

t63_eqrel_1 (TMXefJZqkD- fxYtPg9CmiZAn33AwGM4hxxfM)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_eqrel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \tag{3}$$

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.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (k5_setfam_1 X0 X1 = k3_tarski X1) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(m1_eqrel_1 X1 X0)\Rightarrow(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(m1_subset_1 (k7_subset_1 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(k3_subset_1 X0 X1 = k4_xboole_0 X0 X1) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))\Rightarrow & ((m1_eqrel_1 X1 X0)\Leftrightarrow((k5_setfam_1 X0 X1 = X0)\wedge(\forall X2. \\ (m1_subset_1 X2 (k1_zfmisc_1 X0))\Rightarrow & ((X2 \in X1)\Rightarrow((X2 \neq k1_xboole_0)\wedge \\ (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 X0))\Rightarrow & (\neg(X3 \in X1)\wedge((X2 \neq \\ X3)\wedge(\neg r1_xboole_0 X2 X3)))))))))) & \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0)\Rightarrow & (\forall X1.(m1_eqrel_1 X1 X0)\Rightarrow \\ (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X1))\Rightarrow & (\forall X3.(m1_subset_1 \\ X3 (k1_zfmisc_1 X0))\Rightarrow & ((X3 = k3_tarski X2)\Rightarrow(k3_subset_1 X0 X3 = k3_tarski \\ (k3_subset_1 X1 X2)))))) & \end{aligned}$$