)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k3_tarski\ X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow(\exists X3.(X2 \in X3)\wedge(X3 \in X0))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski\ X0\ X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow(X2 \in X1)) \quad (13)$$

Theorem 1

$$\begin{aligned} &\forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (k1_zfmisc_1\ X0)))\Rightarrow((k5_setfam_1\ X0\ X1 = X0)\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ X1))\Rightarrow(\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1\ X0))\Rightarrow((X3 = k3_tarski\ X2)\Rightarrow(r1_tarski\ (k3_subset_1\ X0\ X3)\ (k3_tarski\ (k3_subset_1\ X1\ X2))))))) \end{aligned}$$