

t61_relset_2 (TMWm-
cjM4SJQUWix7zXHhxMGW9JadNBtTk33)

October 27, 2020

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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 X1)) \Rightarrow (\forall X4. \\ & (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((r1_xboole_0 \\ & X2 (k7_relset_1 X1 X0 (k3_relset_1 X0 X1 X4) X3)) \Leftrightarrow (r1_xboole_0 X3 \\ & (k7_relset_1 X0 X1 X4 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow ((r1_xboole_0 X1 (k3_subset_1 \\ & X0 X2)) \Leftrightarrow (r1_tarski X1 X2))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow ((r1_xboole_0 X1 X2) \Leftrightarrow (r1_tarski \\ & X1 (k3_subset_1 X0 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (r1_xboole_0 X0 X1) \Rightarrow (r1_xboole_0 X1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (m1_subset_1 X2 (\\ & k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (m1_subset_1 (k7_relset_1 \\ & X0 X1 X2 X3) (k1_zfmisc_1 X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(m1_subset_1 (k3_subset_1 X0 X1) (k1_zfmisc_1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(m1_subset_1 (k3_relset_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X1 X0))) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & X0))\Rightarrow(\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 X1))\Rightarrow(\forall X4. \\ & (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((r1_tarski \\ & (k7_relset_1 X0 X1 X4 (k3_subset_1 X0 X2)) (k3_subset_1 X1 X3))\Leftrightarrow \\ & (r1_tarski (k7_relset_1 X1 X0 (k3_relset_1 X0 X1 X4) X3) X2)))) \end{aligned}$$