

t18_rewrite2
(TMHHjtkan5jKSqgFBxi3NZ3N8ZCzGDs2Cqf)

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 $k8_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $r1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_catalan2 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. k3_catalan2\ X0 = k8_afinsq_1\ X0 \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0\ X0) \wedge \\ & ((\neg v1_xboole_0\ X1) \wedge ((m1_subset_1\ X2\ X0) \wedge (m1_subset_1\ X3\ X1)))) \Rightarrow \\ & (k1_domain_1\ X0\ X1\ X2\ X3 = k4_tarski\ X2\ X3) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \neg v1_xboole_0\ (k8_afinsq_1\ X0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & (k8_afinsq_1\ X0)\ (k8_afinsq_1\ X0)))) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2\ (k8_afinsq_1\ X0)) \Rightarrow (\forall X3. (m1_subset_1\ X3\ (k8_afinsq_1 \\ & X0)) \Rightarrow ((r1_rewrite2\ X0\ X1\ X2\ X3) \Leftrightarrow (k1_domain_1\ (k8_afinsq_1\ X0) \\ & (k8_afinsq_1\ X0)\ X2\ X3 \in X1)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X1))) \Rightarrow (\forall X3. (r1_relset_1\ X0\ X1\ X2\ X3) \Leftrightarrow (\forall X4. \\ & (m1_subset_1\ X4\ X0) \Rightarrow (\forall X5. (m1_subset_1\ X5\ X1) \Rightarrow ((k4_tarski \\ & X4\ X5 \in X2) \Rightarrow (k4_tarski\ X4\ X5 \in X3)))))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & \quad (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow \\ & \quad (\forall X3. (m1_subset_1 X3 (k8_afinsq_1 X0)) \Rightarrow (\forall X4. (m1_subset_1 \\ & \quad X4 (k8_afinsq_1 X0)) \Rightarrow (((r1_relset_1 (k8_afinsq_1 X0) (k8_afinsq_1 \\ & X0) X1 X2) \wedge (r1_rewrite2 X0 X1 X3 X4)) \Rightarrow (r1_rewrite2 X0 X2 X3 X4)))))) \end{aligned}$$